

Index Medicus for the WHO Eastern Mediterranean Region

with Abstracts



IMEMR Current Contents

September 2017

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Table of Contents

IMEMR Current Contents	vii
-------------------------------------	------------

Subject Index	ix
----------------------------	-----------

Abortion, Spontaneous	1
Accidents, Traffic.....	1
Acetylcysteine	1
Acrylic Resins	2
Acute Kidney Injury.....	2
Adiponectin.....	3
Aggregatibacter actinomycetemcomitans	3
Albuminuria	4
Amikacin	4
Aminolevulinic Acid.....	5
Amyloid Neuropathies, Familial	5
Aneurysm.....	6
Arbutin.....	6
Arteriovenous Fistula	6
Aspirin	7
Azadirachta	7
Baccharis	8
Bacterial Infections	8
Bacteriuria.....	9
Bile Ducts	9
Blood Donors	10
Boron	10
Bulbourethral Glands	11
Calcium Compounds	11
Calcium Hydroxide	11
Camellia sinensis	12
Camels	12
Carcinogens.....	12
Carotenoids.....	13
Carum	13
Cellulitis	14
Cerium	14
Child Abuse	14
Child Health	15
Chromosomes, Human, Pair 9.....	15
Cleft Lip	15
Cleidocranial Dysplasia.....	16
Clobetasol	17
Cochlear Implants	17
Colistin	18
Colorectal Neoplasms	18
Common Cold	19
Communicable Diseases	19
Computer Communication Networks	20
Coronary Artery Bypass.....	20
Coronavirus Infections	20
Curing Lights, Dental	22
Dengue.....	23
Dental Care	23

Dental Caries	24
Dental Debonding	24
Dental Enamel	24
Dental Health Surveys	25
Dental Implant-Abutment Design	25
Dental Impression Technique	26
Dental Records	26
Dental Scaling	26
Dentists	27
Dentofacial Deformities	27
Denture, Complete	27
Dentures	29
Depression	29
Diabetes Complications	30
Diabetes Mellitus, Type 2	31
Diabetic Foot	31
Diazinon	32
Disasters	32
Drug Interactions	33
Drug Prescriptions	33
Drug Users	34
Education	34
Education, Medical	34
Education, Medical, Continuing	35
Embryo Transfer	36
Endometriosis	36
Epidermis	37
Epilepsy	37
Esophageal Atresia	37
Ethics, Medical	38
Euphorbiaceae	38
Exercise	38
Eye Foreign Bodies	39
Faculty	39
Family Planning Services	40
Fast Foods	40
Fertilization in Vitro	40
Floods	41
Fractures, Bone	41
Fructose	42
Ganoderma	42
Gastrostomy	43
Genital Neoplasms, Female	44
Glaucoma	44
Glioma	45
Glomus Tumor	45
Glucosephosphate Dehydrogenase Deficiency	45
Glycoconjugates	46
Glycoproteins	46
Granuloma, Pyogenic	47
Hand	47
Hand Hygiene	48
Health	48
Health Care Facilities, Manpower, and Services	48
Heat Stroke	49
Helicobacter Infections	49
Hemorrhagic Fever, Ebola	49
Hepatitis B Surface Antigens	50

Hepatitis B Vaccines	50
Hepatitis C, Chronic.....	50
Hepatolenticular Degeneration.....	51
Hernia, Inguinal.....	51
Hyaluronic Acid	52
Hydatidiform Mole.....	52
Hypertension	53
Immunization.....	53
In Vitro Oocyte Maturation Techniques.....	53
Infant Mortality.....	54
Inferior Wall Myocardial Infarction	54
Infertility, Female.....	55
Insulin	56
Intellectual Disability.....	56
Intensive Care Units, Neonatal.....	57
Keratoconus	57
Lactobacillus acidophilus.....	57
Language Tests.....	58
Lasers, Solid-State	58
Learning	59
Leishmaniasis.....	60
Leukemia, Lymphocytic, Chronic, B-Cell.....	61
Leukemia, Myeloid, Acute.....	61
Leukoencephalitis, Acute Hemorrhagic.....	62
Levofloxacin	62
Lichen Planus, Oral.....	62
Liver Abscess, Amebic	63
Malaria.....	63
Malnutrition.....	64
Malocclusion	64
Malondialdehyde	65
Mammoplasty	65
Mandibular Fractures.....	65
Meals	66
Measles.....	66
Medical Errors.....	67
Meningioma.....	67
Meningitis, Bacterial	67
Meningococcal Infections	68
Microbial Sensitivity Tests.....	68
Microbiota	69
Middle East Respiratory Syndrome Coronavirus.....	69
Molar, Third	70
Morus.....	70
Motor Activity	70
Mouth Diseases.....	71
Mouth, Edentulous	71
Multiple Sclerosis.....	72
Musculoskeletal Diseases.....	73
Mycoplasma hominis	73
Myofascial Pain Syndromes	74
Nanoparticles.....	75
National Health Programs	75
Nephrostomy, Percutaneous	75
Neuralgia.....	76
Nocardia Infections	76
Nursing Research	77
Nutrition Assessment.....	77

Obesity	77
Octamer Transcription Factor-3	78
Oral Hygiene	78
Oral Submucous Fibrosis	79
Organophosphate Poisoning	79
Orthomyxoviridae	79
Ossification, Heterotopic	80
Otitis Media, Suppurative	80
Otolaryngology	81
Outliers, DRG	81
Ovarian Neoplasms	81
Pathology, Oral	82
Phoeniceae	82
Photochemotherapy	83
Physical Endurance	83
Pilomatrixoma	84
Pneumococcal Infections	84
Poliomyelitis	85
Polycystic Ovary Syndrome	85
Preimplantation Diagnosis	86
Premature Birth	87
Prenatal Diagnosis	87
Professional Autonomy	88
Professionalism	88
Progesterone	88
Prostatitis	89
Prosthodontics	89
Psychotherapy	90
Public Health	90
Pulpitis	90
Pyruvates	91
Quality of Life	91
Radiation-Protective Agents	91
Radiology, Interventional	92
Reproductive Health Services	92
Research	93
Respiratory Tract Infections	93
Root Canal Obturation	93
Rubber Dams	94
Salmonella enterica	94
Schizophrenia	95
Schools, Medical	95
Sexual Dysfunction, Physiological	96
Shigella	96
Smoking	97
Smoking Cessation	97
Spermatozoa	98
Spine	98
Staphylococcus aureus	99
STAT1 Transcription Factor	99
Stents	99
Stress Disorders, Post-Traumatic	100
Students, Dental	100
Students, Medical	101
Students, Nursing	101
Substance-Related Disorders	102
Surrogate Mothers	102
Temporomandibular Joint Disorders	102

Testosterone	103
Tobacco.....	103
Tooth.....	103
Tooth Abnormalities	104
Tooth Fractures.....	104
Tooth Injuries	105
Tooth Movement	105
Tooth, Artificial	106
Tooth, Deciduous	106
Tooth, Impacted.....	106
Toothache	107
Tourette Syndrome	107
Toxoplasmosis, Ocular	108
Tracheostomy	108
Trachoma	108
Transforming Growth Factor beta.....	109
Transplantation	109
Travel Medicine	110
Trigeminal Neuralgia	110
Tuberculosis	111
Tuberculosis, Multidrug-Resistant	111
Tuberculosis, Pulmonary.....	112
Urinary Bladder Calculi.....	113
Urinary Tract Infections	113
Ventricular Dysfunction, Left	114
Vibrio cholerae.....	114
Vitamin A Deficiency	114
Vitreous Hemorrhage.....	115
Vitrification	115
Warfarin.....	116
Werner Syndrome.....	116
Zika Virus.....	117
Zika Virus Infection	117
Appendix I: Author Index.....	119
Appendix II: List of EMR Journals Indexed in IMEMR (by country)	147
Appendix III: List of EMR Journals Indexed in IMEMR (by title)	169

IMEMR Current Contents

Rationale

The Index Medicus for the WHO Eastern Mediterranean Region (IMEMR) has sustained its indexing policy, which has made it a vital current awareness information tool, for technical staff of the Regional Office, health care staff, and medical professionals who are able now to access health literature published in the Region as soon as it is published. A document delivery service to support the Index has also been activated which will enable any user to acquire a copy of any article listed in the Index.

The cumulative version of the Index Medicus is available now on the Internet as part of EMRO web site. A CD-ROM version of the same is also being provided upon request.

Scope and Coverage

The **IMEMR Current Contents** is issued on a quarterly basis including the most recent articles added to Index Medicus for the Eastern Mediterranean Region (IMEMR) Database¹.

Indexing Level

Each article has been indexed and assigned to a "Main Heading", plus added headings according to the Medical Subject Headings (MeSH) list of the National Library of Medicine (NLM). Up to five added headings (including the respective country) have been allowed. Subheadings (or qualifiers) are used in indexing to qualify MeSH headings by pinpointing some specific aspects of the concept represented by the heading, e.g. "LIVER-Drug Effects" indicates that the article is not about the liver in general, but about the effect of drugs on the liver.

Organization of the IMEMR

Subject Index

The Index is organized in alphabetical order, according to the Main Subject Headings (MeSH). In most cases one main subject is assigned to each article. Under the main subject, entries are sorted by Subheading in alphabetical order also. Each entry includes the bibliographic information of the article e.g. title of the article, author(s), first author's affiliation, journal title, year (date of publication), volume number, issue number, page numbers, number of references, subject descriptors and geographic descriptors. Abstracts have been added and are searchable on the database on the Internet. (as shown in Figure 1)

Author Index

The IMEMR includes the author's index, which also indicates the subjects covered by each author. (Appendix I)

List of EMR Journals by Country

The IMEMR includes an updated list of EMR Journals, which are indexed in the index. The list is sorted in alphabetical order by the country of publication, which also indicates the number of journals in each country. (Appendix II)

List of EMR Journals by Title

The IMEMR includes an updated list of EMR Journals, which are indexed in the index. The list is sorted in alphabetical order by journal's title, which also indicates the status of indexing for each journal. (Appendix III)

Computer facilities

The Current Contents has been produced using the UNESCO WINISIS package. Countries or journals publishers interested in a subset of the database may be provided with data sets in WINISIS format upon request.

¹ Including the countries of Afghanistan, Bahrain, Djibouti, Egypt, Islamic Republic of Iran, Iraq, Jordan, Kuwait, Lebanon, Libyan Arab Jamahiriya, Morocco, Oman, Pakistan, Palestine, Qatar, Saudi Arabia, Somalia, Sudan, Syrian Arab Republic, Tunisia, United Arab Emirates, Yemen

Availability of photocopies

Photocopies of articles cited in IMEMR may be obtained from EMRO Library free of charge upon request.

Availability on the Internet

This issue, as well as all forthcoming issues, will appear in WHO/EMRO web site on the Internet, as part of the complete edition of the Index. Internet address is <http://www.emro.who.int/information-resources/imemr/imemr.html>

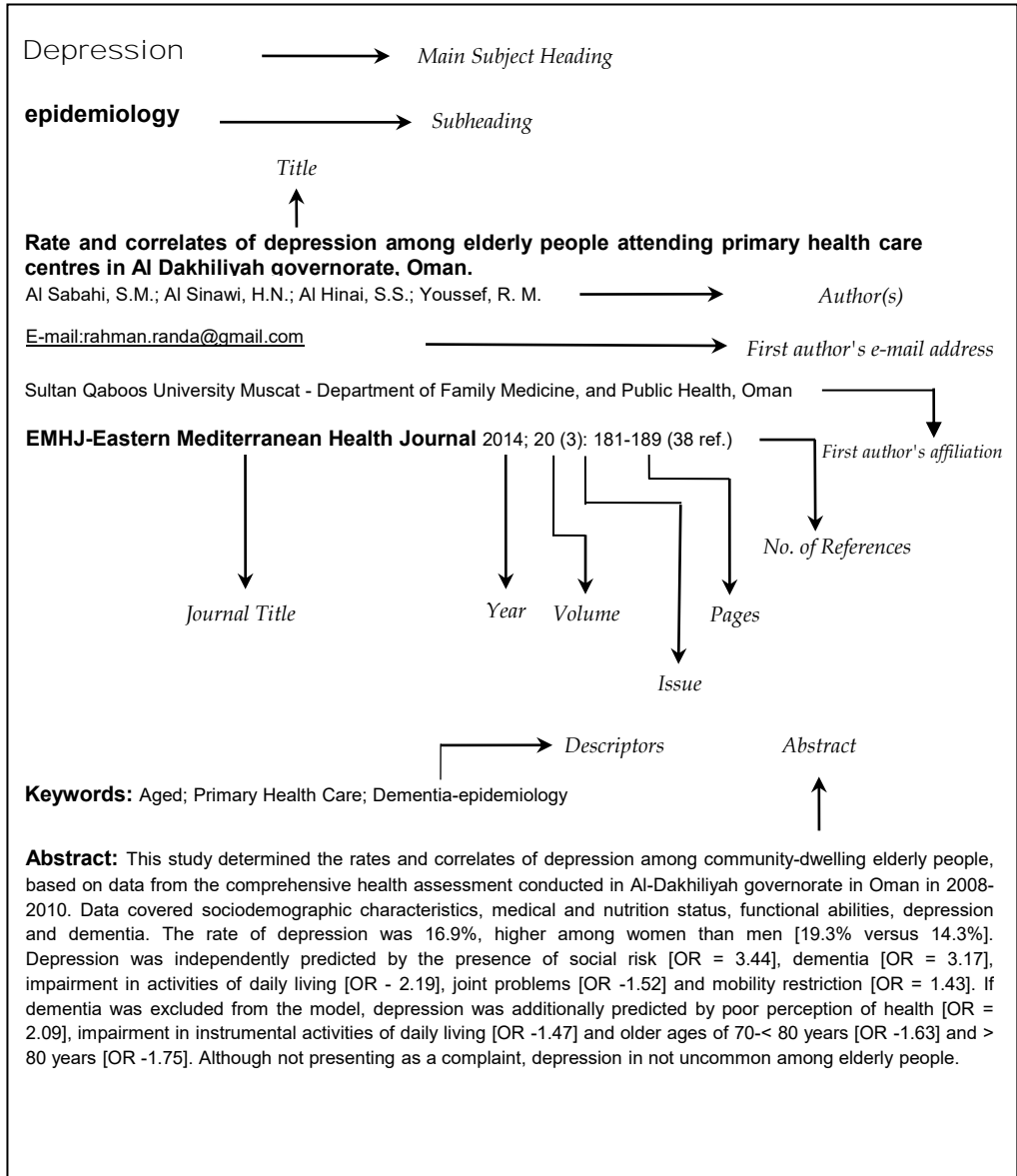


Figure (1): Sample of IMEMR citation

Subject Index

Abortion, Spontaneous

therapy

Manual vacuum aspiration [MVA]: a safe and effective alternative for the surgical management of early pregnancy loss.

Baqai, Shehla; Waheed, Anam Akbar

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PNS Shifa

PAFMJ-Pakistan Armed Forces Medical Journal 2016; 66 (2): 194-198

Keywords: Pregnancy Complications; Pregnancy, High-Risk; Pregnancy; Prospective Studies; Safety Management; Vacuum Curettage

Abstract: Objective: To assess and document safety, efficacy and patient acceptability of Manual vacuum aspiration [MVA] in the management of early pregnancy loss [EPL], performed in the treatment room setting. Study Design: Quasi-experimental, [clinical trial]. Place and Duration of Study: Treatment Room, OBGYN department, PNS Shifa from Nov 2010 to 31[st] Mar 2013. Material and Methods: Single centre prospective study conducted at Obstetrics and Gynecology department, PNS Shifa from Nov 2010 to Mar 2013. A total of 414 women with EPL consented for MVA in the treatment room under local anesthesia, out of which 400 women underwent MVA. Results: Overall MVA was 94.5% effective in treating pregnancies through 13 weeks of gestation. There were no major complications. Minor complications: retained products of conception and endometritis were treated easily. Conclusion: MVA is safe, effective and economical alternative to conventional dilatation and curettage for the treatment of EPL. Treatment in the outpatient setting allows better post-procedure physical and emotional quality of life; avoids general anesthesia, has immense potential in primary health care setting.

Accidents, Traffic

Declining trends in injuries and ambulance calls for road traffic crashes in Bahrain post new traffic laws of 2015.

Awadhalla, Muysar Sabri; Asokan, Govindaraj Vaithinathan; Matoq, Amina; Kirubakaran, Richard

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Journal of Epidemiology and Global Health 2016; 6 (2): 59-65

Keywords: Tertiary Care Centers; Ambulances; Wounds and Injuries; Death; Disaster Victims

Abstract: Road traffic crashes [RTC] are of serious global health concern. To identify whether the number of ambulance calls, injuries, and deaths has declined after the implementation of the new traffic law [NIL] 2015 in Bahrain, de-identified administrative RTC data obtained from the tertiary care center, and the General Directorate of Traffic [GDT] of Bahrain were used. A quasi-experimental design was employed to trend the impact of the NTL on RTC and associated healthcare events. Bahrainis and non-Bahrainis who met with RTC, either in a vehicle or as a pedestrian, between February 8 and May 8 in 2013, 2014 [pre NTL], and 2015 [post NTL] were included in the study. Our results show a reduction in the number of ambulance calls from vehicular and pedestrian RTC victims. The ambulance calls from pedestrian RTC victims were <10% compared to the number of ambulance calls from vehicular RTC victims. There was a significant reduction in minor injuries post 2015, whereas no obvious difference was seen for serious injuries and deaths. A longer follow-up study to confirm the sustained decline in RTC, enforcing a zero tolerance policy toward traffic transgressions and raising public awareness on the critical four minutes and golden hour is recommended.

Acetylcysteine

A preliminary study: n-acetyl-l-cysteine improves semen quality following varicocelelectomy.

Barekat, Foroogh; Tavalae, Marziyeh; Deemeh, Mohammad Reza; Bahreinian, Mahsa; Azadi, Leila; Abbasi, Homayoun; Rozbahani, Shahla; Esfahani Mohammad Hossein Nasr

Royan Institute for Biotechnology, ACECR - Reproductive Biomedicine Research Center - Department of Reproductive Biotechnology

IJFS-International Journal of Fertility and Sterility 2016; 10 (1): 120-126

Keywords: Varicocele; Prospective Studies; Semen; Infertility, Male; Antioxidants; Oxidative Stress

Abstract: Background: Surgery is considered the primary treatment for male infertility from clinical varicocele. One of the main events associated with varicocele is excessive production of reactive oxygen species [ROS]. N-acetyl-L-cysteine [NAC], an antioxidant that scavenges free radicals, is considered a supplement to alleviate glutathione [GSH] depletion during oxidative stress. Despite beneficial effects of NAC in other pathological events, there is no report on the effect of NAC in individuals with varicocele. Therefore, the aim of this study is to evaluate the outcome of NAC on semen quality, protamine content, DNA damage, oxidative stress and fertility following varicocelectomy. Materials and Methods: This prospective clinical trial included 35 infertile men with varicocele randomly divided into control [n=20] and NAC [n=15] groups. We assessed semen parameters, protamine content [chromomycin A3 [CMA3]], DNA integrity [terminal deoxynucleotidyltransferase-mediated dUTP nick-end labeling [TUNEL]] and oxidative stress [2', 7'-dichlorodihydrofluorescein-diacetate [DCFH-DA]] before and three months after varicocelectomy. Results: Percentage of abnormal semen parameters, protamine deficiency, DNA fragmentation and oxidative stress were significantly decreased in both groups compared to before surgery. We calculated the percentage of improvement in these parameters compared to before surgery for each group, then compared the results between the groups. Only percentage of protamine deficiency and DNA fragmentation significantly differed between the NAC and control groups. Conclusion: The results of this study, for the first time, revealed that NAC improved chromatin integrity and pregnancy rate when administered as adjunct therapy post-varico-celectomy [Registration Number: IRCT201508177223N5].

Acrylic Resins

Effect of curing regimes on physical properties of heat cure acrylic resin.

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Pakistan Oral and Dental Journal 2016; 36 (1): 156-160

Keywords: Dental Materials; Dentures; Polymethyl Methacrylate; Self-Curing of Dental Resins; Hot Temperature

Abstract: This study was conducted to determine the effect of varying curing conditions on the residual monomer concentrations of heat cure acrylic denture resin. Sixty-four disc shaped acrylic resin specimens were processed at four powder-liquid ratios [2.22, 2.00, 1.80 and student-ratio] and cured in a heated water bath using 4 different curing regimes [two with a terminal boil and two without]. The residual monomer concentrations were determined at intervals of 24, 48 and 72 hours using a UV Spectrophotometer. The results indicated a decrease in residual monomer concentration with storage time. Group 4 [student-ratio] and curing by cycle 2B [placing the assembly in the water bath directly at 100°C] showed the highest overall residual monomer concentrations while group 1 [highest powder-liquid ratio] and curing by cycle 1A showed the least overall residual monomer concentrations. It was concluded that students dispensing acrylic powder and liquid monomer without calculations would lead to higher residual monomers if a proper curing regime is not followed. Using a 60 minute terminal boil in the polymerization process is strongly recommended. Storing the acrylic denture bases for at least 24-48 hours in water before use will decrease residual monomers being leached into the oral environment.

Acute Kidney Injury

epidemiology

Frequency of acute kidney injury in patients undergoing coronary artery bypass grafting.

Shah, Syed Murad A.N.; Ikramullah; Khan, Ajab; Sher, Akhtar; Abdul Malik; Naseem Ullah; Khan, Riaz Anwar

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Lady Reading Hospital - Cardiovascular Unit

JPMI-Journal of Postgraduate Medical Institute 2016; 30 (1): 30-34

Keywords: Coronary Artery Bypass; Cross-Sectional Studies; Coronary Artery Disease; Risk

Abstract: Objective: To find the frequency of acute kidney injury in patients undergoing coronary artery bypass grafting. Methodology: The study was conducted in cardiovascular unit Lady Reading Hospital Peshawar. It was cross sectional study. Sampling technique was non probability convenient sampling. Data was collected from 20.2.2013 to 20.8.2013. Total 179 patients included in the study. All patients with known coronary artery disease were included in the study whom were planned for revascularization in the form of coronary artery bypass grafting [CABG]. Post-operatively all patients' serum creatinine till 48th post op hour was observed to detect acute kidney

injury. Acute Kidney Injury [AKI] was defined as more than 50% or elevation of 0.3 mg/dl of creatinine level from base line. Results: A total of 179 patients undergoing coronary artery bypass grafting were included in the study. Average age of the patients was 46.88 years +/- 9.91 with range 20-60 years. Patients were divided into four groups according to age. The acute kidney injury after coronary artery bypass grafting was observed in 14 [7.82%] patients. Acute kidney injury was more common in old age and it was non significantly more common in male gender. Conclusion: In spite of current highly advance cardiac surgery techniques and post operative care still there is high incidence of acute kidney injury following revascularization and subsequent worst outcomes.

Adiponectin

Correlation of adiponectin RNA abundance and its receptors with quantitative parameters of sperm motility in rams.

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JFS-International Journal of Fertility and Sterility 2016; 10 (1): 127-135

Keywords: RNA, Messenger; Sperm Motility; Semen; Reverse Transcriptase Polymerase Chain Reaction

Abstract: Background: Adiponectin and its receptors [AdipoR1 and AdipoR2], known as adiponectin system, have some proven roles in the fat and glucose metabolisms. Several studies have shown that adiponectin can be considered as a candidate in linking metabolism to testicular function. In this regard, we evaluated the correlation between sperm mRNA abundance of adiponectin and its receptors, with sperm motility indices in the present study. Materials and Methods: In this completely randomized design study, semen samples from 6 adult rams were fractionated on a two layer discontinuous percoll gradient into high and low motile sperm cells, then quantitative parameters of sperm motility were determined by computer-assisted sperm analyzer [CASA]. The mRNA abundance levels of Adiponectin, AdipoR1 and AdipoR2 were measured quantitatively using real-time reverse transcriptase polymerase chain reaction [qRT-PCR] in the high and low motile groups. Results: Firstly, we showed that adiponectin and its receptors [AdipoR1 and AdipoR2] were transcriptionally expressed in the ram sperm cells. Using Pfaff based method qRT-PCR, these levels of transcription were significantly higher in the high motile rather than low motile samples. This increase was 3.5, 3.6 and 2.5 fold change rate for Adiponectin, AdipoR1 and AdipoR2, respectively. Some of sperm motility indices [curvilinear velocity [VCL], straight-line velocity [VSL], average path velocity [VAP], linearity [LIN], wobble [WOB] and straightness [STR]] were also significantly correlated with Adiponectin and AdipoR1 relative expression. The correlation of AdipoR2 was also significant with the mentioned parameters, although this correlation was not comparable with adiponectin and AdipoR1. Conclusion: This study revealed the novel association of adiponectin system with sperm motility. The results of our study suggested that adiponectin is one of the possible factors which can be evaluated and studied in male infertility disorders.

Aggregatibacter actinomycetemcomitans

An in vitro comparison of antimicrobial effects of curcumin-based photodynamic therapy and chlorhexidine, on aggregatibacter actinomycetemcomitans.

Najafi, Shamsoulmoulouk; Khayamzadeh, Mina; Paknejad, Mojgan; Poursepanj, Golfam; Fard, Mohammad Javad Kharazi; Bahador, Abbas

Tehran University of Medical Sciences - School of Dentistry - Department of Oral Medicine, International Campus

Journal of Lasers in Medical Sciences 2016; 7 (1): 21-25

Keywords: In Vitro Techniques; Curcumin; Lasers, Semiconductor; Anti-Infective Agents; Photochemotherapy; Chlorhexidine-analogs and derivatives

Abstract: Introduction: Considering the importance of prevention in periodontal diseases and the important role of *Aggregatibacter actinomycetemcomitans* in induction and progression of these diseases, the aim of the present in vitro study was to compare the antimicrobial effects of chlorhexidine digluconate [CHX], curcumin and light-emitting diode [LED] laser, on this bacterium. Methods: Antimicrobial activity of curcumin [5 mg/ml], CHX [2%], LED [120 J/cm²] and LED + curcumin [120 J/cm² + 2.5 mg/ml] against *A. actinomycetemcomitans* were tested in vitro, using micro-broth dilution test. One-way analysis of variance [ANOVA] and Tukey's HSD tests served for statistical analysis. Results: Regarding the minimum inhibitory concentration [MIC], CHX had a significantly lower MIC than curcumin [P<0.05]. Sorted out by bacterial growth from lowest to highest, were CHX, LED + curcumin, curcumin, and LED groups. All the differences were found to be statistically significant [P<0.05] except for the LED group. Conclusion: We conclude that curcumin is an effective substance in preventing the growth of *A. actinomycetemcomitans*, whose impact is reinforced when used simultaneously with photodynamic therapy [PDT].

Albuminuria

Comparison of first morning void urine specimen for albumin to creatinine ratio comparing with 24-hour urinary albumin excretion in detecting microalbuminuria in type 2 diabetics.

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Military Hospital

PAFMJ-Pakistan Armed Forces Medical Journal 2016; 66 (2): 240-243

Keywords: Creatinine; Diabetes Mellitus, Type 2; Cross-Sectional Studies; Urine Specimen Collection

Abstract: Objectives: To determine the accuracy of first morning void urine specimen for Albumin to, Creatinine Ratio [ACR] comparing with 24-hour urinary albumin excretion in detecting trueoalbuminuria in type 2 diabetics. Study Design: Cross Sectional study. Place and Duration of Study: Military Hospital Rawalpindi, from Apr 2013 to Oct 2013. Patients and Methods: One hundred and twenty patients with type 2 Diabetes Mellitus [DM] fulfilling the inclusion criteria were included in study using consecutive, non-probability sampling. A standard protocol was followed for specimen collection. Urine collection was started from the next day of admission. Results: Mean random plasma glucose level was 174.54 +/- 33.06 mg/dL, mean HbA1c was 8.5 +/- 1.32%, mean urinary albumin 130.26 +/- 47.25 mg/24 hour and mean ACR was 104.30 +/- 51.56 mg/g. Area under ROC curve was 0.964 for microalbuminuria by ACR. Spearman's rank-order coefficient [rs] was 0.696 for ACR and 24 hour albumin excretion. Conclusion: ACR in first morning void urine accurately detected early microalbuminuria in type 2 diabetics.

therapy

Comparison of efficacy of angiotensin converting enzyme inhibitor [ACEIS] v/s angiotensin ii receptor blockers [ARBs] in management of micro albuminuria among normotensive type 2 diabetic patients.

Tahir, Muhammad; Ul Hassan, Wahaj; Alam, Haji Muhamamd Aftab

Combined Military Hospital

PAFMJ-Pakistan Armed Forces Medical Journal 2016; 66 (2): 258-261

Keywords: Angiotensin-Converting Enzyme Inhibitors; Angiotensin Receptor Antagonists-therapeutic uses; Diabetes Mellitus, Type 2; Treatment Outcome; Diabetes Complications

Abstract: Objective: To compare the efficacy of Angiotension Converting Enzyme [ACEIs] v/s Angiotensin II Receptor Blockers [ARBs] in management of micro albuminuria among normotensive type 2 diabetic patients. Study Design: Randomized controlled trial. Place and Duration of Study: Department of Medicine, Combined Military Hospital, Kohat from Oct 2011 to Mar 2012. Material and Methods: A total of 356 patients [178 in each group] between 30 and 60 years of age with newly diagnosed diabetes and having microalbuminuria fulfilling the inclusion criteria were selected through consecutive sampling and were enrolled in study. Patients were divided into two groups by random sampling. Group-1 [ACEIs] received enalapril 10mg/day while group-2 [ARBs] received losartan 50mg/day. Confounding variables were excluded using exclusion criteria. Results: Mean age of the patients was 53.8 +/- 8.7 and 53.1 +/- 9.5 years in group-1 and group-2, respectively. Majority of patients in both groups were male. Efficacy was observed in 154 patients [86.5%] of group-1 and in 157 patients [88.2%] of group-2. Difference between two groups was non-significant [p>0.05]. Conclusion: ACEIs and ARBs both protect type 2 diabetic patients from developing proteinuria.

Amikacin

blood

Usage pattern and serum level measurement of amikacin in the internal medicine ward of the largest referral hospital in the south of Iran: a pharmacoepidemiological study.

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Shiraz University of Medical Sciences - School of Pharmacy - Department of Pharmacotherapy

IJMS-Iranian Journal of Medical Sciences 2016; 41 (3): 191-199

Keywords: Internal Medicine; Cross-Sectional Studies

Abstract: Background: The inappropriate use of aminoglycosides has harmful effects such as the development of resistant pathogens and the incidence of nephrotoxicity and ototoxicity. Therefore, drug utilization evaluation of these

drugs may improve their usage remarkably. The aim of this study was to assess the usage pattern of amikacin in an internal medicine ward. Methods: This cross-sectional study was conducted in the Internal Medicine Ward of Nemazee Teaching Hospital, Shiraz, Iran, in 2011. The guideline for amikacin use was approved by the institutional Pharmacy and Therapeutics Committee, and the study criteria were developed to assess several parameters involved in amikacin therapy such as appropriateness of drug use, dosage, duration of therapy, toxicity monitoring, and serum concentration assay. Serum concentration was assayed using a Cobas Mira AutoAnalyzer. Clinical and paraclinical parameters such as glomerular filtration rate, culture, microbial sensitivity, white blood cell count, and fever were collected. Results: Sixty-three patients were evaluated. Fifty-seven percent of the patients needed dose readjustment; however, it was not performed for 89% of them. Culture between 48 and 72 hours after amikacin administration was not controlled for 79% of the patients. In 19% of the patients, optimum therapeutic effect was not achieved. The mean \pm SD of the trough and peak concentrations was 7.63 \pm 5.4 microg/mL and 15.67 \pm 7.79 microg/mL, respectively. Forty-five percent of the trough and 38% of the peak levels were within the therapeutic range. The overall adherence of amikacin usage to the guideline was only 48%. Conclusion: To achieve appropriate treatment and prevent toxic effects, we recommend that pharmacokinetic dosing methods, amikacin guideline, and serum monitoring be considered.

Aminolevulinic Acid

analogues and derivatives

5-ALA: in vitro effects as a photosensitizing agent for inactivation of opportunistic fungi.

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Bahrain Medical Bulletin 2016; 38 (2): 125-129

Keywords: Photosensitizing Agents; In Vitro Techniques; Fungi; Photochemotherapy; *Candida albicans*; *Cryptococcus neoformans*

Abstract: Background: The incidence of fungal infections have increased in recent decades, particularly, due to the increase in the immunocompromised population. Opportunistic fungal infections were identified as significant causes of mortality and morbidity in this population. In addition, multidrug resistance [MDR] patterns detected in fungal species limit the efficacy of antifungals. Photodynamic inactivation was identified, as a novel antimicrobial method of treatment with increased interest towards 5-Aminolevulinic acid [5-ALA]. It was found that when metabolized to Protoporphyrin IX [PpIX], a photosensitizing agent, irradiated with light, membrane damage was detected. Objective: To evaluate the potential of 5-ALA as an in vitro photosensitizing agent for antimicrobial photodynamic inactivation of opportunistic fungi. Method: CFU/ml cultures of *Candida albicans* and *Cryptococcus neoformans* were subjected to varying concentrations of 5-ALA and light intensity using 400 W halogen lamp. Surviving colonies were then recorded after 48 hours at 37 °C. Result: Preliminary results showed that *Cryptococcus neoformans* colonies were significantly reduced at 1 M 5-ALA and 200 J/cm². Conclusion: Future work on extraction of intracellular PpIX is needed to determine the potential of this alternative method for the inactivation of opportunistic fungi.

Amyloid Neuropathies, Familial

Familial amyloid polyneuropathy type IV [finnish] with rapid clinical progression in an iranian woman: a case report.

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IJMS-Iranian Journal of Medical Sciences 2016; 41 (3): 241-244

Keywords: Cranial Nerves; Hypotension, Orthostatic

Abstract: Familial amyloid polyneuropathy [FAP] type IV [FINNISH] is a rare clinical entity with challenging neuropathy and cosmetic deficits. Amyloidosis can affect peripheral sensory, motor, or autonomic nerves. Nerve lesions are induced by deposits of amyloid fibrils and treatment approaches for neuropathy are challenging. Involvement of cranial nerves and atrophy in facial muscles is a real concern in daily life of such patients. Currently, diagnosis of neuropathy can be made by electrodiagnostic studies and diagnosis of amyloidosis can be made by genetic testing or by detection of amyloid deposition in abdominal fat pad, rectal, or nerve biopsies. It is preferable to consider FAP as one of the differential diagnosis of a case presented with multiple cranial nerves symptoms. The authors present a case of familial amyloid polyneuropathy [FAP] type IV with severe involvement of multiple cranial nerves, peripheral limb neuropathy, and orthostatic hypotension.

Aneurysm

diagnosis

Posterior tibial artery aneurysm.

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Bahrain Medical Bulletin 2016; 38 (2): 113-115

Keywords: Tibial Arteries; Ultrasonography, Doppler, Duplex

Abstract: True posterior tibial artery aneurysm is an extremely rare pathology. A fifty-three-year-old Bahraini female presented with a pulsatile mass behind the left medial malleolus for one year duration. Arterial duplex and angiogram revealed a true saccular aneurysm of the posterior tibial artery. The aneurysm was resected and the posterior tibial artery was reconstructed with end-to-end anastomosis.

Arbutin

Effects of arbutin on radiation-induced micronuclei in mice bone marrow cells and its definite dose reduction factor.

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IJMS-Iranian Journal of Medical Sciences 2016; 41 (3): 180-185

Keywords: Gamma Rays; Radiation-Protective Agents; Bone Marrow Cells; Micronucleus Tests; Erythrocytes; Mice

Abstract: Background: Interactions of free radicals from ionizing radiation with DNA can induce DNA damage and lead to mutagenesis and carcinogenesis. With respect to radiation damage to human, it is important to protect humans from side effects induced by ionizing radiation. In the present study, the effects of arbutin were investigated by using the micronucleus test for anti-clastogenic activity, to calculate the ratio of polychromatic erythrocyte to polychromatic erythrocyte plus normochromatic erythrocyte [PCE/PCE+NCE] in order to show cell proliferation activity. Methods: Arbutin [50, 100, and 200 mg/kg] was intraperitoneally [ip] administered to NMRI mice two hours before gamma radiation at 2 and 4 gray [Gy]. The frequency of micronuclei in 1000 PCEs [MnPCEs] and the ratio of PCE/PCE+NCE were calculated for each sample. Data were statistically evaluated using one-way ANOVA, Tukey HSD test, and t-test. Results: The findings indicated that gamma radiation at 2 and 4 Gy extremely increased the frequencies of MnPCE [P<0.001] while reducing PCE/PCE+NCE [P<0.001] compared to the control group. All three doses of arbutin before irradiation significantly reduced the frequencies of MnPCEs and increased the ratio of PCE/PCE+NCE in mice bone marrow compared to the non-drug-treated irradiated control [P<0.001]. All three doses of arbutin had no toxicity effect on bone marrow cells. The calculated dose reduction factor [DRF] showed DRF=1.93 for 2Gy and DRF-2.22 for 4 Gy. Conclusion: Our results demonstrated that arbutin gives significant protection to rat bone against the clastogenic and cytotoxic effects of gamma irradiation.

Arteriovenous Fistula

Arteriovenous access in children.

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PAFMJ-Pakistan Armed Forces Medical Journal 2016; 66 (2): 285-289

Keywords: Renal Dialysis; Cross-Sectional Studies; Child; Vascular Patency

Abstract: Objective: To evaluate arteriovenous access [AVA] in children for patency and to compare our results with other studies. Study Design: Cross sectional descriptive study. Place and Duration of Study: Combined Military Hospital Rawalpindi and Combined Military Hospital Lahore, from 1[st] August 2005 to 15[th] June 2011. Patients and Methods: Total 35 AVA patients were included in the study. Record was made of age, weight, gender, physical examination of vein, findings of duplex venous mapping, plan of AVA and procedure performed. Twenty nine cases [82.8%] were already undergoing hemodialysis. Thirty [85.7%] cases were operated under general anesthesia and only 5 [14.2%] under local anesthesia. All end-to-side fistulae were made. Meticulous microsurgical technique was used. Patients were examined on 1st, 2nd and 10th postoperative days, and then every month for at least 12

months. Primary failure, complications and revision procedures were recorded. SPSS version 19.00 was used for statistical analysis. Primary and secondary patencies were calculated. Kaplan - Meier curve was used to express both primary and secondary patency. Results: Out of 35 AVA, 20 [57.1%] radiocephalic [RCAVA], 11[31.4%] brachiocephalic [BCAVA] and 4 [11.4%] brachioabasilic [BBAVA] were made. Three [8.5%] AVA thrombosed within 48 hours. Thrombectomy was done in all but only one [2.8%] was saved. Six [17.1%] presented with failure within next 6 months [4 RCAVA and 2 BCAVA]. Only 1 [2.8%] RCAVA was saved. One RCAVA, BCAVA and BBAVA each presented with failure between 6 and 12 months. Again 1 RCAVA was saved. Primary failure occurred in 4 [11.4%] patients. Primary patency rate at 6 months and 12 months was 74.2% and 65.7% respectively while secondary patency rate was 80% and 74.2% at 6 and 12 months respectively. Conclusion: Primary and secondary patency rates of AVA in children in our study were comparable to most of the similar studies.

Aspirin

pharmacology

Effect of aspirin on spinal cord injury: an experimental study.

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IJMS-Iranian Journal of Medical Sciences 2016; 41 (3): 217-222

Keywords: Spinal Cord Injuries; Rats, Wistar; Antioxidants

Abstract: Aspirin is an anti-inflammatory drug, peroxy radical scavenger, and antioxidant agent that inhibits phospholipases, nitric oxide synthetases, and cyclooxygenase enzymes. The existing literature contains no studies on the effects of various doses of aspirin on spinal cord injury [SCI]. Therefore, we sought to investigate the putative effects of aspirin on experimental SCI. The weight-drop injury model was used to produce SCI in 100 albino Wistar rats. The animals were allocated to five groups: a control group, where the rats did not undergo any surgical or medical intervention except for anesthesia; a sham-treated group, where laminectomy was performed without SCI and no further therapy was administered; and three other groups, where the rats with SCI received low-dose aspirin [20 mg/kg], high-dose aspirin [80 mg/kg], and a vehicle, respectively. Half of the rats were sacrificed 24 hours later, and their spinal cords were excised for biochemical studies. The other rats were subjected to Basso, Beattie, and Bresnahan [BBB] locomotor rating scale scoring once a week for 6 consecutive weeks. Aspirin decreased lipid peroxidation following SCI as the mean \pm [standard error] catalase level was significantly higher in the high-dose aspirin group [46.10 \pm 12.01] than in the sham-treated group [16.07 \pm 2.42] and the vehicle-treated group [15.31 \pm 3.20] [$P < 0.05$; $P < 0.05$, respectively]. Both of the groups treated with high-dose and low-dose aspirin demonstrated a higher mean BBB score than did the control group [$P < 0.001$] and the sham-treated group [$P < 0.001$]. Our data provide evidence in support of the potential effects of aspirin in biochemical and neurobehavioral recovery after SCI.

Azadirachta

Adulticidal efficacy of azadirachta indica [Neem Tree], sesamum indicum [Til] and pinus sabinaena [Pine Tree] extracts against aedes aegypti under laboratory conditions.

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PJMR-Pakistan Journal of Medical Research 2016; 55 (1): 11-15

Keywords: Plant Proteins; Calcium-Binding Proteins; Pinus; Plant Extracts; Plant Oils; Aedes-drug effects.

Abstract: Background: Emergence of resistance to insecticides against mosquitoes and other disease vectors has prompted the need for alternate sources of mosquito control which are more target-specific, easily bio-degradable and effective against mosquitoes. Materials and Methods: The adulticidal efficacy of crude Neem oil extract, Pine oil extract and Til oil extract with five different concentrations i.e. 2%, 4%, 6%, and 8% was tested against five to six days old sugar fed female *Aedes aegypti* using standard WHO Bioassay test kit. The percentage mortality was observed after 24 and 48 hours under laboratory condition. Results: The LC[50] [Lethal Concentration] values of Neem oil extract against adults of *Aedes aegypti* were. 1.17 ml and 0.09 ml after 24 and 48 hours of exposure respectively, while the LC[99] were 4.27 ml and 1.17 ml after 24 and 48 hours of exposure respectively. The LC[50] values of Pine oil extract after 24 and 48 hours were 0.25 and, 0.06 ml respectively, while LC[99] values at 24 and 48

hour were and 0.89 ml and 0.64 ml respectively. The LC[50] values of Til oil extract after 24 and 48 hours of exposure were 1.17 ml and 0.05 ml respectively while LC99 values were 4.18 ml and 1.28 ml after 24 and 48 hours of exposure respectively. The LC[50] and LC[90] values were indicative that the plant extracts were highly toxic after 48 hours of exposure. Among the tested plant oil extracts the maximum adulticidal efficacy was observed in the pine oil extract. No mortality was observed in controls. Conclusion: Crude extract of Pine oil was more effective against *Aedes aegypti* as compared to Neem and Til oil.

Baccharis

Antibacterial activity of *Baccharis dracunculifolia* in planktonic cultures and biofilms of *Streptococcus mutans*.

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Journal of Infection and Public Health 2016; 9 (3): 324-330

Keywords: *Streptococcus mutans*; Biofilms; Dental Caries; Anti-Bacterial Agents

Abstract: *Streptococcus mutans* is an important cariogenic microorganism, and alternative methods for its elimination are required. Different concentrations of *Baccharis dracunculifolia* essential oil [EO] were tested to determine its minimal inhibitory concentration [MIC] in planktonic cultures, and this concentration was used in *S. mutans* biofilms. Additionally, we assessed the effect of a 0.12% chlorhex-idine [CHX] and saline solution in *S. mutans* biofilms. The biofilms were grown in discs of composite resin for 48 h and exposed to *B. dracunculifolia*, CHX or saline solution for 5min. The viability of the biofilms was determined by counting the colony-forming units per milliliter [CFU/ml] in agar, which was statistically significant [P<0.05]. The MIC of the *B. dracunculifolia* EO to planktonic growth of *S. mutans* was 6%. In biofilms of *S. mutans* clinical isolates, *B. dracunculifolia* EO [6%] and CHX resulted in reductions of 53.3-91.1% and 79.1-96.6%, respectively. For the biofilm formed by the *S. mutans* reference strain, the reductions achieved with *B. dracunculifolia* EO and CHX were, respectively, 39.3% and 88.1%. It was concluded that *B. dracunculifolia* EO showed antibacterial activity and was able to control this oral microorganism, which otherwise causes dental caries.

Bacterial Infections

epidemiology

Prevalence of polybacterial infection and antimicrobial susceptibility of wound samples from different wards.

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Journal of Gorgan University of Medical Sciences 2016; 18 (1): 120-127

Keywords: Wounds and Injuries; Prevalence; Microbial Sensitivity Tests

Abstract: Background and Objective: Wound infection treatment, particularly in chronic and bacterial poly cases, is difficult and entails heavy costs. This study was done to determine the prevalence of poly bacterial infection and antimicrobial susceptibility of wound samples from different wards. Methods: In this descriptive study, wound sampling was prepared from 336 patients admitted to different wards of Baqiyatallah Hospital in Tehran, Iran. Identification was performed based on biochemical tests including oxidase test, TSI, IMVIC, lysine decarboxylase, phenylalanine deaminase, urea, motility, catalase, coagulase, mannitol fermentation, optochin sensitivity, susceptibility to bacitracin and sulfamethoxazole, growth in Bile esculin and DNase production. Antibiotic resistance pattern of isolates was determined using disk diffusion method for 14 important antibiotics. Results: 294 samples were positive for bacterial culture, from which 364 isolates including 11 different isolates were obtained. Out of 294 positive samples, 245 samples were mono bacterial and 54 were poly bacterial including two-bacterial [45 samples], three-bacterial [7 samples], and four-bacterial [2 samples]. *S. aureus* [29.7%], Enterococci [15.6%], and *E. coli* [15.6%] were the most prevalent isolates. *S. aureus*-Enterococci pattern was the most common two-bacterial pattern [33%], and majority of polybacterial patterns belonging to gram negative bacteria was in surgery ward [32.5%]. Antibiogram results showed high levels of antibiotic resistance in the isolates. Imipenem and amikacin were the most effective antibiotics against Gram negative isolates, and vancomycin for Gram positive isolates. Also, 71% of *S. aureus* isolates were resistant to oxacillin. Conclusion: Variation of bacterial isolates was similar to other studies. Most of poly-bacterial wound infections were due to common nosocomial pathogens and their high rates of antibiotic resistance are extremely alarming.

Bacteriuria

epidemiology

Asymptomatic bacteriuria among type 2 diabetic females.

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Bahrain Medical Bulletin 2016; 38 (2): 82-85

Keywords: Diabetes Mellitus, Type 2; Prevalence; Risk Factors; Prospective Studies

Abstract: Background: Asymptomatic bacteriuria [ASB] is a risk factor for pyelonephritis and renal dysfunction in diabetic patients. Objective: To investigate the prevalence of and risk factors for ASB among type 2 diabetic female patients. Setting: Chronic Diseases Clinic, Abha Polyclinic, Abha, Saudi Arabia. Design: A Prospective Controlled Study. Method: Two hundred forty-six type 2 diabetic females attending the Chronic Diseases Clinic screened for ASB. Personal characteristics, duration and glycosylated hemoglobin [HbA1c] level were recorded. Four hundred ninety-two age-matched, non-diabetic and apparently healthy females registered at the same polyclinic were used as controls. All participants were followed-up every three months for one year for the development of symptomatic UTI. Result: The mean age of type 2 diabetic females was 50.3 +/- 16.2 years, and 50.4 +/- 15.1 years for non-diabetic. [P-Value=0.976]. ASB was detected in 31 [12.6%] diabetic patients and in 32 [6.5%] controls. [P-Value=0.005]. E. coli was the most common organism in diabetic patients [18/31, 58.1%] and control subjects [23/32, 71.9%]. Risk factors for ASB among type 2 diabetic females were older age, marriage, duration of diabetes and elevated HbA1c. During the follow-up period, symptomatic UTI developed in 25/31 [80.6%] diabetic patients compared to 39/215 [18.1%] without ASB [P-Value<0.001]. Conclusion: Type 2 diabetic females are at a high risk of developing ASB. Risk factors for ASB include older age, marriage, longer duration of diabetes and high HbA1c.

Bile Ducts

injuries

Bile duct injuries and outcomes: a retrospective medical record review.

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PAFMJ-Pakistan Armed Forces Medical Journal 2016; 66 (2): 185-189

Keywords: Cholecystectomy; Postoperative Complications; Morbidity; Retrospective Studies

Abstract: Objective: To report on our experience of cholecystectomy associated bile duct injuries and observe factors influencing outcomes. Study Design: Simple descriptive study. Place and Duration of Study: Surgical unit IV, Military Hospital [MH] Rawalpindi, over a period of seven years from 01-01-2005 to 1-12-2012. Material and Methods: Eighty eight patients who underwent repair of bile duct injuries during this period were included in this study. Patients referred from class 'W and 'C' hospitals to our institute were also included. Results: Fifteen immediate repairs [0-72 hours] post cholecystectomy, forty eight intermediate repairs [72hrs-6wks] and twenty five late repairs [> 6 wks] were performed [table-1]. Short term morbidity was higher in patients with upper biliary tract injury [p=.04]. The most common long-term complication was biliary stricture, which occurred in 28 patients [31.8%]. Patients with bile duct injuries [BDIs] repaired in intermediate period were more prone to develop stricture of biliary tree than those repaired in immediate or late period [p=.03] [table 3]. Long term morbidity was also higher in patients who presented with bile contamination of peritoneum [p=.03] and had sustained complex biliary tract injuries [E4/E5] [p=.03]. The overall morbidity and mortality rate was 31% and 3% respectively. Conclusion: We observed that complex hilar injury, presence of intra-abdominal bile and timing of BDI repair is an important predictor of long-term outcome. Injuries repaired in early [0-72hrs] or late period [>6wks] were less likely to develop biliary stricture as compared to injuries repaired in intermediate period [72hrs-6wks]. Moreover complex hilar injuries and intra-abdominal bile at presentation increases the possibility for development of late biliary stricture.

Blood Donors

Seroprevalence of transfusion transmissible infections in blood donors: a three year experience.

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PAFMJ-Pakistan Armed Forces Medical Journal 2016; 66 (2): 190-193

Keywords: Seroepidemiologic Studies; Blood Transfusion; Infection

Abstract: Objective: To determine seroprevalence of transfusion transmissible infections [TTIs] in blood donors and to compare the present results with the data from studies conducted in past. Study Design: Descriptive study. Place and Duration of Study: Armed Forces Institute of Transfusion [AFIT], Rawalpindi. from January 2010 to December 2012. Material and Methods: All the blood donors who had donated blood at AFIT during the three year study period were included. Prior to blood donation at the institute, all the donors were subjected to a preset, structured questionnaire to determine their eligibility for donation as per the criteria set by the institute. Donors' serum samples were screened for hepatitis B virus [HBV], hepatitis C virus [HCV], human immunodeficiency virus [HIV] and syphilis by using HBsAg, anti-HCV, HIV. antigen-antibody combination assay and syphilis antibody test, respectively. The repeatedly reactive samples were considered as true reactive. Results: A total 160552 blood donors were screened during the study period. The mean age of the donors was 29 +/- 10.2 years [Range: 18 - 60 years]. Out of these, 158144 [98.5%] were male donors and 2408 [1.5%] were female donors. 7385 [4.6%] donors were volunteer and 153167 [95.4%] donors the replacement donors. The seroprevalence of TTIs in the donors for HBV, HCV, HIV and syphilis was 2385 [1.48%], 4194 [2.61%] 26 [0.02%] and 1520 [0.95%], respectively. The seroprevalence of HBV was higher and statistically significant [p value<0.05] in Gp-II [31-45 years] and the seroprevalence of both HCV and Syphilis was higher and statistically significant [p value <0.05] in both GP-II [31-45 years] and GP-III [46 years and above] when compared with overall seroprevalence of the respective infections in all age groups. Conclusion: This study highlights that the seroprevalence of HBV and HCV is decreasing in our blood donors, but still it is an important risk factor for spread of these infections. The seroprevalence of HIV is rising gradually in the blood donors.

Boron

therapeutic uses

Boron induces early matrix mineralization via calcium deposition and elevation of alkaline phosphatase activity in differentiated rat bone marrow mesenchymal stem cells.

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Cell Journal [Yakhteh] 2016; 18 (1): 62-73

Keywords: Alkaline Phosphatase; Mesenchymal Stromal Cells; Rats, Wistar; Bone Marrow; Boric Acids

Abstract: Objective: Boron [B] is essential for plant development and might be an essential micronutrient for animals and humans. This study was conducted to characterize the impact of boric acid [BA] on the cellular and molecular nature of differentiated rat bone marrow mesenchymal stem cells [BMSCs]. Materials and Methods: In this experimental study, BMSCs were extracted and expanded to the 3rd passage, then cultured in Dulbecco's Modified Eagle's Medium [DMEM] complemented with osteogenic media as well as 6 ng/ml and 6 µg/ml of BA. After 5, 10, 15 and 21 days the viability and the level of mineralization was determined using MTT assay and alizarin red respectively. In addition, the morphology, nuclear diameter and cytoplasmic area of the cells were studied with the help of fluorescent dye. The concentration of calcium, activity of alanine transaminase [ALT], aspartate transaminase [AST], lactate dehydrogenase [LDH] and alkaline phosphatase [ALP] as well as sodium and potassium levels were also evaluated using commercial kits and a flame photometer respectively. Results: Although 6 microg/ml of BA was found to be toxic, a concentration of 6 ng/ml increased the osteogenic ability of the cell significantly throughout the treatment. In addition it was observed that B treatment caused the early induction of matrix mineralization compared to controls. Conclusion: Although more investigation is required, we suggest the prescription of a very low concentration of B in the form of BA or foods containing BA, in groups at high risk of osteoporosis or in the case of bone fracture.

Bulbourethral Glands

A rare case of Cowper's syringocele in an adult male: Clinical presentation and management.

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Journal of Taibah University Medical Sciences 2016; 11 (2): 168-171

Keywords: Transurethral Resection of Prostate; Laser Therapy; Disease Management

Abstract: A 25-year-old male presented with a weak urine stream and increased urinary frequency for six months. Clinical examination and baseline investigations were unremarkable. Flexible cystourethroscopy and magnetic resonance imaging revealed the closed type of Cowper's syringocele. Transurethral laser marsupialization of the syringocele was carried out without adverse events. The patient's symptoms disappeared after surgery and he remained symptom-free through a 15-month period of follow-up.

Calcium Compounds

Sorption and solubility of biodentine new restorative material.

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Pakistan Oral and Dental Journal 2016; 36 (1): 126-129

Keywords: Silicates; Sorption Detoxification; Solubility; Composite Resins; Dental Restoration Permanent

Abstract: Since water sorption of any restorative material can result in expansion of the restoration, which would be detrimental to the restoration, it is important to limit the amount of water absorbed. In addition, solubility of restorative materials is of concern, since inorganic ions can leach into the surrounding environment resulting in breakdown of the restoration. The aim of this study was to measure and compare water sorption and solubility values of Biodentine new direct restorative material with other conventional restorative materials. Three direct restorative materials were selected for this study: Biodentine [Septodont, France], composite [masterfill], GIC [Kemdent, UK]. Ten specimens were prepared from each restorative material [n=10] using a stainless steel mold of 15 mm in inner diameter and 1 mm in thickness. Each restorative material was prepared according to manufacturer's instructions. Water sorption and solubility of each specimen was calculated by weighting the samples before and after immersion in water for 15 days and desiccation. Data were analyzed with one way ANOVA and t-test at [0.05] level of significance. One way ANOVA that, there were statistically significant differences between the tested groups [P<0.05] in both sorption and solubility values. Within the limit of this study, Biodentine restorative material showed an intermediate sorption and solubility values between Kemdent GIC restorative and Master Fill composite and due to this result the material [Biodentine] is not recommended to be used as a final direct restorative material but recommended to be used as abase only.

Calcium Hydroxide

Success rate of vitapex as an obturating material in primary molars.

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Pakistan Oral and Dental Journal 2016; 36 (1): 122-125

Keywords: Root Canal Filling Materials; Silicones; Root Canal Obturation; Tooth, Deciduous; Dental Pulp; Pulpectomy

Abstract: The aim of this study was to determine the success rate of Vitapex as an obturating material for primary teeth. A total of 50 patients with non-vital necrotic pulp of lower primary molars were selected. They were treated with contemporary treatment of pulpectomy. After disinfections of canals, obturation was done with Vitapex and restoration of tooth was done. Clinical and radiographic examination was done at one, two and three month intervals. The teeth were evaluated for pain, tenderness to percussion, swelling, presence of radiolucency. Results showed out of 50 patients, 24 were females and 26 were males. Age of patients ranged from 5 years to 10 years with a mean value of 7.2 and standard deviation +/- 1.6. Success rate of Vitapex was 88% [44 patients] and 12% [6 patients] cases were in failure. It was concluded that 88% success rate of Vitapex®, showed promising results to save a restorable primary tooth until its normal exfoliation.

Camellia sinensis

Effect of green tea extract [Camellia sinensis] on kidney toxicity induced by sodium arsenite: a stereological study.

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Journal of Gorgan University of Medical Sciences 2016; 18 (1): 30-38

Keywords: Plant Extracts; Kidney Diseases; Antioxidants; Sodium Compounds; Arsenites-toxicity; Mice.

Abstract: Background and Objective: Sodium Arsenite is an environmental pollutant which can generate free radicals causing tissue damage. This study was done to evaluate the effect of Green Tea [GTE], as a strong antioxidant, on kidney tissue in mice treated with Sodium Arsenite. Methods: In this experimental study 24 adult male NMRI mice were randomly allocated into four groups including: control, GTE [100mg/kg/day], Sodium Arsenite [5mg/kg/day] and Sodium Arsenite + GTE, for 34 days, orally. Animals were scarified and left kidney was taken out, fixed, sectioned, processed and stained using Heidenhain'azan method. Using stereological technique the total volume of kidney, volume of cortex, medulla, proximal and distal tubule, renal corpuscle, glomerulus, tuft and capillary, membrane and space of Bowman's capsule and length of proximal and distal tubule were determined. Creatinine, BUN and MDA serum samples were measured. Results: The mean of total volume of cortex, proximal tubule, distal tubule, renal corpuscle and glomerulus, tuft, Bowman's capsule space, size of epithelium and lumen of proximal and distal tubule were significantly reduced in Sodium Arsenite group compared to control [P<0.05]. These parameters were significantly increased in the Sodium Arsenite + GTE group in comparison with Sodium Arsenite group [P<0.05], The creatinine, Blood urea nitrogen [BUN] and MDA were significantly increased in the Sodium Arsenite group in compared to the control group [P<0.05]. These parameters were significantly reduced in the Sodium Arsenite + GTE group in comparison with Sodium Arsenite group [P<0.05]. Conclusion: Green tea has a protective role in Sodium Arsenite induced nephrotoxicity.

Camels

The unique medicinal properties of camel products: a review of the scientific evidence.

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Journal of Taibah University Medical Sciences 2016; 11 (2): 98-103

Keywords: Milk; Urine; Diabetes Mellitus; Lactoferrin; Immunoglobulins; Disease Management; Antineoplastic Agents

Abstract: Camel milk and urine have been used as medicines in certain parts of Asia and Africa since ancient times, but only recently have scientists shown interest in exploring the claimed therapeutic benefits of camel products. Significant evidence, drawn from laboratory and limited clinical studies, has shown that camel milk on its own and occasionally mixed with camel urine is effective in the management of diverse clinical conditions such as diabetes mellitus, cancer, food allergy, autism, viral hepatitis and a host of other viral, bacterial and parasitic infections. In addition, a number of potential benefits of camel milk and urine on the cardiovascular system, particularly their antiplatelet and fibrinolytic actions, have been demonstrated. The current review presents a concise summary of the scientific evidence to support these therapeutic actions.

Carcinogens

Environmental carcinogen exposure and lifestyle factors affecting cancer risk in Qatar: findings from a qualitative review.

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International Agency for Research on Cancer - Environment and Radiation Section

EMHJ-Eastern Mediterranean Health Journal 2016; 22 (3): 219-227

Keywords: Neoplasms; Risk Factors; Life Style; Environmental Pollution

Abstract: To meet the country's health goals for 2011-2016, a qualitative review of exposure to risk factors for cancer in Qatar was conducted in 2013. The review included exposure to environmental agents carcinogenic to humans [International Agency for Research on Cancer classification], as well as lifestyle factors known to affect cancer risk. Information from all available sources was assembled and reviewed. The levels of particulate matter

reported in Qatar were in the upper range of ambient air pollutants reported internationally, and may influence the country's future lung cancer burden. The limited data on occupational exposure suggests that the greatest risks for workers in the construction industry are likely to be from environmental dust and related air pollutants. The greatest cancer risks for Qatari nationals may be lifestyle factors, particularly obesity, physical inactivity and tobacco use. Extended monitoring of the composition of and human exposure to air pollutants is recommended.

Carotenoids

Crocin improves damage induced by nicotine on a number of reproductive parameters in male mice.

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IJFS-International Journal of Fertility and Sterility 2016; 10 (1): 71-78

Keywords: Nicotine-adverse effects; Mice; Fertility; Antioxidants; Spermatozoa

Abstract: Background: Crocin, a carotenoid isolated from *Crocus sativus* L. [saffron], is a pharmacologically active component of saffron. Nicotine consumption can decrease fertility in males through induction of oxidative stress and DNA damage. The aim of this study is to determine the effects of crocin on reproductive parameter damages in male mice exposed to nicotine. Materials and Methods: In this experimental study, we divided 48 mice into 8 groups [n=6 per group]: control [normal saline], nicotine [2.5 mg/kg], crocin [12.5, 25 and 50 mg/kg] and crocin [12.5, 25 and 50 mg/kg] + nicotine [2.5 mg/kg]. Mice received once daily intraperitoneal injections of crocin, nicotine and crocin + nicotine for 4 weeks. Sperm parameters [count, motility, and viability], testis weight, seminiferous tubule diameters, testosterone, and serum nitric oxide levels were analyzed and compared. Results: Nicotine administration significantly decreased testosterone level; sperm count, viability, and motility; testis weight and seminiferous tubule diameters compared to the control group [P<0.05]. However, increasing the dose of crocin in the crocin and crocin + nicotine groups significantly boosted sperm motility and viability; seminiferous tubule diameters; testis weight; and testosterone levels in all groups compared to the nicotine group [P<0.05]. Conclusion: Crocin improves nicotine-induced adverse effects on reproductive parameters in male mice.

Carum

Anticonvulsant effect of the aqueous extract and essential oil of carum carvi L. seeds in a pentylenetetrazol model of seizure in mice.

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University of Medical Sciences - Student Research Committee

IJMS-Iranian Journal of Medical Sciences 2016; 41 (3): 200-208

Keywords: Anticonvulsants; Seizures; Plant Extracts; Pentylenetetrazole; Mice

Abstract: Background: *Carum carvi* L. [caraway], known as black zeera in Iran, has been indicated for the treatment of epilepsy in Iranian folk medicine. This study evaluated whether the aqueous extract and essential oil of caraway seeds have anticonvulsant effects in mice. Methods: The anticonvulsant effects of the aqueous extract [200, 400, 800, 1600, and 3200 mg/kg, i.p.] and essential oil [25, 50, 100, 200, and 400 mg/kg, i.p.] of caraway were assessed using pentylenetetrazol [PTZ; 95 mg/kg i.p.] induced convulsions. Diazepam [3 mg/kg] was used as positive control. The latency time before the onset of myoclonic, clonic, and tonic convulsions and the percentage of mortality were recorded. In addition, the effect of caraway on neuromuscular coordination was evaluated using the rotarod performance test. Results: The extract and essential oil dose-dependently increased the latency time to the onset of myoclonic [ED50, 1257 and 62.2 mg/kg, respectively] and clonic [ED50, 929 and 42.3 mg/kg, respectively] seizures. The extract and essential oil of caraway prevented the animals from tonic seizure with ED50s of 2142.4 and 97.6 mg/kg, respectively. The extract and essential oil of caraway protected 28.6 and 71.4% of the animals from PTZ-induced death, respectively, and had no significant effect on neuromuscular coordination. Conclusion: This study showed that the aqueous extract and essential oil of caraway had anticonvulsant properties. However, the essential oil was more potent and effective than was the aqueous extract as an anticonvulsant. Additionally, the anticonvulsant effect of caraway was not due to a muscle relaxant activity. These findings support the acclaimed antiepileptic effect of caraway in folk medicine and propose its potential use in petit mal seizure in humans.

Cellulitis

etiology

Education-family physician corner eosinophilic cellulitis [wells syndrome]

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Bahrain Medical Bulletin 2016; 38 (2): 102-104

Keywords: Eosinophilia; Foot; Prednisolone; Cellulitis-diagnosis

Abstract: Eosinophilic Cellulitis [Wells Syndrome] is an uncommon inflammatory disease with clinical polymorphism. A thirty-five-year-old female presented with 2 weeks history of gradually progressive and painful erythematous plaque on the right foot. She had already received several types of antibiotic for the Cellulitis without improvement. A diagnosis of Wells syndrome was established. Significant improvement was noted after one month of treatment with prednisolone. Awareness of this condition is necessary for early identification and management.

Cerium

pharmacology

Nanoceria attenuated high glucose-induced oxidative damage in hepg2 cells.

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Cell Journal [Yakhteh] 2016; 18 (1): 97-102

Keywords: Hyperglycemia; Antioxidants; Oxidative Stress; Hep G2 Cells; Reactive Oxygen Species; Lipid Peroxidation; Glutathione

Abstract: Objective: Hyperglycemia, a common metabolic disorder in diabetes, can lead to oxidative. Damage. The use of antioxidants can benefit the control and prevention of diabetes side effects. This study aims to evaluate the effect of nanoceria particles, as an antioxidant, on glucose induced cytotoxicity, reactive oxygen species [ROS], lipid peroxidation [LPO] and glutathione [GSH] content in a human hepatocellular liver carcinoma cell line [HepG2] cell line. Materials and Methods: In this experimental study, we divided HepG2 cells into these groups: i. Cells treated with 5 mM D-glucose [control], ii. Cells treated with 45 mM Dmannitol+ 5 mM D-glucose [osmotic control], iii. Cells treated with 50 mM D-glucose [high glucose], and iv. Cells treated with 50 mM D-glucose+nanoceria. Cell viability, ROS formation, LPO and GSH were measured and analyzed statistically. Results: High glucose [50 mM] treatment caused significant cell death and increased oxidative stress markers in HepG2 cells. Interestingly, nanoceria at a concentration of 50 mM significantly decreased the high glucose-induced cytotoxicity, ROS formation and LPO. This concentration of nanoceria increased the GSH content in HepG2 cells [P<0.05]. Conclusion: The antioxidant feature of nanoceria particles makes it an attractive candidate for attenuation of hyperglycemia oxidative damage in different organs.

Child Abuse

Effect of therapeutic intervention on general health of child abused mothers.

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Journal of Gorgan University of Medical Sciences 2016; 18 (1): 1-7

Keywords: Health; Mothers; Depression; Anxiety; Surveys and Questionnaires; Parents

Abstract: Background and Objective: Child abuse is a common phenomenon with variety of reasons; the most important one is mother psychiatric disorders. Concurrent interventions in the family can recover the mother and reduce child abuse. This study was done to evaluate the effect of therapeutic intervention on. general health of child abused mothers. Methods: This clinical trial study was conducted on 57 children and their child abused mothers whom referred to child psychiatry and pediatric department of Imam Hossien hospital, Tehran, Iran during November 2009- April 2010. Children and their families were visited by a psychiatrist and depend on the child and the family after either pharmaceutical or psychological interventions was taken. Parent management training was done for all mothers in 8 weekly sessions. General health questionnaire were filled by mothers before intervention in the third

and sixth months following the intervention. Results: Total score of general health, depression and anxiety of child abused mothers were 31.3 +/- 1.90, 5.26 +/- 0.66, 8.10 +/- 0.46, respectively. It was significantly increased after six months intervention in comparison with pre-intervention [37.3 +/- 2.34, 7.48 +/- 0.72, 10.44 +/- 0.58, respectively]. Conclusion: Appropriate therapeutic intervention and parent management training for mothers can improve general health of child abused mothers.

Child Health

Improved water and child health in Egypt: impact of interrupted water supply and storage of household water on the prevalence of diarrhoea.

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EMHJ-Eastern Mediterranean Health Journal 2016; 22 (1): 5-19

Keywords: Water; Diarrhea-epidemiology; Prevalence; Water Supply

Abstract: Egypt is approaching universal access to improved water supply, but the variable quality of improved water may have a measureable health impact. We investigated the impact of different measures of improved water access on the prevalence of diarrhoea among children aged under 5 years. Using data from the 2008 Egypt Demographic and Health Survey and propensity score matching techniques we compared children in households with improved water supplies, with/without interruptions to supplies and with/without in-home storage of water. Access to improved water that was not subject to cuts resulted in a significant 2.6 percentage point reduction in the prevalence of diarrhoea [4.7% reduction in rural areas], and access to improved water that was not stored prior to use resulted in a 3.5% reduction. Further research is needed to better understand the nature and causes of piped water interruptions in Egypt, in order to address potential infrastructure challenges that are leading to poorer health outcomes.

Chromosomes, Human, Pair 9

Report of a case with trisomy 9 mosaicism.

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IJMS-Iranian Journal of Medical Sciences 2016; 41 (3): 249-252

Keywords: Trisomy; Mosaicism; Cytogenetic Analysis

Abstract: Trisomy 9 is a rare chromosome disorder with high neonatal mortality. It is often seen in mosaic form. Most patients who survive are severely mentally retarded. The main features of this syndrome are "bulbous" nose, microphthalmia, dislocated limbs, and other anomalies of skeletal, cardiac, genitourinary, and central nervous system. Most patients have developmental and cognitive impairment. Patients with mosaicism survive longer than non-mosaics, but it was believed that the degree of mosaicism in lymphocytes or fibroblasts does not associate with survival or degree of impairment. In this report, we present a 2,5- year-old male case of mosaic trisomy 9, to show the wide range of clinical findings in this chromosome disorder. The patient had cardiac anomalies, inguinal hernia, and undescended testes. He had low-set slightly malformed ears, deeply-set malformed eyes, small palpebral fissures, micrognathia, developmental delay and unilateral optic hypoplasia. The most prominent facial anomaly in this patient was eye anomalies. Cytogenetic analysis with G banding showed karyotype 47XY,+ 9 in 44% of peripheral lymphocytes examined [47XY,+9[22], 46XY[28]]. His parents' karyotypes were normal. Moderate developmental delay, which was detected in this patient shows that the range of motor and cognitive impairment in this chromosomal disorder is quite broad. This fact should be considered in genetic counseling as well as prenatal diagnosis of this chromosomal disorder.

Cleft Lip

psychology

Investigating psychosocial impact of cleft lip and palate on patients and parents.

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Pakistan Oral and Dental Journal 2016; 36 (1): 42-44

Keywords: Cleft Palate-psychology; Social Support; Surveys and Questionnaires; Cross-Sectional Studies; Tertiary Care Centers; Parents; Patients

Abstract: The objectives of this study are to evaluate the psychosocial impact of cleft lip and palate [CLP] condition among non-syndrome patients and their parents in Malaysia. Total eighty three CLP patients [age. > 10 years] and eighty three parents were selected from university of Malaya medical centre [UMMC] and Hospital Kota Bharu I Hospital Raja Perempuan Zainab II [HKB I HRPZII] Kelantan Malaysia. The Questionnaires were used for determining impact of CLP condition on psychosocial status of patients and parents. It was found that due to CLP condition majority of patients were teased. In addition, the self-confidence of CLP patients was also adversely affected. Among the parents 22.9% felt upset always, 36.1% felt upset often while 8.4% felt upset sometimes about their child oral cleft in the current study. Only 26.5% of the patients reported that they have problems at school due to their CLP condition. About 54.2% of patients were having very good relationship with other children, 37.3% had reasonably good and 8.4% were having quite good relationship with other children. The prevalence of teasing was quite high among the oral cleft patients. The self-confidence was adversely affected because of the cleft condition among majority of the patients.

surgery

Staged reconstruction of a tesser number 4 facial cleft.

Nor, Ahmad Muhsin Mohammad; Kumar, Ramesh; Kelly, Enda Gerard; Zain, Mohd Ali Mat; Basiron, Normala; Imran, Farrah Hani

Bahrain Medical Bulletin 2016; 38 (2): 110-112

Keywords: Cleft Palate; Rare Diseases; Macrostromia

Abstract: Tessier number 4 cleft is an extremely rare facial cleft. We report a case of Tessier number 4 facial cleft recently managed in our center. The approach to facial clefts is multi-disciplinary and may differ between centers. Multiple surgical interventions are required as well as a good psychosocial support. The child underwent a craniofacial reconstruction at 6 months of age, followed by a left macrostromia repair 9 months later and transcranial correction of the right orbital dystopia with eyelid reconstruction.

therapy

Management of uncorrected cleft lip - an innovative prosthodontic approach.

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Pakistan Oral and Dental Journal 2016; 36 (1): 136-140

Keywords: Mouth, Edentulous; Prosthodontics; Denture, Complete; Aged; Developing Countries

Abstract: Instances of uncorrected cleft lip in adult or elderly patients are still seen in rural areas or among the people who are unaware of its correction in the developing countries. Adult patients who did not receive proper treatment for cleft lip are challenging for clinicians in terms of prosthetic rehabilitation especially when the patient become edentulous. This paper presents the management and personal identity revival of a completely edentulous 54 year old patient with uncorrected bilateral cleft lip. The facial deformity was characterized by irregularities of upper lip, protruded and rotated central incisors in the pre-maxillary region with multiple missing teeth in the upper jaw and completely edentulous lower jaw. Complete Dentures were inserted following extraction of the central incisors and the remaining natural teeth in the upper jaw, along with a Lip prosthesis made out of silicone that is retained to the maxillary Complete Denture by means of magnets. The patient was very pleased with the improvement in speech and chewing and she approved of her facial esthetics. The existence of uncorrected cleft in the elderly population highlights the need to improve policies in treating patients with cleft lip, mainly in developing countries.

Cleidocranial Dysplasia

diagnosis

Cleidocranial dysplasia- a case report and literature review.

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Pakistan Oral and Dental Journal 2016; 36 (1): 29-31

Keywords: Cranial Fontanelles; Cranial Sutures; Tooth, Supernumerary; Prevalence

Abstract: Cleidocranial dysplasia is a rare congenital skeletal disorder, associated with hypoplasia or aplasia of clavicles, delayed closure of cranial sutures and fontanelles, frontoparietal bossing, delayed exfoliation of primary dentition, delayed or failure of eruption of permanent teeth, and presence of multiple supernumerary teeth. The disorder is caused by mutation in the CBFA1 gene, on the short arm of chromosome 6p21. Estimated prevalence of cleidocranial dysplasia is one per million, without gender or ethnic predilection. A multidisciplinary approach is often required for dental management of multiple supernumerary teeth. We report clinical and radiographic presentation and surgical management of multiple supernumerary teeth in an 11-year-old child with cleidocranial dysplasia.

Clobetasol

adverse effects

Frequency of serum cortisol suppression in patients using 0.05% clobetasol propionate as topical steroid for more than 3 weeks.

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PAFMJ-Pakistan Armed Forces Medical Journal 2016; 66 (2): 199-202

Keywords: Hydrocortisone-pharmacology; Cross-Sectional Studies; Clobetasol-therapeutic uses; Administration, Topical; Hydrocortisone-blood

Abstract: Objective: To determine the frequency of serum cortisol suppression in patients using 0.05% clobetasol propionate as topical steroid for more than 3 weeks. Study Design: Cross sectional Study. Place and Duration of Study: Both outdoor and indoor patients of Dermatology Department, Military Hospital [MH] Rawalpindi for duration of 6 months i.e. from 18th April 2012 to 17th October 2012 were selected. Patients and Methods: A total of 189 patients were included in the study. Non-probability purposive sampling technique was used. Early morning [0800 hrs] serum for cortisol levels was taken before starting the treatment and same was repeated after 3 weeks at AFIP. Effect modifiers like age and gender were controlled through stratification. The data was analyzed using SPSS version 10. The quantitative variables like age, duration of illness were calculated by taking standard deviation and mean whereas the qualitative variables like gender, suppression of serum cortisol levels were calculated by taking percentages and frequency. Frequency of serum cortisol suppression was presented according to gender and age groups. Results: Majority of the patients selected were between 31-40 years i.e. 44.98% [n=85]. Gender distribution was 61.90% [n=117] males and 38.10% [n=72] females. Frequency of serum cortisol suppression in patients using 0.05% Clobetasol propionate as topical steroid for more than 3 weeks was seen in 33.33% [n=63]. Conclusion: The frequency of serum cortisol suppression was significantly higher amongst patients using clobetasol propionate 0.05%. Therefore patients prescribed clobetasol propionate 0.05% topically should be checked for serum cortisol suppression regularly if the application is intended to be used for more than 3 weeks.

Cochlear Implants

Comparison of auditory perception in cochlear implanted children with and without additional disabilities.

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IJMS-Iranian Journal of Medical Sciences 2016; 41 (3): 186-190

Keywords: Auditory Perception; Disabled Children; Cross-Sectional Studies

Abstract: Background: The number of children with cochlear implants who have other difficulties such as attention deficiency and cerebral palsy has increased dramatically. Despite the need for information on the results of cochlear implantation in this group, the available literature is extremely limited. We, therefore, sought to compare the levels of auditory perception in children with cochlear implants with and without additional disabilities. Methods: A spondee test comprising 20 two-syllable words was performed. The data analysis was done using SPSS, version 19. Results: Thirty-one children who had received cochlear implants 2 years previously and were at an average age of 7.5 years were compared via the spondee test. From the 31 children, 15 had one or more additional disabilities. The data analysis indicated that the mean score of auditory perception in this group was approximately 30 scores below that of the children with cochlear implants who had no additional disabilities. Conclusion: Although there was an improvement in the auditory perception of all the children with cochlear implants, there was a noticeable difference in the level of auditory perception between those with and without additional disabilities. Deafness and additional

disabilities depended the children on lip reading alongside the auditory ways of communication. In addition, the level of auditory perception in the children with cochlear implants who had more than one additional disability was significantly less than that of the other children with cochlear implants who had one additional disability.

Colistin

administration and dosage

Establishment and comparison of nephrotoxicity associated with the use of various doses of colistin in rabbits.

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PAFMJ-Pakistan Armed Forces Medical Journal 2016; 66 (2): 180-184

Keywords: Kidney-pathology; Drug-Related Side Effects and Adverse Reactions; Rabbits; Colistin-toxicity.

Abstract: Objective: This study was designed to assess the nephrotoxicity associated with various doses of Colistin sulfate in rabbits. Study Design: Laboratory based randomized controlled trials, Place and Duration. of Study: This study was held at Army Medical College, Rawalpindi. Study period was from 15[th] April till 30[th] April 2012. Material and Methods: Rabbits were divided into three groups of six rabbits each. Baseline serum urea, serum creatinine and serum electrolytes were estimated. A loading dose of colistin infusion was given followed by I.M injections for six days. Rabbits were sacrificed 24 hours after the last dose and both kidneys were sent for histopathology. Results: There was marked nephrotoxicity in high toxic group where as in low toxic group mild nephrotoxicity was evident. Conclusion: It was established that we may safely escalate dose of colistin up to four times the currently recommended schedule to combat the threat of resistance when using it for one to two weeks.

Colorectal Neoplasms

Association between hypolipidemias and colorectal carcinoma.

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PAFMJ-Pakistan Armed Forces Medical Journal 2016; 66 (2): 203-206

Keywords: Case-Control Studies; Lipids-blood

Abstract: Objective: To study association of hypolipidemias and primary colorectal carcinoma in population of patients of colorectal carcinoma presenting to Combined Military Hospital [CMH] Rawalpindi. Study Design: Case control study. Place and Duration of Study: Oncology department, Combined Military Hospital [CMH], Rawalpindi. Material and Methods: Forty one treatment naive patients between ages of 18-75, with histologically confirmed primary colorectal carcinoma were selected and their serum lipid profile was measured after an overnight fast, from Armed Forces Institute of Pathology [AFIP]. These levels were compared with 41 controls, selected from healthier population, using an unpaired T test. Frequency and percentages were computed for variables; sex, age and stage at presentation. Results: Colorectal carcinoma had significant association with triglycerides [p=0.007], total cholesterol [p=0.014] and LDL [p=0.013]. Conclusion: There is an inverse relationship between serum total and LDL cholesterol, and colorectal carcinoma, implying that hypolipidemias may play a role in development of colorectal carcinoma.

epidemiology

Prevalence of anxiety and depression in patients with colorectal cancer in Babol - north of Iran [2008-12]

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Journal of Gorgan University of Medical Sciences 2016; 18 (1): 101-107

Keywords: Anxiety; Depression; Prevalence; Cross-Sectional Studies; Surveys and Questionnaires

Abstract: Background and Objective: Colorectal cancer can significantly cause physical, psychological and social problems. This study was done to determine the prevalence of anxiety and depression in patients with colorectal

cancer in Babol located in north of Iran. Methods: This cross-sectional, analytical study was done on 120 [75 males, 45 females] patients with colorectal cancer which registered in the Babol cancer registry in north of Iran during 2008-12. A questionnaire containing demographic information, aspects of the disease and HADS questionnaire was completed by interviewing to assess anxiety and depression for each patient. Results: The prevalence rate of depression and anxiety in patients was 23.4% and 30.8%, respectively. Gender, residency of rural area, and having comorbidities are related to depression among which location was identified as an independent predictor. Urban residency had 79% less risk of depression than rural residents [95% CI=0.06-0.67, OR=0.21, P<0.009]. Gender, resident of rural areas, unemployed, having comorbidities, low income and lack of education were associated with anxiety, among which only education was identified as an independent predictor [95% CI=L32-13.81, OR=4.27, P<0.015]. Conclusion: The prevalence of anxiety and depression in colorectal cancer patients was high in this area. Therefore, interventions are recommended to increase awareness and greater attention to rural women and controlling comorbidities.

Common Cold

General public knowledge and practices about the common cold.

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Journal of Taibah University Medical Sciences 2016; 11 (2): 104-109

Keywords: Health Knowledge, Attitudes, Practice; Surveys and Questionnaires; Cross-Sectional Studies; Anti-Bacterial Agents; Delivery of Health Care

Abstract: Objectives: This study aimed to evaluate the knowledge and practices of the general public about the common cold in Taif, KSA. Methods: A pre-validated questionnaire was developed and administered to 1700 respondents using a non-probability convenience sampling technique. A total of 1487 completed and valid questionnaires were successfully obtained. All data were analysed using IBM SPSS version 22.0 at an alpha value of 0.05. Results: The majority of respondents demonstrated poor knowledge about the common cold. Forty percent of respondents believed that there was no difference between the common cold and the flu. Sixty-six percent of participants believed that antibiotics would cure the common cold. Only 24% believed that coughing and direct contact with patients suffering from the common cold would spread this illness. A small number of participants, after catching the common cold, took precautionary measures such as avoiding contact with other people. Conclusion: It can be concluded that the general public has poor knowledge about the common cold, which is reflected in their routine practices towards illness management. Healthcare policy makers should consider these findings in developing plans for improving public knowledge and practices.

Communicable Diseases

Overview of the CSIRO Australian Animal Health Laboratory.

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Australian Animal Health Laboratory - Emerging Infectious Diseases Program

Journal of Infection and Public Health 2016; 9 (3): 236-239

Keywords: Coronavirus Infections; Zoonoses; Communicable Diseases, Emerging

Abstract: Emerging infectious diseases arising from livestock and wildlife pose serious threats to global human health, as shown by a series of continuous outbreaks involving highly pathogenic influenza, SARS, Ebola and MERS. The risk of pandemics and bioterrorism threats is ever present and growing, but our ability to combat them is limited by the lack of available vaccines, therapeutics and rapid diagnostics. The use of high bio-containment facilities, such as the CSIRO Australian Animal Health Laboratory, plays a key role studying these dangerous pathogens and facilitates the development of countermeasures. To combat diseases like MERS, we must take a holistic approach that involves the development of early biomarkers of infection, a suite of treatment options [vaccines, anti-viral drugs and antibody therapeutics] and appropriate animal models to test the safety and efficacy of candidate treatments.

Computer Communication Networks

Human Disease Insight: An integrated knowledge-based platform for disease-gene-drug information.

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Centre for Interdisciplinary Research In Basic Sciences - Jamia Millia Islamia

Journal of Infection and Public Health 2016; 9 (3): 331-338

Keywords: Knowledge; Databases, Genetic; Drug Information Services; Awareness; Health Knowledge, Attitudes, Practice

Abstract: The scope of the Human Disease Insight [HDI] database is not limited to researchers or physicians as it also provides basic information to non-professionals and creates disease awareness, thereby reducing the chances of patient suffering due to ignorance. HDI is a knowledge-based resource providing information on human diseases to both scientists and the general public. Here, our mission is to provide a comprehensive human disease database containing most of the available useful information, with extensive cross-referencing. HDI is a knowledge management system that acts as a central hub to access information about human diseases and associated drugs and genes. In addition, HDI contains well-classified bioinformatics tools with helpful descriptions. These integrated bioinformatics tools enable researchers to annotate disease-specific genes and perform protein analysis, search for biomarkers and identify potential vaccine candidates. Eventually, these tools will facilitate the analysis of disease-associated data. The HDI provides two types of search capabilities and includes provisions for downloading, uploading and searching disease/gene/drug-related information. The logistical design of the HDI allows for regular updating. The database is designed to work best with Mozilla Firefox and Google Chrome and is freely accessible at <http://humandiseaseinsight.com>.

Coronary Artery Bypass

Frequency of increased fibrinolysis after coronary artery bypass grafting.

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PAFMJ-Pakistan Armed Forces Medical Journal 2016; 66 (2): 262-265

Keywords: Fibrinolysis; Coronary Vessels

Abstract: Objective: To determine the frequency of increased fibrinolysis after coronary artery bypass grafting [CABG]. Study Design: Descriptive study. Place and Duration of Study: One year duration conducted in the Department of Pathology, Army Medical College in collaboration with Armed Forces. Institute of Cardiology [AFIC] from December 2013 to November 2014. Material and Methods: Sixty patients were selected who were admitted to AFIC for CABG surgery. Venous samples were drawn from the patients immediately after surgery when the patients were shifted to post-operative ward. Patients were selected by non-probability purposive sampling technique. D-dimers were analyzed by rapid agglutination assay. Results: Out of 60 patients included in the study, 50 [83.3%] were males and 10 [16.7%] were females. D-dimers level more than 200ng/ml were considered to show increased fibrinolysis. Raised D-dimers were present in 40 [66.6%] patients while they were normal in 20 [33.3%] patients. Twenty [33.3%] patients had D-dimers <200ng/ml, 27 [45%] patients had D-dimers between 200-400ng/ml, 7 [11.7%] patients had D-dimers between 400-800ng/ml and 6 [10%] had D-dimers between 800-1600ng/ml. Conclusion: Increased fibrinolysis was present in 40 [66.7%] patients. It is more common in older age than younger ones.

Coronavirus Infections

Is the Saudi public aware of Middle East respiratory syndrome?

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Journal of Infection and Public Health 2016; 9 (3): 259-266

Keywords: Cross-Sectional Studies; Surveys and Questionnaires; Awareness; Health Knowledge, Attitudes, Practice

Abstract: To limit the spread of Middle East respiratory syndrome coronavirus [MERS-CoV] in Saudi Arabia, the Ministry of Health tried to raise public awareness using different public campaigns. We aimed to measure public awareness of MERS in Saudi Arabia. A cross-sectional study was conducted between May and June 2014 using a newly designed Arabic questionnaire that was distributed and completed online. We analyzed the response of 1149

respondents across Saudi Arabia. We found that 97% of the participants were aware of MERS. In addition, 72% realized that coughing and sneezing could spread the infection. Furthermore, 83% thought that some patients with MERS could be cured. Moreover, 62% knew that no vaccine can prevent the disease. However, only 36% realized that taking antibiotics will not stop the infection, and only 41% recognized that no medication has yet been manufactured to treat it. Regarding protection measures, 74% used hand sanitizers, 43% avoided crowded places, and 11% wore masks in public places. Moreover, only 47% knew that bats and camels are the primary source of the virus. As anticipated, this level of awareness varied between the different categories of the studied population. Female, married, older, and more educated participants were significantly more knowledgeable about the disease. Public awareness of MERS is generally sufficient. However, some false beliefs about treatment were fairly common. In addition, almost half of the population remains unaware that bats and camels are the most likely sources of the virus.

The search for therapeutic options for Middle East Respiratory Syndrome [MERS]

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Journal of Infection and Public Health 2016; 9 (3): 213-215

Keywords: Therapeutics; Mortality

epidemiology

Closing the knowledge gaps on MERS: three and half years since its detection, what have we learnt and what needs to be done urgently?

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EMHJ-Eastern Mediterranean Health Journal 2016; 22 (2): 85-86

Keywords: Health Knowledge, Attitudes, Practice; Coronavirus Infections-transmission; Ambulatory Care; Coronavirus Infections-diagnosis

Proceedings of the Middle East Respiratory Syndrome [MERS] Coronavirus research initiative workshop, September 9-10 2015 in Riyadh, KSA.

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Journal of Infection and Public Health 2016; 9 (3): 205-207

Keywords: Mortality; Education

therapy

Nitazoxanide, a new drug candidate for the treatment of Middle East respiratory syndrome coronavirus.

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Journal of Infection and Public Health 2016; 9 (3): 227-230

Keywords: Middle East Respiratory Syndrome Coronavirus; Interleukin-6; Respiratory Tract Infections; In Vitro Techniques; Thiazoles-therapeutic uses

Abstract: Nitazoxanide is a broad-spectrum antiviral agent undergoing clinical development for treatment of influenza and other viral respiratory infections. Nitazoxanide exhibits in vitro activity against Middle East respiratory syndrome coronavirus [MERS-CoV] and other coronaviruses, inhibiting expression of the viral N protein. Nitazoxanide also suppresses production of pro-inflammatory cytokines in peripheral blood mononuclear cells and suppresses interleukin 6 production in mice. Having been used extensively in clinical trials and in post-marketing experience, nitazoxanide is an attractive drug candidate for treatment of Middle East respiratory syndrome. Future research should include in vitro mechanism studies, animal models of MERS-CoV infection, clinical trials, including dose-ranging trials, and evaluation of combination therapy with other potential MERS-CoV antivirals.

Rapid generation of a human monoclonal antibody to combat Middle East respiratory syndrome.

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Journal of Infection and Public Health 2016; 9 (3): 231-235

Keywords: Antibodies, Monoclonal; Coronavirus Infections-prevention and control

Abstract: The last century has witnessed the emergence of several previously unknown viruses as life-threatening human pathogens. Several examples include HIV, Ebola, Lujo, and, most recently, the Middle East respiratory syndrome [MERS] and Ebola. In this study, we describe a method for the swift generation of a human-derived monoclonal antibody, known as LCA60, as a treatment for MERS infections. LCA60 antibody was generated using the Cellclone Technology from the immortalized B cells of a human donor recovering from MERS. Only four months were required from the initial screening of B cells to the development of a stable CHO cell line suitable for the production of clinical grade antibody, thereby delineating a rapid pathway for the development of antiviral therapies against emerging viruses. Currently, the LCA60 antibody is being considered for clinical development, which includes prophylaxis in individuals at risk and a treatment for severe MERS-CoV infections.

transmission.

Preventing healthcare-associated transmission of the Middle East Respiratory Syndrome [MERS]: Our Achilles heel.

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Journal of Infection and Public Health 2016; 9 (3): 208-212

Keywords: Delivery of Health Care; Coronaviridae; Coronavirus Infections-prevention and control; Disease Transmission, Infectious

Abstract: Middle East Respiratory Syndrome [MERS] coronavirus is the most recent among the Coronaviridae family to jump species and infect humans. Major health-care associated MERS outbreaks have occurred in the Middle East and Korea that affected both patients and healthcare workers. These outbreaks were characterized by intra and inter-hospital spread and were exacerbated specifically by overcrowding, delayed diagnosis and appropriate use of personal protective equipment. Recent experience with this virus emphasizes the importance of compliance with infection control practices and with other interventions addressing patient triage, placement and flow within and between healthcare facilities. Our Achilles heel remains compliance with the best infection prevention practices and their harmonization with patient flow. Both infection prevention compliance and maintenance of patient flow are critical in preventing healthcare-associated transmission of many of these emerging infectious diseases, including MERS.

Curing Lights, Dental

Morphological changes in oral mucosa of rabbits induced by light emitting diode [LED] used as dental curing light.

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Pakistan Oral and Dental Journal 2016; 36 (1): 55-59

Keywords: Mouth Mucosa; Rabbits; Dental Materials

Abstract: A dental curing light is a piece of dental tool that is used for the hardening of light cure composites. Many studies have shown these lights induce changes in DNA, mitosis and mitochondria through free radicals production. Light emitting diode [LED] are most commonly used and claim less hazards to the adjacent soft tissues. Current study was therefore designed to observe the morphological changes induced by light emitting diode [LED] as a dental curing light source in oral mucosa of experimental animals. Fifty rabbits were divided into 5 groups [4 experimental and 5th as a control group]. Cervical margin of central incisors of each animal in the experimental groups was exposed 3 times with LED light; duration of each exposure being 40 seconds with a gap of 30 seconds. Punch biopsies were taken after 24 hours, 48 hours, week and 2 weeks from group 1, 2, 3 and 4 animals respectively. Results showed ulceration [4%], acanthosis and vascular pathological changes [100%] enlarge [bulbous] rete ridges [97.5%], basal layer vacuolization [85%], acantholysis [27.5%] and atypical mitosis [10%] in all the experimental animals. With passage of time, a significant increase [P=0.000] in frequency of basal cell

hyperplasia [90% in group 1 to 100% in group 4] and basal layer atypia [70% in group 1 to 90% in group 4] was observed. While inflammation dropped from 100% in group 1 to 0% in group 4 [P=0.000] due to healing of tissues. Changes were similar to the previous studies except some severe effects like atypical mitosis and basal layer atypia were observed which may be attributed to increase in number of light exposures in our study that is in compliance with the clinical practice in our set up. These findings may help in creating awareness among the dental practitioners to use dental curing lights with caution keeping appropriate safety measures for the adjacent oral soft tissue in consideration.

Dengue

psychology

Depression, anxiety, stress and their effect upon the self-efficacy in dengue patients.

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JPMI-Journal of Postgraduate Medical Institute 2016; 30 (1): 62-65

Keywords: Depression; Anxiety; Stress, Psychological; Cross-Sectional Studies; Self Efficacy

Abstract: Objective: To explore the correction of self-efficacy with depression, anxiety and stress in dengue patients. Methodology: For this purpose a sample of 200 dengue patients [men = 132, women = 68] was employed from two different hospitals of Lahore by using purposive sampling technique of collect data. In order to measure self-efficacy of dengue patients General Self Efficacy Scale, and Depression, Anxiety and Stress Scale [DASS] was used to assess depression, anxiety and stress of dengue patients. Correlation and simple regression statistical techniques were used for data analyses. Results: Results depicted that self-efficacy has significant negative relationship with depression [$r = -.42, p < .01$], anxiety [$r = -.49, p < .01$] and stress [$r = -.42, p < .01$] in dengue patients. Regression coefficients of depression [$\beta = -.32$], anxiety [$\beta = -.24$] stress [$\beta = -.14$] and overall combine effect of DASS [$\beta = -.45$] have negatively predicted self-efficacy of dengue patients. Conclusion: Self-efficacy has negative correlation with depression, anxiety and stress in dengue patients. Self-efficacy cannot be obtained in the presence of depression, anxiety and stress. These negative states [DASS] weaken self-efficacy of an individual.

Dental Care

Factors that limit access to dental care for person with disabilities.

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PAFMJ-Pakistan Armed Forces Medical Journal 2016; 66 (2): 230-234

Keywords: Disabled Persons; Cross-Sectional Studies; Surveys and questionnaires; Oral health

Abstract: Objective: To assess the perceived barriers to oral health care for persons with disabilities living in Islamabad. Study Design: Cross-sectional study. Place and Duration of Study: Study was conducted at general community organizations in Islamabad providing services to Persons with Disabilities [PWDs] from Jan 2013 to Jun 2013 over a period of 6 months. Material and Methods: A total of 500 persons with disability who were dependent on someone to reach dental facilities were included in the study while those who were not dependent on someone were excluded from the study. A 12-item self-administered questionnaire was used. Patient's demographic data, type of disability and barriers to oral health care were recorded. Finally data was analyzed by using SPSS version 20. Results: Out of 400 respondents the most common disability was physical impairment [33.25%] followed by visual impairment [20.75%] and polio [14.75%]. The major barriers to oral health care were transportation difficulty [48%] followed by high cost of dental treatment [39.5%] and inability to sit on dental chair /co-operate with dentist [31.25%]. Conclusion: Significant barriers exist that limit the access to dental care for Person with Disabilities [PWDs].

Dental Caries

epidemiology

Prevalence of dental caries of one grade school children in Karachi.

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Pakistan Oral and Dental Journal 2016; 36 (1): 116-118

Keywords: Prevalence; Cross-Sectional Studies; Risk; Students; Child; Oral Health; Oral Hygiene

Abstract: Aim of the study was to determine the incidence of dental caries in one grade children and to convey them the importance of oral hygiene. Development of proper brushing habit is beneficial for children at this stage. Dental status of one grade children in a semi government school was evaluated with proforma. Details regarding carious missing and filled teeth were recorded after their dental checkup. The risk of caries development in male and female students was evaluated. Frequency of low and high DMFT was also analysed. High incidence of unfilled carious teeth was observed in Class one children. The mean DMFT value was moderate and risk of caries was found slightly more in males. Community awareness programs at school, especially targeting one grade students can affect the oral health of our children in a positive manner. Following proper hygiene instructions and regular dental visits can promote their oral health.

Dental Debonding

Laser-aided ceramic bracket debonding: a comprehensive review.

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Journal of Lasers in Medical Sciences 2016; 7 (1): 2-11

Keywords: Ceramics; Lasers; Orthodontic Brackets; Dental Materials; Dental Enamel

Abstract: Different techniques have been introduced for the removal of ceramic brackets. Since the early 1990s, lasers have been used experimentally for debonding ceramic brackets. The goal of this study is to give a comprehensive literature review on laser-aided ceramic bracket debonding. PubMed and Google Scholar databases were used to identify dental articles with the following combination of key words: Ceramic brackets, Debonding, and Laser. Sixteen English articles from 2004 to 2015 were selected. The selected studies were categorized according to the variables investigated including the intrapulpal temperature, shear bond strength, debonding time, enamel damage and bracket failure. Most articles reported decreased shear bond strength and debonding time following laser irradiation without any critical and irritating increase in pulpal temperature. There were no reports of bracket failure or enamel damage. Laser irradiation is an efficient way to reduce shear bond strength of ceramic bracket and debonding time. This technique is a safe way for removing ceramic bracket with minimal impact on intrapulpal temperature and enamel surface and it reduces ceramic bracket failure.

Dental Enamel

The study of demineralized and remineralized enamel and hydroxyapatite using nuclear magnetic resonance (NMR)

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Pakistan Oral and Dental Journal 2016; 36 (1): 60-65

Keywords: Durapatite; Magnetic Resonance Spectroscopy

Abstract: The study was conducted to observe if there is any difference in the chemical structure of demineralized and remineralized enamel and hydroxyapatite using solid state ³¹P MAS NMR techniques. Chemical structure and composition of enamel and hydroxy apatite powder were analyzed using different acids i.e. hydrochloric acid, citric acid and acetic acid, of different molarities, followed by treatment in remineralizing solution for a time period of 1, 3, 6 and in some cases 7 days, using NMR. We expected to change current concepts of remineralizing and demineralizing processes of enamel and hydroxy apatite. Synthetic hydroxy apatite provided by Plasma Biotol was used for the experiments, while extracted teeth provided by tissue culture labs were used for the enamel. The enamel crowns were converted into powder using Gyro Mill. All the measurements for NMR were done in Bruker

NMR spectrometer which had a magnetic field strength of 600MHz or 14.1 Tesla. The nucleus used for the experiments was. Phosphorous-31. Changes were observed in the peak positions of HAP as well as enamel powder samples. Remineralized samples [both enamel and HAP] also showed increase in mass which may be due to precipitation of hydroxy apatite on consuming the ions, used from the remineralizing solution. This study provides a better insight into the remineralization and demineralization of enamel and HAP and the changes that take place in the chemical structure after and during the processes. The work also demonstrates that NMR is a very powerful and modern technique which can be used to detect structural changes in different complicated materials.

Dental Health Surveys

Oral health survey of school children of gohawa village, lahore.

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Pakistan Oral and Dental Journal 2016; 36 (1): 105-109

Keywords: Oral Health; Child; Oral Hygiene; Prevalence; Cross-Sectional Studies; Dental Caries;. Students; Dentition, Permanent; Tooth, Deciduous

Abstract: This descriptive, cross sectional oral health survey was carried out to document the oral health status of underprivileged school children of a trust school in Lahore. The sample consisted of all the school children [n = 389]. Each student was examined randomly by one of three calibrated examiners and the findings were recorded on a modified WHO oral health assessment form. In addition to DMFT index, oral hygiene status was recorded and the students who needed fillings, scaling or orthodontic treatment were referred for treatment. In the permanent dentition, mean DMFT was 0.13, 95% CI = 0.09-0.18 [9.6% of the students had carious teeth] while in the deciduous dentition, mean DMFT was 0.94, 95% CI = 0.76-1.11 [34.1% of the students had caries]. One hundred and ten students [28.3%] were referred for fillings. Oral hygiene status was poor in 6.2% and 7.2% were referred for scaling. There was only one filled tooth in the entire sample. The oral health status of these students from lower socioeconomic strata was good. Caries prevalence and treatment need was lower than most studies done the world over.

Dental Implant-Abutment Design

Effects of angulated and non-angulated mini-implants abutment supporting mandibular overdenture on peri-implant bone height.

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Bahrain Medical Bulletin 2016; 38 (2): 97-100

Keywords: Dental Abutments; Denture, Overlay; Dental Implants; Jaw, Edentulous

Abstract: Background: Mini-implants have been successfully used when there is a little bone to support complete dentures, using of mini-implants abutment is the key solution for stable and retentive overdentures. Objective: To compare peri-implant bone height post angulated or non-angulated. Mini-implants insertion. Design: A Randomized Two-Arm Parallel Study. Setting: Faculty of Dentistry, Al-Azhar University-Assiut Branch, Egypt. Method: The study was performed from October 2012 to December 2014. Twenty patients were included in the study based on two criteria [1] free from any systemic diseases and [2] their lower flat ridges resorbed with ill-fitted lower dentures. The patients were divided into two groups. The first group received lower overdenture with non-angulated abutment while the second group received lower overdenture with angulated abutment. The bone height for each subject was evaluated with panoramic X-ray after 6,128 and 24 months. The data were analyzed using SPSS program. Result: Twenty edentulous patients participated in this study. They were homogenous in their personal characteristics. Their education levels varied between primary and secondary levels. Insignificant differences in age, education level and gender were found [$p > 0.05$]. The differences between the two groups were highly significant. Mean bone height was found to be significantly higher in Group 1 than in Group 2 [$p = 0.03$]. The paired sample t-test showed a significant improvement in bone height in the Non-angulated group [$p = 0.03$] and insignificant increase in the angulated group [$p = 0.14$]. Conclusion: Lower overdenture mini-implant with non-angulated abutment is better for edentulous patients compared to angulated abutment in term of bone height.

Dental Impression Technique

Impression techniques used by dental surgeons in different institutes -a study.

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Pakistan Oral and Dental Journal 2016; 36 (1): 161-163

Keywords: Surveys and Questionnaires; Cross-Sectional Studies; Dental Implants; Self-Curing of Dental Resins; Dental Staff; Dentists

Abstract: The objective of this study was to survey the impression technique used by the dental professionals of different institutes. Impression making is an important step in fabricating complete dentures. An impression is an imprint produced by existence of pressure of one thing into another surface. And this indicate an active role not a passive one and the clinician should understand that impressions are made, not taken. Mucostatic or passive impression was first proposed by Richardson and later popularized by Henry Page. A survey was conducted in dental colleges to get to know about the impression techniques and impression material used by the dental surgeons. It is discouraging to know that 35% of dental surgeons are using base plate custom trays to record secondary impressions. 10% are still using the alginate for secondary impressions. A supportable technique for recording full denture impressions is put forwarded for impression.

Dental Records

Evaluation of dental record keeping at Hamdard university dental hospital.

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Pakistan Oral and Dental Journal 2016; 36 (1): 38-41

Keywords: Quality of Health Care; Medical Records; Students, Dental; Dental Audit; Medical Audit; Medical History Taking; Data Collection

Abstract: An audit was conducted at Hamdard University Dental Hospital to assess the standard of clinical, record keeping by undergraduate dental students, house officers and faculty members. Objective of this audit was to improve the quality of care of patients treated by the staff and students. 100 hospital notes were audited for this purpose. These records were randomly selected from the record room at HUDH. CRABEL score was used for assessing the quality of these notes. Ten variables were measured in our study. Data analysis was done on SPSS version 16. Descriptive statistics were performed. Mean CRABEL score was found to be 50. 94% of the notes had readable writing. 87% of the clinical notes did not mention the chief complaint of the patient. 98% of the clinical notes had no mention of consent in them, while 43% of the clinical notes did not mention the investigations performed. These inferences clearly suggest that the current standards of clinical notes need considerable improvements. Further studies are planned in the future after addressing the present deficiencies.

Dental Scaling

Influence of different proportions of external irrigation during the Er,Cr:YSGG laser irradiation on wear and roughness of root surface.

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Journal of Lasers in Medical Sciences 2016; 7 (1): 51-55

Keywords: Tooth Wear; Lasers, Solid-State; Erbium; Chromium

Abstract: Introduction: The aim of this study was to evaluate the influence of different levels of external irrigation during irradiation with an erbium, chromium: yttrium-scandium-gallium-garnet [Er,Cr:YSGG] laser on the roughness and wear of dental tissue during scaling procedures. Methods: Twenty-Five uniradicular bovine teeth had the proximal surfaces planed and divided into 3 regions: upper, middle and lower. The upper region was treated with hand instruments, the middle region was not treated and served as a control, and the lower region was treated by the Er,Cr:YSGG laser. The teeth were randomly divided into five groups according to the different proportions of external irrigation used during the laser irradiation: G1: 10%; G2: 20%; G3: 30%; G4: 40% and G5: 50%. The samples were analyzed for roughness and wear on the root surface irradiated with the laser. Results: There were no differences in

the surface roughness and wear parameters between the groups irradiated with the laser, but the laser irradiation produced a rougher surface of the dentin than treatment with hand scaling. Conclusion: Changes in the external irrigation level did not influence the wear and roughness of root surfaces treated with an Er,Cr:YSGG laser.

Dentists

Ergonomic hazards to dental surgeons: a cross-sectional study.

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Pakistan Oral and Dental Journal 2016; 36 (1): 168-171

Keywords: Surveys and Questionnaires; Cross-Sectional Studies; Students, Dental; Musculoskeletal Pain; Human Engineering; Equipment Safety

Abstract: Ergonomics is the working condition which facilitates the performance of labor and promotes worker's welfare. Dentists all around the world have been challenged with issues related to the musculoskeletal system. Mostly musculo - skeletal problems start during the learning period of the dentist and then continue throughout his/her life, affecting spine, neck, shoulders, hands and other body parts. The aim of this study was to assess the awareness of graduate and postgraduate dental students about the role of ergonomics in dentistry and to evaluate the presence of any pain or discomfort during the last twelve months. A cross-sectional study was carried out on 120 dental graduate and postgraduate students working in Armed Forces Institute of Dentistry, Rawalpindi using the Standardized Nordic Musculoskeletal Questionnaire. All of the respondents endorsed the significance of maintaining an ideal posture during their clinical activities. However, 65% reported that they seldom assumed an ideal posture during work. About 70% of the participating dentists reported one or more episodes of musculoskeletal disorders over the last 12 months. The highest frequency was observed for lower back ache [65%] followed by neck pain [53.3%] and pain in wrist or hand [37.5%]. A positive correlation was found between the musculoskeletal disorders and the average working hours per week [$P < 0.05$].

Dentofacial Deformities

epidemiology

Prevalence of oro-dental anomalies among schoolchildren in Sana'a city, Yemen.

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EMHJ-Eastern Mediterranean Health Journal 2016; 22 (1): 34-39

Keywords: Prevalence; Child; Students; Cross-Sectional Studies

Abstract: Practitioners and policy-makers need information about the relative frequency of dental anomalies among children in their region. This study investigated the prevalence of different oral anomalies among schoolchildren in Sana'a city, Yemen. A sample of 1000 private and public schoolchildren aged 4-12 years were examined by the same examiner using disposable tongue blades. The total prevalence of oral anomalies was 15.1%, most commonly in boys [male:female ratio 3.2:1] aged 7-12 years. The most prevalent dental anomaly related to hard tissues was tooth hypoplasia [2.8%], followed by hypocalcification [2.6%] then microdontia [0.5%], macrodontia [0.4%], hypodontia [0.4%], supernumerary teeth [0.3%], tooth transposition [0.3%], dental fusion [0.2%] and gemination [0.2%]. The most prevalent soft tissues anomaly was fissured tongue [4.0%], followed by ankyloglossia [1.8%], geographic tongue [0.9%], macroglossia [0.4%] and hairy tongue [0.3%]. Appropriate measures need to be taken early to mitigate the negative impact and later costs of treatment of anomalies.

Denture, Complete

Comparison of occlusal schemes in complete denture patients.

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Pakistan Oral and Dental Journal 2016; 36 (1): 141-143

Keywords: Masticatory Muscles; Mouth, Edentulous; Dental Occlusion, Balanced; Occlusal Adjustment

Abstract: The objective of this study was to compare the masticatory performance with bilateral balanced occlusion and lingualized occlusion in complete denture patients reporting to Armed Forces Institute of Dentistry Pakistan. A randomized control trial study was carried out on sixty edentulous patients. Subjects were divided into two equal groups, A and B by non-probability consecutive sampling method. Group A patients were provided complete dentures with bilaterally balanced occlusion and group B patients were provided complete dentures with lingualized occlusion. Masticatory performance was determined at the .01-month follow-up appointment using Sieving method. Data were analyzed using SPSS 19.0. Results of the study showed that patients with bilateral balance occlusion dentures had superior masticatory performance as compared to ones' with lingualized occlusion. Conclusion made was that bilateral balance occlusal scheme patients were able to masticate properly with ease and comfort and were more comfortable with their prostheses.

A survey on current impression techniques and materials used for complete denture fabrication practiced by private dental practitioners in Sindh.

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Pakistan Oral and Dental Journal 2016; 36 (1): 144-147

Keywords: Dental Clinics; Dentists; Surveys and Questionnaires; Cross-Sectional Studies; Dental Impression Materials

Abstract: The purpose of the study was to evaluate which impression materials and techniques are used by private dental practitioners for fabrication of complete denture in Sindh, Pakistan. In this cross-sectional study, structured questionnaires consisting of 10 questions regarding complete denture impression materials and techniques was prepared and randomly distributed among 150 dentists in Sindh, Pakistan. The response rate was [85%] in this survey. [78%] practitioners used stock metal tray for primary impressions. The irreversible hydrocolloid was the material of choice for preliminary impression by [76%]. Custom tray for final impression by [89%]. Self-cure acrylic resins was the most commonly used material for the custom tray fabrication by [92%] Custom tray was made few days prior to make final impression by [82%]. Close-fitting trays was preferred by [75%]. Mucocompressive technique was the most predominant impression philosophy [77%]. The most common materials of Choice for border molding and final impressions were modeling plastic impression compound [90%] and zinc oxide eugenol paste [89%] respectively. Concerns and issues regarding the non-use of latest impression materials and techniques related to complete denture impressions as well as a lack of understanding of the related concepts of participants were observed.

adverse effects

Frequency of complications with conventional dentures.

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Pakistan Oral and Dental Journal 2016; 36 (1): 164-167

Keywords: Dentures; Mouth, Edentulous; Cross-Sectional Studies; Stomatitis, Denture; Denture Retention

Abstract: The objective of 'this study was to determine the frequency of 'complications with complete. dentures. A total of 45 completely edentulous patients wearing conventional complete denture for more than one year were included in this study. These dentures were fabricated by private practitioners, undergraduate and postgraduate students in dental institutes. The complications associated with these dentures recorded by taking a detailed history and examination of the prosthesis and mouth of the patients. The data were analyzed by SPSS version 20.0. Twenty were females while the remaining 25 were males with mean age of 61.06 +/- 9.4 years. The complications observed in the patients with regards to their frequency were; loss of denture retention [80%], developed of ulcers [37.7%], loss of denture teeth due to fracture [26.6%], fractures of the denture base [22.2%] and denture stomatitis [6.6%]. The difference between males and females were not significant.

Dentures

Effects of different complete dentures base materials and tooth types on short-term phonetics.

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Journal of Taibah University Medical Sciences 2016; 11 (2): 110-114

Keywords: Tooth; Phonetics; Surveys and Questionnaires; Mouth, Edentulous; Dental Porcelain

Abstract: Objective: This study aimed to identify the effect of various types of complete dentures, base materials, and teeth types on patients' short-term phonetics. Methods: A quasi-parallel study was conducted at the dental clinic, Faculty of Dentistry at Al Azhar University-Assiut Branch in Egypt. Fifty healthy participants with complete dentures were enrolled in the study. The enrolled patients were grouped into two main batches: three groups in batch one and two groups in batch two. The three groups in the first batch received three different denture base materials [flexible acrylic resin, heat cure acrylic resin, and chrome cobalt metallic base]. The two groups in batch two received different types of teeth [acrylic and porcelain teeth]. The five groups completed a questionnaire composed of items pertaining to demographic characteristics, and the researcher obtained data about phonetics. Results: The sound level was significantly higher in the group of dentures constructed of chrome cobalt metallic base in comparison to the other materials. Additionally, the sound level in porcelain teeth was significantly higher than that in acrylic teeth. The material used to construct teeth was one of the major determinants influencing phonetics. Conclusion: Phonetics is affected by the material used to construct the base of complete dentures and the teeth type. Complete dentures with a chrome cobalt metallic base and porcelain teeth are considered to be superior for improving phonetics.

Depression

The relationship between self-reported and clinician rated assessment of depression in clinically depressed patients.

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PAFMJ-Pakistan Armed Forces Medical Journal 2016; 66 (2): 221-224

Keywords: Psychometrics; Health Services, Indigenous; Symptom Assessment

Abstract: Objective: The study examines the relationship between a clinician rated measure Hamilton Rating Depression Scale [HRSD] and indigenously developed self-reported Siddiqui-Shah Depression Scale [SSDS] in clinically depressed and matched control group. Study Design: Correlational design. Place and Duration of Study: Data was collected over a span of 6 month from Department of Psychiatry Pakistan Naval Ship [PNS] Shifa Karachi and Combined Military Hospital [CMH] Malir, Karachi. Material and Methods: A purposive sample of forty-seven patients from psychiatry department and thirty-six participants in the matched group were first screened on DSM-IV criteria independently by a psychologist, and then assessed on HRSD by the psychiatrist followed by assessment of depression on SSDS by the participants. Results: SSDS has significant relationship with HRSD for both matched group [$r=.74$, $p<.001$] and depressed group [$r=.38$, $p<.01$]. SSDS also indicates moderate sensitivity index [.79] and a significant specificity index [.89]. Conclusion: Self-report measure [SSDS] correlates significantly with clinician rated assessment measure [HRSD]; it also demonstrates psychometric properties to be recommended for screening depression in general practice.

epidemiology

Frequency and predictors of depression among elderly of Rawalpindi Pakistan.

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JPMI-Journal of Postgraduate Medical Institute 2016; 30 (1): 35-40

Keywords: Cross-Sectional Studies; Aged; Prevalence; Surveys and Questionnaires

Abstract: Objective: To determine the frequency of depression and identify predictors of depression in elderly. Methodology: This cross-sectional study was conducted in Holy Family Hospital Rawalpindi during a three months period from October 2013 to December 2013 among elderly coming to outdoor patient department Patients and their

attendants of age 64 or above were included in the study. 209 patients were selected by consecutive sampling technique. Questionnaire included socio-demographic profile and geriatric depression scale [GDS] scale consisting of 15 items. Analysis was done by utilizing SPSS16. Descriptive statistics were performed. The results were recorded as frequencies. P-values were obtained and results were depicted in form of tables and figures. Chi-square test and Fisher's exact test were applied to the data to calculate the association. Results: A sample of 209 was studied and depression was found to be present in 28.71%. There was no statistically significant relationship between education, intimacy, sleep, having children or having not financial support and depression [P-value > 0.05]. The analysis showed that there was a significant relationship between gender, people ever diagnosed for depression in life, persons having suicidal ideas at least once in life, poor marital relationship, monthly income between Rs10,000 to 30,000, elderly having no care giver and depression [P-value < 0.05]. Conclusion: High frequency of depression was found among elderly community and diversity exists in predicting factors.

psychology

Psychological predictors of depression in diabetes.

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PJMR-Pakistan Journal of Medical Research 2016; 55 (1): 25-28

Keywords: Diabetes Mellitus; Quality of Life; Cross-Sectional Studies; Social Support; Diabetes Mellitus, Type 2

Abstract: Objective: To study the association between psychological predictors of depression i.e. social support and quality of life in diabetic patients. Study design, settings and duration: Cross-sectional study conducted in clinics of different hospitals of Gujranwala, Abbottabad and Islamabad from January 2013 to January 2014. Patients and Methods: Fifty nine adult type II diabetic patients of both genders who came to hospital's diabetic clinic for diabetic treatment were selected for the study. The data was collected using multidimensional scale of perceived social support WHO quality of life scale and depression scale. All these scales had already been validated in the local population. Data was analyzed using SPSS Version 20. Results: Social support and quality of life were negatively related to depression. Within gender, it was found that male were significantly higher on social support, quality of life, friends support, physical quality of life and social quality of life as compared to female. Conclusion: If diabetic patient's social support and quality of life is improved, their levels of depression decrease. Depression associated with diabetes was more common in females. Policy message: Diabetes patients need better social support and better quality of life to cope up with diabetes related depression.

Diabetes Complications

Number of renal echogenic foci in patients of fatty liver in relation with diabetes.

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PAFMJ-Pakistan Armed Forces Medical Journal 2016; 66 (2): 254-257

Keywords: Diabetes Mellitus; Kidney-ultrasonography; Fatty Liver; Cross-Sectional Studies; Ultrasonography

Abstract: Objective: To establish a relationship of numbers of renal echogenic foci and the grades of fatty liver with the time span of diabetes mellitus. Study Design: Cross sectional study. Place and Duration of Study: Radiology Department of Combined Military Hospital [CMH] Kohat from 1st January 2014 to 1st May 2014. Material and Methods: Patients reporting for ultrasound abdomen in Radiology Department at CMH Kohat and showing renal echogenic foci i.e. bright foci without significant distal acoustic shadowing and fatty liver were selected and included in this study. Forty [40] patients were selected in the study by non-probability purposive sampling and these were categorized into three groups according to the number of renal echogenic foci i.e. those with less than 5 were grouped as REF 1, those with 5-10 as group REF-2 and those with more than 10 foci as group REF-3. Patients having associated fatty liver that is those showing bright liver along with vascular blurring in liver parenchyma were grouped as mild, moderate and severe depending upon the ultrasound attributes of fatty liver [FL]. The clinical and demographic variables were laid down. All of the patients were subsequently subjected to fasting blood sugar levels and glycated hemoglobin HbA1C with their consent. The patients having normal fasting blood sugar levels [3.3-5.6 mmol/L] were excluded from the study. These cases were grouped according to the HbA1C levels i.e. 5.6-6.8%, 6.8%-7.6% and >7.6% as good, fair or poor control patients respectively. Data was analyzed by SPSS version 20. Results: Average age of patients included in the study was 48.62 years [SD=10.43] with 70% female patients. Twenty four [60%] patients had mild FL, 14 [35%] patients had moderate FL and 2 [5%] patients had severe FL.

Thirteen [32.5%] patients were in REF-1 group, 9 [47.5%] were in group REF-2 and 8 [20%] were in group REF-3. Fifteen [37.5%] patients had good control of diabetes, 16 [40%] patients had fair control while 9 [22.5%] patients had poor control. Duration of diabetes varied from newly diagnosed [0 years] to 20 years with mean duration of 5.33 years [SD=4.73]. Nine [22.5%] patients were recently diagnosed, 18 [45%] patients had disease span of 2 - 5 years while 13 [32.5%] patients had disease span of more than 5 years. Number of echogenic foci had significant and stronger association with disease span [$p < 0.001$, Cramer's $V = 0.660$] than disease control [$p = 0.002$, Cramer's $V = 0.466$]. Insignificant association was observed between severity of fatty liver with disease span [$p = 0.373$] and disease control [$p = 0.581$]. Conclusion: In diabetics with fatty liver the number of the renal echogenic foci have a link to the time span of diabetes. The greater the number of renal echogenic foci in these cases, the longer is the time span of the disease.

Diabetes Mellitus, Type 2

therapy

Effect of pioglitazone on serum high density lipoprotein [HDL] levels of type-2 diabetics.

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PAFMJ-Pakistan Armed Forces Medical Journal 2016; 66 (2): 212-215

Keywords: Thiazolidinediones-pharmacology; Cholesterol, HDL-blood; Hemoglobin A, Glycosylated

Abstract: Objective: To study effect of Pioglitazone on serum high density lipoprotein levels in patients with type 2 diabetes mellitus. Study Design: Single blind randomized controlled trial. Place and Duration of Study: Department of medicine, Combined Military Hospital Multan from 1[st] Feb 2011 to 30[th] July 2012. Material and Methods: A total of 276 already diagnosed patients of diabetes mellitus type 2 between age of 30-80 years, presenting to the outpatient department of Combined Military Hospital Multan were selected. Type 2 diabetic patients were allocated group A or B using random allocation. Base line blood sugar fasting [BSF], glycosylated hemoglobin [HbA1c], high density lipoprotein [HDL] levels were taken. Group A was treated with Pioglitazone along with other hypoglycemic agents while group B was treated with only hypoglycemic agents and multivitamin tablets were added as placebo. After 12 weeks of treatment, serum HDL levels were measured to analyze effect of pioglitazone on serum HDL levels. Results: Pioglitazone group showed significant improvement in the serum HDL levels from baseline HDL 46.38 + 6.44mmol/L to 49.80+ 5.86 mmol/L after 12 weeks of therapy, [$p = 0.001$]. Conclusion: Pioglitazone when used in combination with other oral hypoglycemic agents has a beneficial effect on the serum HDL levels of the diabetics.

Diabetic Foot

etiology

Association of bacteria in diabetic and non-diabetic foot infection - an investigation in patients from Bangladesh.

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Journal of Infection and Public Health 2016; 9 (3): 267-277

Keywords: Diabetes Mellitus; Drug Resistance, Multiple; C-Reactive Protein; Diabetes Complications

Abstract: The microbial community on a host relies on its immune status and pathophysiological condition. Diabetes mellitus is a metabolic disorder associated with a 25% increased risk of developing foot infection. The pathophysiological differences between diabetic foot infection [DFI] and non-DFI patients may alter the microbial composition in infections. The present study aims to comparatively analyze the microbes colonized in DFI and non-DFI patients in Bangladesh. Pus specimens were collected from 67 DFI and 12 non-DFI patients to investigate the bacteria associated with foot infection. For this investigation, an array of microbiological, molecular biological and immunological approaches were performed. Common bacteria detected in both DFI/non-DFI samples were *Pseudomonas* spp. [22/29%], *Bacillus* spp. [12/3%], *Enterobacter* spp. [22/7%], *Staphylococcus* spp. [13/13%] and *Acinetobacter* spp. [10/10%]. *Enterococcus* spp. [9%] and *Klebsiella* spp. [8%] occurred only in DFI patients, whereas *Citrobacter* spp. [29%] was only detected in non-DFI samples. The rate of occurrence of three organisms, namely, *Enterococcus* spp. [$|Z| = 2.2125$], *Klebsiella* spp. [$|Z| = 1.732$], *Bacillus* spp. [$|Z| = 1.9034$], were also statistically significant. Most of the isolates from DFI patients were commonly resistant to the cephalosporin [Cefazidime, Ceftriazone, Cefurozime] and monobactam [Aztreonam] groups of antibiotics. DFI patients had comparatively higher C-

reactive protein [CRP] levels than non-DFI patients, and a positive correlation was observed between multi-antibiotic resistance and CRP levels [one of the markers of chronic subclinical inflammation]. The present investigation implicated a complex association of the bacterial population in DPI compared with non-DFI with different antimicrobial resistance properties, which was linked with CRP levels.

Diazinon

pharmacology

Effect of Diazinon on pituitary-gonadal axis and histological alteration of seminiferous tubules in adult rat testis.

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Journal of Gorgan University of Medical Sciences 2016; 18 (1): 23-29

Keywords: Seminiferous Tubules; Testis; Rats, Wistar; Testosterone

Abstract: Background and Objective: Diazinon is an organophosphate insecticide., which inhibits the enzyme acetylcholinesterase. This study was done to evaluate the effect of Diazinon on pituitary-gonadal axis and histological alteration of seminiferous tubules in adult rat testis. Methods: In this experimental study, 40 adult male Wistar rats were randomly allocated into five groups including control, sham and experimental 1, 2 and 3. Animals in experimental group 1, 2 and 3 were received 50, 100 and 150 mg/kg/bw of diazinon for 28 days, orally, respectively. Animals in control group did not receive any substance. Animals in sham group were received an equivalent amount of normal saline. The animals were euthanized after 28 days and a blood sample was collected via heart puncture and testes were removed for histological studies. Results: Diazinon significantly reduced serum testosterone concentration, sertoli cell, leydig cell count, primary spermatocyte and spermatid [P<0.05]. Diazinon had no significant effect on the body and testis weight in the experimental groups compared to controls. Conclusion: Diazinon reduces the concentration of testosterone and cells in seminiferous tubule in adult rat.

Disasters

Addressing non-communicable diseases in disaster risk reduction - an issue of equity.

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Journal of Epidemiology and Global Health 2016; 6 (2): 119-121

Keywords: Risk; Health Equity

Abstract: The issues raised by noncommunicable diseases [NCDs] during and after disasters are a challenge to equity within local communities, as well as between countries. Individuals with NCDs are particularly vulnerable in disasters and their aftermath given health systems are disrupted. Although welcome progress has been made in taking NCDs and equity into account in the UN General Assembly ratified agreement, the Sendai Framework for disaster risk reduction 2015-2030, there is need now for a clear plan of implementation.

Responding to physical and psychological health impacts of disasters: case study of the Iranian disaster rehabilitation plan.

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EMHJ-Eastern Mediterranean Health Journal 2016; 22 (3): 212-218

Keywords: Behavioral Medicine; Rehabilitation; Environment; Disaster Planning

Abstract: This paper describes the process of developing a national pre-disaster plan for physical health and psychological rehabilitation of disaster-stricken communities. Data gathered from a literature review and expert panel discussions informed the process of drawing up unified definitions of physical and psychological health rehabilitation, carrying out stakeholder and STEEP-V analyses, and assigning the responsible organization and the collaborative organizations for each task. The Ministry of Health and the Welfare Organization were selected as the two responsible organizations. Integrated management at all levels, and sharing information, education and funding, were identified as ways to improve stakeholders' participation and collaboration. A system is needed for evaluating the implementation of the disaster rehabilitation plan, using valid and reliable indicators.

Drug Interactions

Interaction between meropenem and valproate: Not to overlook.

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IJEHSR-International Journal of Endorsing Health Science Research 2016; 4 (1): 27-31

Keywords: Valproic Acid; Thienamycins; Tertiary Care Centers

Abstract: Background Valproic acid is commonly used to treat various types of seizures and follows nonlinear pharmacokinetics with a therapeutic range of 50 - 150 microg/ml. Several retrospective studies have reported that concomitant administration of VPA and carbapenem lead to decrease in VPA levels significantly and results in failure of seizure control. Different studies suggest the mechanism of interaction as [i] carbapenem may inhibit the gastrointestinal absorption of VPA [ii] meropenem accelerated the glucuronidation of VPA to VPA glucuronide [VPA-G] and inhibited the hydrolysis of VPA-G back to the VPA thus increasing the clearance of VPA and VPA-G and [iii] due to fast erythrocyte distribution of VPA by carbapenem, VPA levels has been reduced. Purpose To report four cases who "were maintained on therapeutic levels of VPA and had sub-therapeutic levels afterward due to the administration of meropenem. Method through CPOE system of AKUH the cases in 2014 were identified who were on valproate-meropenem combination with the available pre and post meropenem valproate levels. Result Patients of different age group showed significant reduction in VPA levels within 48 hour of administration of meropenem. Conclusion This case series describing the clinical importance of this probable drug interaction and promote its awareness among physicians in Pakistan. If a patient was therapeutic on the same dose of valproate and need broad spectrum coverage, a dose adjustment of valproate should not be done and physicians should consider either alternative broad spectrum antibiotic or renally cleared antiepileptic to avoid this frequently used dangerous drug combination.

Drug Prescriptions

Drug prescribing patterns in dental teaching hospitals.

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Pakistan Oral and Dental Journal 2016; 36 (1): 49-54

Keywords: Hospitals, Teaching; Drug Interactions; Surveys and Questionnaires; Retrospective Studies; Dental Service, Hospital

Abstract: Medicines are prescribed in the dental setting for a number of reasons, like oral infections, inflammations, pain complaints, fractures, cancers etc. Medications prescribed are of various kinds mainly antibiotics, anti-inflammatory, and analgesics. The aim of this study was to observe drug prescribing trends i. e. the number of drugs and antibiotics prescribed per prescription, presence of any drug-drug interaction or adverse drug reactions if any and preference of brand or generic name prescribing, in both government and private dental teaching hospitals of Lahore. An observational and questionnaire based retrospective study was conducted for this purpose. 80 patients were selected randomly for their prescription analysis, 40 from each hospital [private and government]. 20 dentists were also selected for their preferences in prescribing medicines to dental patients. Irrational prescribing was observed more in government setting than in the private hospital. Antibiotics prescribing ratio was more in government hospitals, drug-drug interactions were also observed there that were not present in private hospital. Amoxicillin was prescribed 60% in government, and 77% in private dental setting. 94% of subjects were given 2 antibiotics per prescription in government setting as compared to 4% in private setting. Generic prescribing was not observed in both government as well as in private hospitals. Conclusively, much attention must be given to government hospitals as irrational prescribing has been observed more there. The irrational use of antibiotics must be corrected. Emphasis should be given on generic prescribing to reduce and to avoid the overlapping of inventory.

Drug Users

Change in attitudes and knowledge of problem drug use and harm reduction among a community cohort in Kabul, Afghanistan.

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EMHJ-Eastern Mediterranean Health Journal 2016; 22 (3): 183-192

Keywords: Health Knowledge, Attitudes, Practice; Harm Reduction; Cohort Studies; Surveys and Questionnaires; Cross-Sectional Studies; Residence Characteristics

Abstract: This pre-post evaluation aimed to measure changes in knowledge and attitudes towards drug users among community representatives in Kabul, Afghanistan, over a period of expansion of harm reduction and drug dependence programming. A convenience sample of 160 professionals aged 18+ years completed interview questionnaires in 2007 and 2009. Views endorsing programme quality and the provision of condoms, infection counselling/testing and needle/syringe distribution increased significantly over the 2-year period. In 13 of 38 statements, there was a substantial [$> 10\%$] change in agreement level, most commonly among men and medical professionals. Attitudes concerning support of drug users remained largely positive, with substantial attitude changes in some subgroups of the population further community education through the media and a more cohesive government drug policy may be needed to strengthen community support for harm reduction/drug treatment in Afghanistan.

Education

Histopathology training and fellowship in Pakistan-how to make it more effective to simultaneously prepare for fellowship of royal college of pathologists [FRCPath]

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PAFMJ-Pakistan Armed Forces Medical Journal 2016; 66 (2): 173-175

Keywords: Teaching; Physicians; Fellowships and Scholarships; Training Support

Education, Medical

Clinical education stressors in medical trainees in Shahid Sadoughi University of Medical Sciences, Yazd.

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Journal of Advances in Medical Education and Professionalism 2016; 4 (1): 8-12

Keywords: Teaching; Learning; Students, Medical; Training Support; Surveys and Questionnaires

Abstract: Introduction: Stress is an important factor in the educational process. Teaching and learning are stressful processes. This stress can affect one's ability and change his/her performance. The purpose of this study was to investigate stressors of clinical education from the perspective of medical students in Yazd University of Medical Sciences. Methods: This descriptive-analytic study was conducted in Yazd University of Medical Science during year 2014-2015. The sample size was 170 medical students who were selected randomly. The data were collected by a questionnaire including four components: interpersonal relationship, educational environment, clinical experience and the unpleasant emotions. A significance level of 0.05 was considered for analysis. The statistical analyses included descriptive statistics, ANOVA and T-tests, using SPSS software, version 14. Results: The results showed that the highest domain score belonged to interpersonal relationship [3.33 +/- 0.3] followed by unpleasant emotions domain [3.3 +/- 0.3]. The lowest domain score of clinical education stressors was educational environment [3.12 +/- 0.1]. The results showed that the mean score of interpersonal relationship domain was more in women than in men [$p < 0.05$]. Conclusion: The relationship between teachers and students is an effective factor in all dimensions of clinical education stressors. So proper measures such as the promotion of scientific awareness of teachers and educational staff about factors that lead to stress and the best way to communicate with students should be taken to reduce the students' stress.

Oral assessment in medical education: time for change.

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PAFMJ-Pakistan Armed Forces Medical Journal 2016; 66 (2): 294-295**Keywords:** Educational Measurement; Needs Assessment; Students

Abstract: There has been a phenomenal change in medical education in Pakistan also over the last 30 years. Through medical education, training of future doctors is done in such a way that they are capable of managing the health problems of those who seek their services in a competent and humane manner. The traditional oral examination/viva-voce is a favorite assessment tool in basic medical sciences as well as in clinical examinations for various reasons in our country.

Paediatric continuing medical education needs and preferences of UNRWA physicians in Jordan.

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EMHJ-Eastern Mediterranean Health Journal 2016; 22 (1): 48-52**Keywords:** Pediatrics; Physicians; Surveys and Questionnaires; Schools, Medical

Abstract: Most physicians who work in the United Nations Relief and Works Agency [UNRWA] infant and child health programme in Jordan are general practitioners with no postgraduate training in paediatrics. Furthermore, in resource-poor or remote settings, the ability to deliver live continuing medical education [CME] is often limited. A questionnaire exploring the resources available for accessing CME, preferences for types of CME, current sources of CME and topics of interest in the field of paediatric care was sent to all 92 physicians practising in UNRWA clinics in Jordan. Of the 89 respondents 80% had attended live medical lectures for CME and 70% CME meetings. Despite most physicians having access to the Internet only 52.8% were interested in Internet-based courses for accessing CME. There was a statistically significant relationship between year of graduation from medical school and preference for Internet-based CME. Implications for CME participation and paediatric CME topics are discussed.

System based practice: a concept analysis.

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Journal of Advances in Medical Education and Professionalism 2016; 4 (2): 45-53**Keywords:** Students, Medical; Competency-Based Education

Abstract: Introduction: Systems-Based Practice [SBP] is one of the six competencies introduced by the ACGME for physicians to provide high quality of care and also the most challenging of them in performance, training, and evaluation of medical students. This concept analysis clarifies the concept of SBP by identifying its components to make it possible to differentiate it from other similar concepts. For proper training of SBP and to ensure these competencies in physicians, it is necessary to have an operational definition, and SBP's components must be precisely defined in order to provide valid and reliable assessment tools. Methods: Walker and Avant's approach to concept analysis was performed in eight stages: choosing a concept, determining the purpose of analysis, identifying all uses of the concept, defining attributes, identifying a model case, identifying borderline, related, and contrary cases, identifying antecedents and consequences, and defining empirical referents. Results: Based on the analysis undertaken, the attributes of SBP includes knowledge of the system, balanced decision between patients' need and system goals, effective role playing in interprofessional health care team, system level of health advocacy, and acting for system improvement. System thinking and a functional system are antecedents and system goals are consequences. A case model, as well as border, and contrary cases of SBP, has been introduced. Conclusion: The identification of SBP attributes in this study contributes to the body of knowledge in SBP and reduces the ambiguity of this concept to make it possible for applying it in training of different medical specialties. Also, it would be possible to develop and use more precise tools to evaluate SBP competency by using empirical referents of the analysis.

Education, Medical, Continuing

Improving continuing medical education by enhancing interactivity: lessons from Iran.

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Journal of Advances in Medical Education and Professionalism 2016; 4 (2): 54-63

Keywords: General Practitioners; Surveys and Questionnaires

Abstract: Introduction: Continuing Medical Education [CME] has been considered as a lifelong commitment for doctors to provide the optimal care for patients. Despite a long history of creating CME programs, outcomes are far from ideal. The present qualitative study aims to clarify the barriers affecting effectiveness of the CME programs in Iran based on the experiences of general practitioners. Methods: Sixteen general practitioners were recruited to participate in in-depth interviews and field observations concerning experiences with CME. The study was performed using a qualitative content analysis method. The codes, categories and themes were explored through an inductive process in which the researchers moved from specific to general. Results: The participants' experiences identified a number of barriers, particularly insufficient interaction with the instructors; additional problems included the teachers' use of an undifferentiated approach; unreal and abstract CME; and ignorance of the diverse reasons to participate in CME. Conclusion: Based on the study results, there are multiple barriers to effective implementation of CME in Iran. The key barriers include insufficient interaction between the trainees and providers, which must be considered by other stakeholders and program designers. Such interactions would facilitate improved program design, invite more specific tailoring of the education to the participants, allow for more effective educational methods and set the stage for outcome evaluation from the learners actually applying their new knowledge in practice. Replication of these findings with another sample would improve confidence in these recommendations, but these findings are broadly consistent with findings in the educational literature on improving the efficacy of CME.

Embryo Transfer

A comparison of success rates of embryo transfer on weekdays and weekends.

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IJFS-International Journal of Fertility and Sterility 2016; 10 (1): 48-52

Keywords: Fertilization in Vitro; Pregnancy; Retrospective Studies; Infertility

Abstract: Background: The aim of this study is to examine the effect of the embryo transfer [ET] day on clinical pregnancy success rates in in vitro fertilization-ET [IVF-ET] cycles. Materials and Methods: In this retrospective study, we divided patients with infertility who underwent IVF-ET with fresh embryos into two groups depending on whether the ET was performed on weekdays or weekends. The main outcome measure was to compare the clinical pregnancy rates of patients with similar demographic and clinical characteristics who underwent ET on weekdays or weekends. Results: A total of 188 patients underwent IVF-ET on weekdays [n=156] or weekends [n=32]. Both groups had similar demographic and cycle characteristics. The overall pregnancy rate was 42.8%. Among the study groups, the weekday group had a 40.2% ET success rate and the weekend group had a 54.8% success rate [P=0.517]. Although no statistically significant difference existed between the two groups, we observed an absolute 14.6% increase in pregnancy rate for ETs performed during weekends compared to those performed on weekdays, with a 35% statistical power. Conclusion: ETs performed during weekends were more successful than ETs performed during weekdays with an absolute 14.6% increase in clinical pregnancy rate. This finding should be confirmed by conducting further studies with larger groups of patients.

Endometriosis

diagnosis

Evaluation of risk factors associated with endometriosis in infertile women.

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IJFS-International Journal of Fertility and Sterility 2016; 10 (1): 11-21

Keywords: Risk Factors; Retrospective Studies; Laparoscopy; Infertility, Female; Pelvic Pain

Abstract: Background: Endometriosis affects women's physical and mental wellbeing. Symptoms include dyspareunia, dysmenorrhea, pelvic pain, and infertility. The purpose of this study is to assess the correlation between some relevant factors and symptoms and risk of an endometriosis diagnosis in infertile women. Materials and Methods: A retrospective study of 1282 surgical patients in an infertility Institute, Iran between 2011 and 2013 were evaluated by laparoscopy. Of these, there were 341 infertile women with endometriosis [cases] and 332 infertile women with a normal pelvis [comparison group]. Chi-square and t tests were used to compare these two groups. Logistic regression was done to build a prediction model for an endometriosis diagnosis. Results: Gravidity [odds ratio [OR]: 0.8, confidence interval [CI]: 0.6-0.9, P=0.01], parity [OR: 0.7, CI:

0.6-0.9, P=0.01], family history of endometriosis [OR: 4.9, CI: 2.1-11.3, P0.001], history of galactorrhea [OR: 2.3, CI: 1.5-3.5, P=0.01], history of pelvic surgery [OR: 1.9, CI: 1.3-2.7, P0.001], and shorter menstrual cycle length [OR: 0.9, CI: 0.9-0.9, P=0.04] were associated with endometriosis. Duration of natural menstruation and age of menarche were not correlated with subsequent risk of endometriosis [P>0.05]. Fatigue, diarrhea, constipation, dysmenorrhea, dyspareunia, pelvic pain and premenstrual spotting were more significant among late-stage endometriosis patients than in those with early-stage endometriosis and more prevalent among patients with endometriosis than that of the comparison group. In the logistic regression model, gravidity, family history of endometriosis, history of galactorrhea, history of pelvic surgery, dysmenorrhoea, pelvic pain, dyspareunia, premenstrual spotting, fatigue, and diarrhea were significantly associated with endometriosis. However, the number of pregnancies was negatively related to endometriosis. Conclusion: Endometriosis is a considerable public health issue because it affects many women and is associated with the significant morbidity. In this study, we built a prediction model which can be used to predict the risk of endometriosis in infertile women.

Epidermis

Epidermal differentiation complex: a review on its epigenetic regulation and potential drug targets.

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Cell Journal [Yakhteh] 2016; 18 (1): 1-6

Keywords: Epigenomics; Epigenesis, Genetic; Keratinocytes; Skin

Abstract: The primary feature of the mammalian skin includes the hair follicle, inter-follicular epidermis and the sebaceous glands, all of which form pilo-sebaceous units. The epidermal protective layer undergoes an ordered/programmed process of proliferation and differentiation, ultimately culminating in the formation of a cornified envelope consisting of enucleated corneocytes. These terminally differentiated cells slough off in a cyclic manner and this process is regulated via induction or repression of epidermal differentiation complex [EDC] genes. These genes, spanning 2 Mb region of human chromosome 1q21, play a crucial role in epidermal development, through various mechanisms. Each of these mechanisms employs a unique chromatin re-modelling factor or an epigenetic modifier. These factors act to regulate epidermal differentiation singly and/or in combination. Diseases like psoriasis and cancer exhibit aberrations in proliferation and differentiation through, in part, dysregulation in these epigenetic mechanisms. Knowledge of the existing mechanisms in the physiological and the aforesaid pathological contexts may not only facilitate drug development, it also can make refinements to the existing drug delivery systems.

Epilepsy

Jeavons syndrome.

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Bahrain Medical Bulletin 2016; 38 (2): 105-107

Keywords: Syndrome; Electroencephalography; Seizures

Abstract: Jeavons syndrome is a rare generalized childhood epileptic condition characterized by eyelid myoclonia with or without absences. Other features of the syndrome include photosensitivity and electroencephalography [EEG] findings. An eight-year-old male was referred to the pediatric clinic from the ophthalmology clinic with a chief complaint of repetitive abnormal eye movements. The patient did not exhibit any photosensitivity but his EEG was diagnostic for primary generalized epilepsy. Treatment with levetiracetam revealed significant improvement.

Esophageal Atresia

diagnosis

Tracheoesophageal atresia and fistula: a case of mistaken identity?

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Bahrain Medical Bulletin 2016; 38 (2): 119-121

Keywords: Tracheoesophageal Fistula; Intubation, Gastrointestinal; Mass Chest X-Ray

Abstract: Tracheoesophageal atresia with or without fistula presents shortly after birth with difficulty in swallowing saliva, history of polyhydramnios and failure to pass a nasogastric tube which coils in the proximal blind ending esophagus. Early thoracotomy and primary anastomosis within a few hours of birth have produced a significant survival result; mortality is associated with coexisting serious cardiac disease, late diagnosis and presentation. The majority of patients have a fistula which could result in significant pulmonary contamination with saliva [or food] if the abnormal connection is not urgently ligated. We report a case of a neonate referred at three days of age where the nasogastric tube [NGT] had not coiled proximally as expected; the tube initially extended vertically to the level of the diaphragm, giving the impression of an intact esophagus. The neonate subsequently underwent primary repair of the atresia with fistula ligation. At five-month post-discharge follow-up, the patient was thriving and well.

Ethics, Medical

Ethics in health practice and research: an EMR perspective.

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EMHJ-Eastern Mediterranean Health Journal 2016; 22 (1): 62-63

Keywords: Public Health Practice; Ethics; Bioethics; Health Services Research; Mediterranean Region

Euphorbiaceae

Antibacterial activities of methanol extracts from *Alchornea cordifolia* and four other Cameroonian plants against MDR phenotypes.

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Journal of Taibah University Medical Sciences 2016; 11 (2): 121-127

Keywords: Plants, Medicinal; Plant Extracts; Methanol; Pennisetum; Drug Resistance, Multiple; Phenotype; Bacterial Infections; Gram-Negative Bacteria

Abstract: Objectives: Multidrug-resistant [MDR] bacterial infections, especially those caused by Gram-negative phe-notypes, have emerged as one of the major health concerns worldwide. In the present study, we investigated the antibacterial activity of methanol extracts from five Cameroonian medicinal plants [*Alchornea cordifolia*, *Eremomastax speciosa*, *Laportea aestuans*, *Pennisetum purpureum* and *Spathodea campanulata*] against 15 Gram-negative bacteria that included MDR phenotypes. Methods: The broth microdilution method was used to determine the minimal inhibitory concentrations [MIC] and the minimal bactericidal concentrations [MBC] of all of the samples. Standard phytochemical methods were used for a preliminary phytochemical screening of the plant extracts. Results: Phytochemical analysis showed the presence of polyphenols, tannins, triterpenes and sterols in all of the studied extracts. Other chemical classes of secondary metabolites were selectively identified. The best antibacterial activities [MICs ranges of 64-1024 microg/mL] obtained against the 15 tested bacteria were found in extracts of leaves [93.3%], bark [86.7%] and roots [80%] of *A. cordifolia* as well as extracts of *L. aestuans* [86.7%] and *P. purpureum* [66.7%]. The lowest MIC value of 64 microg/mL was recorded for the *A. cordifolia* bark extract against *Pseudomonas aeruginosa* PA01. Conclusions: The findings of this study provide deep insights into the possible use of the studied plants, especially *A. cordifolia* and *L. aestuans*, for the control of Gram-negative bacterial infections, especially against MDR species.

Exercise

Effect of exercise on pseudo dilution anemia in healthy male subjects. A comparative study.

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IJEHSR-International Journal of Endorsing Health Science Research 2016;4 (1): 15-19

Keywords: Anemia; Hemoglobins; Erythrocyte Indices; Hematocrit; Erythrocytes

Abstract: Regular exercise is largely done to have maintained body shape and fitness. It exerts influence on almost all physiological and psychological parameters. One of these is dilutional anemia or sports anemia that is the initial adaptation of body to exercise. The aim of present study was to evaluate the extent of dilutional anemia in healthy males who have been exercising for past three years at least. Randomly selected 40 male subjects from

gymnasiums of Karachi were recruited in the study. Peripheral blood was collected pre and post exercise, and tested for hematocrit, hemoglobin concentration and red blood cell count. Increased hemoglobin concentration was observed which is directly related to increased red blood cell count which is inversely proportional to blood plasma level. So, decreased plasma level is the possible cause that pseudo dilution anemia was not observed in males who have been regularly exercising for past three years.

Eye Foreign Bodies

surgery

Open globe injuries with intraocular foreign body: surgical outcome.

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JPMI-Journal of Postgraduate Medical Institute 2016; 30 (1): 52-57

Keywords: Eye Injuries; Prospective Studies; Vitrectomy; Morbidity

Abstract: Objective: To determine surgical outcome and residual co-morbidities after surgical intervention in eyes having Open Globe Injury [OGI] with retained Intra Ocular Foreign Body [IOFB]. Methodology: A prospective interventional case series was carried out at the department of Ophthalmology, Khyber Institute of Ophthalmic Medical Sciences [KIOMS], Hayatabad Medical Complex [HMC], Peshawar from 1st September 2012 to 30th November 2013. Patients who were followed post-operatively for at least 90 days were included. Eyes having open globe injury [OGI] and intraocular foreign body [IOFB] who had surgical intervention were included in our study. Visual outcome was determined comparing final best corrected visual acuity [BCVA] with initial BCVA. Co-morbidities were noted at final follow up. For data analysis, Snellen's VA was converted to log MAR VA. Data was analyzed by SPSS version 16. Results: Total of 35 patients were included in our study. Male were 94.3% compared to 5.3% females. Mean age was 32.42 years. Bomb blast injury was cause of eye trauma in 60% cases while 40% were doing hammer and chisel work at the time of trauma. IOFB was impacted in anterior segment in 20% cases while it was impacted in posterior segment in 80% cases. IOFB removal was achieved in 33[94.28%] cases; silicone oil was used as tamponade in 48.57% cases. Primary repair was required in 40% cases while rest 21[60%] eyes had self-sealed wound. Primary surgical intervention in the form of Pars Plana Vitrectomy, IOFB removal with the use of intraocular magnet or forceps was carried out in 71% cases. Mean BCVA log MAR improved from initial BCVA of 2.20 to 1.20. Common comorbidities at final visit were corneal scars, macular scars and cataract. Conclusion: Bomb blast injuries are most common cause of OGI with IOFB in our region. Significant visual improvement occurs in most of the cases after skilled vitreo-retinal surgical interventions. Common ocular co-morbidities are corneal scar, macular scar and cataract.

Faculty

Faculty development programs for medical teachers in India.

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Journal of Advances in Medical Education and Professionalism 2016; 4 (2): 97-101

Keywords: Education, Medical; Education, Professional; Teaching

Abstract: Introduction: India has the highest number of medical colleges in the world and subsequently the higher number of medical teachers. There is a dire need of adopting a systematic approach to faculty development to enhance quality education to meet health challenges for 21st Century. This manuscript provides a landscape of faculty development programs in India, identifying gaps and opportunities for reforms in faculty development. Methods: Conventionally, FDPs are organized by medical colleges and universities through Basic Courses and Advanced Courses focusing on pedagogy. Medical Council of India is facilitating FDPs through 18 selected regional centers to enable medical teachers to avail modern education technology for teaching from July 2009. Foundation for Advancement of International Medical Education and Research has three Regional Institutes in India. Results: Recommendations include the need for formulating a national strategy for faculty development to not only enhance the quantity of medical teachers but also the quality of medical education; providing support for Departments of Medical Education/Regional Centers in terms of finance and staffing and incorporation of teaching skills in postgraduate training. Conclusion: Distance learning courses focusing on educational leadership and pedagogy for medical teachers can be an option to reach a wider audience. FDPs can be an asset in recruiting and retaining teachers as they offer valued professional development opportunities.

Family Planning Services

Men's perceptions of and participation in family planning in Aqaba and Ma'an governorates, Jordan.

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EMHJ-Eastern Mediterranean Health Journal 2016; 22 (2): 124-132

Keywords: Health Knowledge, Attitudes, Practice; Perception; Cross-Sectional Studies; Surveys and Questionnaires; Contraception

Abstract: Men's participation in family planning has become a cornerstone in women's reproductive health. The aim of this study was to examine knowledge, attitudes and practice towards family planning of Jordanian men in southern Jordan. In across-sectional descriptive study in 2012, structured interviews were made with 104 married men in Aqaba and Ma'an governorates, Although 93.5% of the men had heard about family planning-most commonly the intrauterine device [IUD] and oral contraceptives-only 45.1% reported that they and their wife currently used it. Most men agreed about a minimum 2 years' child spacing [93.3%] and starting contraception after childbirth [71.2%] and that husband and wife should share decisions about family planning [90.2%] and the number of children [89.5%]. Level of education significantly affected current use of contraception, while number of children significantly affected previous use of contraception. Although married men had positive attitudes and good knowledge about family planning, this did not translate into practice of contraceptive use.

Fast Foods

Trend of fast food consumption among university girls in Karachi, Pakistan.

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IJEHSR-International Journal of Endorsing Health Science Research 2016; 4 (1): 32-38

Keywords: Students; Surveys and Questionnaires

Abstract: Background The present study is aimed at improving the understanding of fast food trend among university girls. Objectives to study the trend of fast food consumption among university girls and to find out the association between university girls' perception regarding the unhealthfulness of fast food and their frequency of eating fast food. Methods. A sample size of 50 female university students was selected for data collection through purposive sampling. By using questionnaire method, respondents were asked about their trend of fast food consumption by inquiring about their fast food preferences, their consumption pattern, and their monthly fast food expenditure. Correlation was used to analyze the association between the perception regarding the unhealthfulness of fast food and frequency of eating fast food. Results. We found that the most preferred fast food item among university girls was burger [44.7%]. The majority of respondents consume fast food at an average of 2-3 times a month [29.8%] and the main reason for their fast food consumption was convenience [55.3%]. Among those who infrequently consume fast food, a majority [90%] agreed to the statement that fast food is unhealthful whereas among those who frequently consume fast food, a comparatively low percent [77.7%] agreed to the statement. Through correlation, we observed no association between all of the asked perceptions regarding fast food and frequency of fast food consumption among university girls [$p > 0.05$]. Conclusion. The overall results showed that university girls' perception regarding the unhealthfulness of fast food does not necessarily affect their frequency of fast food consumption.

Fertilization in Vitro

Effect of laparoscopic ovarian drilling on outcomes of in vitro fertilization in clomiphene-resistant women with polycystic ovary syndrome.

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IJFS-International Journal of Fertility and Sterility 2016; 10 (1): 42-47

Keywords: Sperm Injections, Intracytoplasmic; Clomiphene; Polycystic Ovary Syndrome; Retrospective Studies; Laparoscopy; Ovary

Abstract: Background: Recently the laparoscopic ovarian drilling [LOD] has been used as a surgical, treatment for ovulation in women with polycystic ovarian syndrome [PCOS], although its mechanism and. outcomes are still unclear. This study was undertaken to evaluate the in vitro fertilization [IVF]. /intracytoplasmic sperm injection [ICSI] outcomes in clomiphene-resistant women with PCOS who were treated with LOD. Materials and Methods: In this retrospective study, we reviewed the medical records of 300 women between 20 to 35 years old with clomiphene-resistant PCOS who had an ovulatory infertility and who were nominated for IVF/ICSI. Based on their treatment history, they were located into the following two groups: group I [n=150] including PCOS women who had history of LOD at least 6 months to 3 years before IVF/ICSI, and group II [n=150] including PCOS patients without history of drilling. Both groups were treated with antagonist protocol in the assisted reproductive technology [ART] process. The duration of treatment cycles, number of oocytes and embryos obtained, chemical and clinical pregnancy rate, the number of embryos transferred, and presence of ovarian hyper stimulation syndrome [OHSS] were measured. To compare means and frequencies, Student's t test, Mann-whitney and chi-square tests were used. Results: Our results showed that ovarian cauterization before IVF/ICSI in patients with PCOS reduced the risk of OHSS [P=0.025]. Despite the same pregnancy rate in both groups [P=0.604], more obtained oocytes and embryos were seen on women without ovarian drilling than women with LOD [P<0.001 and P=0.033, respectively]. Conclusion: There is no difference between the pregnancy rate in both groups. Due to significant reduction in OHSS in women undergoing LOD, this surgical treatment may be considered as a useful technique in the management of patients who have previously developed OHSS. However, there are ongoing concerns about long-term effects of LOD on ovarian function.

Floods

Stress, anxiety, depression, and posttraumatic stress disorder among general population affected by floods in Pakistan.

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PJMR-Pakistan Journal of Medical Research 2016; 55 (1): 29-32

Keywords: Disasters; Stress, Psychological; Stress Disorders, Post-Traumatic; Cross-Sectional Studies; Prevalence; Anxiety; Depression

Abstract: Background: Natural disasters evoke certain distressful traumatic reactions which impede the lives of the survivors. The flood in July 2010 were one of the Pakistan's largest natural disasters. Objectives: To determine the prevalence of stress, anxiety, depression and posttraumatic stress disorder among adults exposed to 2010 floods in Pakistan. Study type, settings and duration: Cross sectional study done in flood affected areas of Pakistan. Data was collected from February7 2013 to May 2013. Subjects and Methods: Sample of the study comprised of 2000 individuals. The data was collected from highly flood affected areas like Mianwali, Muzafar Garh, and Dera Ghazi Khan from Punjab, Nowshera and Peshawar from Kyber Pukhtunkhwa and Neelum Valley form Azad Jammu Kashmir. Data was collected by using convenient sampling technique. Stress, Anxiety and depression were measured by using Depression, Anxiety and Stress Scale. Posttraumatic stress disorder was assessed using the self-report measure, Impact of Event Scale. Results: Age range of the participants was between 15 to 65 years [Mean 28.7, SD = 7.1], for both genders. After about three years of floods, posttraumatic stress disorder was still present in both genders. However, it was higher among females and unemployed individuals. Moreover, higher exposure to flood was positively associated with posttraumatic stress disorder whereas, age, and education were negatively related with distress and posttraumatic stress disorder. Conclusion: Psychological disorders persists for several years after the disaster and results in significant personal distress. Policy message: The association between psychological distress, gender, age, education and employment status has to be taken into consideration when mental health policies for flood-survivors are planned at the national level.

Fractures, Bone

surgery

Assessment of the functional outcomes of isolated fifth metacarpal fractures treated by antegrade intramedullary K-wiring.

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Bahrain Medical Bulletin 2016; 38 (2): 78-81

Keywords: Metacarpal Bones; Retrospective Studies; Fracture Fixation, Intramedullary; Fracture Fixation

Abstract: Background: Fractures of the neck of the fifth metacarpal is known as Boxer's fractures; they are, among the most common fractures of the hand. Despite the variety of conservative and surgical options available, no one technique has been established as the reference. Objective: To evaluate functional outcomes of isolated fifth metacarpal fractures treated by antegrade intramedullary K-wiring. Design: A Retrospective Review. Setting: Bahrain Defense Force Hospital, Kingdom of Bahrain. Method: A retrospective review of patients who underwent surgical fixation of fractures of the neck of the fifth metacarpal using intramedullary K-wires inserted in an ante grade fashion treated from July 2007 to February 2013. Result: Twelve patients met inclusion criteria. Mean follow-up was 34.5 months, a range of. 23 to 56 months. The patients had a mean of 97.8% range of motion in the injured hand compared to the non-injured. They had a mean of 90.2% strength on the injured hand compared to the non-injured. Complex regional pain syndrome was documented in one patient. Radiographically, all patients showed full union on follow-up. Subjectively, Visual Analogue Scale [VAS] scores had a mean of 1.08. Disabilities of the Arm, Shoulder and Hand [DASH] scores had a mean of 6.9 and Steele scores had a mean of 378.5. Conclusion: Surgical fixation of Boxer's fractures using intramedullary K-wires inserted in an ante grade fashion is an effective method of fixation.

Fructose

analogs and derivatives

Effects of topiramate administration on placenta of rat.

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Bahrain Medical Bulletin 2016; 38 (2): 90-93

Keywords: Rats, Sprague-Dawley; Pregnancy; Placenta

Abstract: Background: Topiramate was classified as pregnancy category D, which means that it possesses a potential risk to the fetus. An increasing evidence points to the risk of development of cleft lip and/or cleft palate [oral clefts] in infants born due to Topamax [topiramate] during pregnancy. Objective: To evaluate the effects of the therapeutic doses of topiramate on the placental structure. Design: An Experimental Animal Study. Setting: Teratology Laboratory, Anatomy Department, CMMS, Arabian Gulf University. Method: Pregnant rats were treated with oral topiramate at doses of 50 and 100mg/Kg body weight. On day 20, the pregnant rats were sacrificed, and the placentae were collected and processed for histological evaluation. Result: Degenerative changes in all three layers of the placenta [decidual, basal and labyrinthine] were observed. In the decidual layer, deposition of fibrous and hyaline materials were found in the cells, in addition to vacuolization and hemorrhages. In the basal layer, the trophoblast cells [giant, basophilic and glycogen cells] showed vacuolization, cytolysis and cyst formation. In the labyrinthine layer, there was an increased fibrinoid material and fetal mesenchyme. In addition, degeneration of cells and congestion of blood vessels were evident. Conclusion: The deleterious effects of the therapeutic doses of topiramate on the placental structure may play a role in its teratogenicity. These placental changes are not dose dependent.

Ganoderma

Chemical composition and anti-proliferative effect of Oman's Ganoderma applanatum on breast cancer and cervical cancer cells.

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Journal of Taibah University Medical Sciences 2016; 11 (2): 145-151

Keywords: Breast Neoplasms; Uterine Cervical Neoplasms; Antineoplastic Agents

Abstract: Objectives: To evaluate the anti-proliferative potential of Oman's Ganoderma applanatum on triple negative breast cancer cells [MDA-MB-231], cervical cancer cells [HEp-2] and Vero cells [normal] and its chemical profiling of G. applanatum. Methods: The cytotoxicity of the methanolic extract of G. applanatum was tested on MDA-MB-231 cells, HEp-2 cells and Vero cells by microculture tetrazolium [MTT] assay. The anti-cancer properties of G. applanatum were characterized using gas chromatography coupled with gas chromatography mass spectrometry [GCMS] analysis. Results: The methanolic extract of G. applanatum elicited dose-dependent cell death on both MDA-MB-231 and HEp-2 cells after 24 h of treatment, with an IC₅₀ value of 84.6 Jig/ml and 43.2 [ig/ml, respectively. Normal vero cells were able to significantly withstand the treatment. Furthermore, seven molecules were identified from G. applanatum by GCMS analysis, and five of them were present in considerable amounts, namely, 'y-terpinene

[30.3%]. D-limonene [23.6%], cis-2-methyl-4-pentylthiane-s,s-dioxide [15.3%] [3-cymene [12.7%] and oc-terpinolene [8.1%]. Conclusion: In this study, surprisingly, *G. applanatum* exhibited toxicity particularly towards tumour cells [MDA-MB-231 and HEp-2] compared to normal vero cells. This tumour-specific chemo-sensitivity of *G. applanatum* is unclear, and the mechanism of cancer cell death induced by *G. applanatum* should be studied in detail. In addition, the observed anti-cancer activity of *G. applanatum* might be due to the synergistic effects of the identified properties. This would pave the way for isolation and characterization of the potential anti-cancer molecule from Oman's *G. applanatum*.

Gastrostomy

Experience with wide and narrow caliber percutaneous radiologically guided gastrostomy tubes.

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JPMI-Journal of Postgraduate Medical Institute 2016; 30 (1): 41-47

Keywords: Technology, Radiologic; Retrospective Studies; Catheters; Administration, Cutaneous

Abstract: Objective: To compare the percutaneous radiologically guided gastrostomy [PeRG] tubes of wide caliber with narrow caliber tubes. Methodology: This retrospective study was performed on 36 patients who were referred to Radiology department for PeRG tube placement between 2008 till 2012. Comparison of wide caliber gastrostomy tubes [18-24 Fr] was done with narrow caliber tubes [14 Fr] considering procedure success rate, procedure related complications and catheter related minor and major complications. Results: Out of 36 patients, 18 patients were present in each group. Mean age of patients was 53.944 +/- 19.380. Procedure success rate was 100% in both groups and procedure related immediate complications were none in either groups. Peri-catheter leakage was observed in 1 patient in each group. Tube occlusion was present in 2 patients in narrow caliber group. Two patients had severe pain in wide caliber group and also 3 patients had wound infection in this group. Conclusion: Regardless of the type of radiologic catheter placed, PeRG can be considered as safe and highly successful procedure. Use of a 24 Fr gastrostomy tubes may show promising results if placed under radiological guidance with comparable technical success and complication rates to other caliber tubes.

Percutaneous endoscopic gastrostomy: a review of practice and complications.

Ghallab, Alaa; Mohamed, Ahmed; Corbally, Martin

Bahrain Medical Bulletin 2016; 38 (2): 74-77

Keywords: Endoscopy-adverse effects; Retrospective Studies; Treatment Outcome; Nutritional Support.

Abstract: Background: Percutaneous Endoscopic Gastrostomy [PEG] is the standard option for long-term nutritional support in infants and children with nutritional deficit due to feeding difficulties. Objective: To assess the indications, complications and long-term efficacy of PEG. Design: A Retrospective Study. Setting: Our Lady's Children's Hospital, Crumlin, Dublin, Ireland. Method: One hundred forty-eight patients underwent PEG insertion from October 2004 to December 2007. Data were reviewed from the Hospital Inpatient Enquiry [HIPE] and patients' charts. Result: One hundred forty-eight patients underwent PEG insertion; 91 [61.5%] males and 57 [38.5%] females with a median age of 15 months [range 1-190 months]. The procedure was abandoned in one patient due to unfavorable anatomy [failure rate 0.7%], and this patient is excluded from this report. PEG was indicated for feeding difficulties in 102 [68.9%] patients, recurrent aspiration pneumonia in 15 [10.1%] and failure to thrive in 31 [11.6%]. No mortality was recorded; however, 15 [10.1%] patients developed stomal leakage and 3 [2%] of these required change of PEG. Nine [6%] patients developed a wound infection, 2 [1.4%] developed a gastrocolic fistula, 1 [0.7%] patient developed adhesive intestinal obstruction requiring laparotomy and adhesiolysis. Two [1.4%] patients had aspiration pneumonia, 3 [2%] had inadvertent tube removal, 4 [2.7%] had tube blockage, 3 [2%] had tube breakdown, 2 [1.4%] had tube migration, 5 [3.4%] had vomiting and 6 [4%] patients had excess granulation tissue. Conclusion: PEG tube feeding is an efficient, well-tolerated method for medium and long-term enteral feeding with excellent results and minimal overall morbidity.

Genital Neoplasms, Female

therapy

Impact of multidisciplinary care in gynecological cancer patients.

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PAFMJ-Pakistan Armed Forces Medical Journal 2016; 66 (2): 207-211

Keywords: Gynecological Examination; Neoplasms; Quality of Health Care; Interdisciplinary Communication; Patients

Abstract: Objective: To determine the impact of multidisciplinary care in Gynecological cancer patients through multidisciplinary meetings [MDM] at MCH centre, Pakistan Institute of Medical Sciences [PIMS], Islamabad. Study Design: A pre and post intervention comparative study. Place and Duration of Study: The study was conducted at MCH centre, PIMS and Nuclear Oncology and Radiotherapy Institute, Islamabad from 1st April 2009 to 31st Mar 2010. Material and Methods: MDM is a regularly scheduled meeting of core and limited team members for the purpose of prospective treatment and care planning of newly diagnosed cancer patients. It was started in 2009 in order to improve the management of the cancer patients according to the international recommendations. In a total of 1 year study period 24 meetings were held. The major audit tool was the documentation of the meeting and its outcomes, patient communication and record of the Nuclear Oncology and Radiotherapy Institute of Islamabad [NORI]. A postgraduate student was deputed for documentation. Results: The study identified that MDM helped in achieving many of the best practices of international recommendations which include team approach to treatment planning as well as to care provision, throughout the complete patient pathway. The workload almost doubled as regards the surgery and outdoor cancer claims. There was a shorter delay to first seen in the cancer clinic and shorter duration from diagnosis to treatment. Team members were present in 90-100% of the meetings. Conclusion: MDM has swiftly improved the quality of care and follow up of patients with gynecological cancers and should be conducted at all tertiary care hospitals. Problems of access to high quality and timely care of poor patients in public sector should be addressed as poor patients are not compliant to timely follow-up.

Glaucoma

pathology

Comparison of central corneal thickness in pseudoexfoliation glaucoma patients with healthy adults.

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PAFMJ-Pakistan Armed Forces Medical Journal 2016; 66 (2): 176-179

Keywords: Endothelium, Corneal; Intraocular Pressure; Cross-Sectional Studies; Exfoliation Syndrome; Corneal Pachymetry

Abstract: Objective: To compare the central corneal thickness [CCT] in pseudoexfoliation glaucoma [PXG]. patients with healthy adults. Study Design: Cross-sectional comparative study. Place and Duration of Study: Armed Forces Institute of Ophthalmology Rawalpindi, from Dec 2009 to Feb 2011. Material and Methods: 30 patients having PXG [Group A] and 30 healthy adults having normal intraocular pressure [Group B] were included in the study. Intraocular pressure [IOP] in both groups was measured using gauged Goldmann applanation tonometer [GAT]. Central corneal thickness [CCT] was measured with an ultrasonic pachymeter. Results: The comparison of Mean CCT in both Groups showed that Mean CCT was significantly lesser [17-value <0.05] in PXG Group [519.73 μ m] as compared to healthy adults Group [567.48 μ m]. Conclusion: CCT in PXG patients group was found to be statistically significantly thinner as compared to healthy adults Group. CCT must be assessed in patients with pseudoexfoliation syndrome [PXF] in order to avoid the underestimation of IOP.

Glioma

therapy

Is oncolytic virotherapy a viable platform for glioma treatment?

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JPMI-Journal of Postgraduate Medical Institute 2016; 30 (1): 15-22

Keywords: Mortality; Oncolytic Virotherapy; Adenoviridae; Simplexvirus; Glioma-diagnosis

Abstract: Gliomas are devastating cancers of the nervous system with poor prognosis. Their aggressiveness produces a mortality rate rarely seen with other malignant tumours and the lack of effective treatment has left very few options. On-colytic viruses, with their long history of experimentation, have been deemed to be a key player in the future treatment of gliomas. This review will focus on the two main contenders, adenovirus and herpes simplex virus, for glioma treatment and discuss how far the field has come since its conception. The concept of each vector and the rationales behind their use will be contrasted before discussing the future of the field. Data was located by accessing the MEDLINE database using the PubMed search system. Data was selected on the basis of the insight its information provided as well as on the dependability of the experimental method used.

Glomus Tumor

diagnosis

Glomus tumour masquerading as an aural polyp in chronic middle ear disease: a case report.

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Journal of Taibah University Medical Sciences 2016; 11 (2): 172-174

Keywords: Ear; Ear, Middle- abnormalities; Otitis Media; Paraganglioma

Abstract: Paraganglioma is an uncommon benign tumour of the temporal bones. It usually causes pulsatile tinnitus, recurrent ear bleeds, deafness or facial palsy and is rarely associated with chronic suppurative otitis media [CSOM]. The latter may lead to false histopathological findings. We present an unusual case of a 45-year-old female with a right ear glomus tumour that was associated with CSOM and a large polyp protruding from the auditory canal. Despite preoperative investigations including computed tomography, diagnosis of the tumour could not be established. After taking a biopsy, a curative operation had to be abandoned because of a torrential intra-operative haemorrhage. The initial biopsy report suggested cholesteatoma; however, further histopathological studies including S-100 protein immune-staining revealed it to be paraganglioma. Large aural polyps and granulation tissues in CSOM can mask the characteristic histopathological features of these vascular tumours. We recommend including glomus tumour in the differential diagnosis of similar cases and performing optimum preoperative radiological investigations and immunological staining to confirm the diagnosis.

Glucosephosphate Dehydrogenase Deficiency

Employment of G6PD deficient patient in high altitude area- a case study.

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PAFMJ-Pakistan Armed Forces Medical Journal 2016; 66 (2): 296-297

Keywords: Hemolysis; Oxidative Stress; Altitude

Glycoconjugates

Glycoconjugates distribution in the lateral walls of spinal cord during mouse morphogenesis using lectin histochemical method.

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Journal of Gorgan University of Medical Sciences 2016; 18 (1): 16-22

Keywords: Spinal Cord; Morphogenesis; Lectins; Mice

Abstract: Background and Objective: Different organizers are involved in spinal cord development and differentiation by sending various messages. Specific glycoconjugates secreted from the cells of lateral wall of spinal cord can also act as neurogenesis and neural differentiation messengers. This study was carried out to determine the distribution of sugar compounds in the lateral walls of spinal cord during mice morphogenesis using lectin histochemistry method. Methods: In this experimental study, sections of BALB/c mice from 10-16 embryonic days were fixed in formalin and then histological sections were prepared. Tissue samples for reaction to the glycoconjugates were incubated with DBA, OFA, GSA1B4 and MPA lectins. Alcian blue with pH equal 2.5 was used for background staining. Results: DBA lectin did not react with the lateral wall of the spinal cord. MPA lectin showed severe reaction but consistent, especially in nerve fibers of the lateral wall of spinal cord. GSA1B4 lectin showed weak reaction in the cells and nerve fibers of the spinal cord, but severe reaction was clearly observed in blood vessels. OFA lectin showed severe reaction with -L-Fucose terminal sugar in the lateral walls of the spinal cord in early stages of morphogenesis. Conclusion: The most reaction in the lateral walls of the spinal cord was related to OFA, which reflects the importance of fucose terminal sugar by connecting [16] to the penultimate sugar N-acetyl-D-glucosamin [Glc-Nac] in the development of spinal cord. Due to severe reaction of GSA1B4 to blood vessels of spinal cord, use of this lectin for vascular studies, is recommended.

Glycoproteins

CD133 is not suitable marker for isolating melanoma stem cells from D10 cell line.

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Cell Journal [Yakhteh] 2016; 18 (1): 21-27

Keywords: Peptides; Antigens, CD; Melanoma; Homeodomain Proteins; Transcription Factors; Stem Cells; Cell Line; Spheroids, Cellular; Cells, Cultured

Abstract: Objective: Cutaneous melanoma is the most hazardous malignancy of skin cancer with a high mortality rate. It has been reported that cancer stem cells [CSCs] are responsible for malignancy in most of cancers including melanoma. The aim of this study is to compare two common methods for melanoma stem cell enriching; isolating based on the CD133 cell surface marker and spheroid cell culture. Materials and Methods: In this experimental study, melanoma stem cells were enriched by fluorescence activated cell sorting [FACS] based on the CD133 protein expression and spheroid culture of D10 melanoma cell line,. To determine stemness features, the mRNA expression analysis of ABCG2, c-MYC, NESTIN, OCT4-A and -B genes as well as colony and spheroid formation assays were utilized in unsorted CD133+, CD133- and spheroid cells. Significant differences of the two experimental groups were compared using student's t tests and a two-tailed value of $P < 0.05$ was statistically considered as a significant threshold. Results: Our results demonstrated that spheroid cells had more colony and spheroid forming ability, rather than CD133+ cells and the other groups. Moreover, melanospheres expressed higher mRNA expression level of ABCG2, c-MYC, NESTIN and OCT4-A compared to other groups [$P < 0.05$]. Conclusion: Although CD133+ derived melanoma cells represented stemness features, our findings demonstrated that spheroid culture could be more effective method to enrich melanoma stem cells.

Granuloma, Pyogenic

therapy

Management of a recurrent pyogenic granuloma of (j) the hard palate with diode laser: a case report.

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Journal of Lasers in Medical Sciences 2016; 7 (1): 56-61

Keywords: Lasers, Semiconductor; Recurrence; Palate, Hard

Abstract: Introduction: Pyogenic granuloma [PG] is a prevalent inflammatory hyperplasia of skin and oral mucosa which is often caused by constant low-grade local irritation, traumatic injury or hormonal factors. In many cases, gingival irritation and inflammation due to poor oral hygiene are precipitating factors. Oral PG occurs predominantly on the gingiva, but it is also encountered on the lips, tongue, buccal mucosa and rarely on the hard palate. Although surgical excision is the first choice of treatment, many other treatment modalities could be counted such as cryosurgery, sodium tetradecyl sulfate sclerotherapy, intralesional steroids, flash lamp pulsed dye laser, neodymium-doped yttrium aluminum garnet [Nd:YAG] laser, carbon dioxide [CO₂] laser, erbium-doped yttrium aluminum garnet [Er:YAG] lasers and diode laser have been suggested. After surgical excision recurrence occurs up to 16% of these lesions. It is believed that recurrence ensues as a result of incomplete excision, failure to eliminate etiologic factors or repeated trauma. Case Report: A 50-year-old female was referred to the Department of Oral Surgery, Gazi University, School of Dentistry, complaining of a swelling and growth on the right side of the hard palate for four months. Patient reported a similar growth in the same area about two years earlier, which had turned out to be a PG by histopathology. The treatment plan included surgical excision of the lesion using diode laser. Results: The patient reported no pain after the surgery. She was discharged with a prescription of chlorhexidine mouthwash and necessary post-operative instructions. At 7 days follow up visit, immediate recurrence of the lesion was observed, and it was excised by diode laser with 2 mm margins at its clinical periphery, to a depth up to the periosteum, by the same operator. No recurrence or scarring was observed in 14 months follow-up. Conclusion: Although diode laser is a secure and efficient technique for the treatment of intraoral PG, in order to minimize its recurrence, the lesion should be excised with a wider margin down to the periosteum or to the causing agent. Also due to its high recurrence rate, long-term follow-up is recommended.

Hand

surgery

Use of postoperative antibiotics in elective soft tissue hand surgeries.

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Bahrain Medical Bulletin 2016; 38 (2): 86-89

Keywords: Anti-Bacterial Agents; Postoperative Period; Retrospective Studies; Cohort Studies; Soft Tissue Injuries

Abstract: Objective: To evaluate prophylactic postoperative antibiotic use in elective soft tissue hand surgeries. Design: A Retrospective Cohort Study. Setting: King Haniad University Hospital, Bahrain. Method: Retrospective review of 309 patients undergoing elective soft tissue hand surgery from 2012 to 2015. One hundred fifty-nine [51.5%] of these patients received postoperative prophylactic antibiotics while 150 [48.5%] did not. The records were reviewed for the type of procedure performed, comorbidities, use of postoperative antibiotics, outpatient visits and associated complications. Result: One hundred fifty-nine [51.5%] patients [group I] received postoperative prophylactic antibiotics and 150 [48.5%] did not [group II]. Four [1.3%] patients had infection [3 from group I and 1 from group II]. One [0.3%] patient had deep surgical site infections and 2 [0.6%] patients had superficial surgical site infections, all received postoperative antibiotics. The P-Value obtained was 0.63. Conclusion: Our study failed to demonstrate a benefit of prescribing prophylactic postoperative antibiotics to patients undergoing elective soft tissue hand surgery. Unwarranted antibiotic administration may pose harm to the patient as gastrointestinal side effects, allergic reactions and/or antimicrobial resistance.

Hand Hygiene

Assessment of hand hygiene techniques using the World Health Organization's six steps.

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Journal of Infection and Public Health 2016; 9 (3): 366-369

Keywords: Hand Disinfection; World Health Organization; Nurses; Physicians; Medical Staff

Abstract: The quality of hand hygiene was evaluated via direct observation for compliance with the six recommended World Health Organization steps. A total of 2497 HH opportunities, of which 1573 [63.0%] were hand rubs, were monitored over a five month period. Compliance was higher in nurses compared with physicians and auxiliaries and in steps 1 and 2 for hand rubs as well as the first three steps of hand washing, with lower rates after these steps. Rubbing of the thumbs and fingertips achieved the lowest rates of compliance in both HH types. A combination of the five recommended moments and six steps and staff education is recommended to improve the quality of hand hygiene.

Health

The psychology of health and well-being in mass gatherings: a review and a research agenda.

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Journal of Epidemiology and Global Health 2016; 6 (2): 49-57

Keywords: Psychology; Social Identification; Health Status Indicators; Stress, Psychological

Abstract: Mass gatherings bring large numbers of people into physical proximity. Health benefit. Typically, this physical proximity has been assumed to contribute to ill health Health risk, [e.g., through being stressful, facilitating infection transmission, etc.]. In this, paper, we add a new dimension to the emerging field of mass gatherings medicine. Sharing- Drawing on psychological research concerning group processes, we consider the psy-Social identity chological transformations that occur when people become part of a crowd. We then consider how these transformations may have various consequences for health and well-being. Some of these consequences may be positive. For example, a sense of shared identity amongst participants may encourage participants to view others as a source of social support which in turn contributes to a sense of health and well-being. However, some consequences may be negative. Thus, this same sense of shared identity may result in a loss of disgust at the prospect of sharing resources [e.g., drinking utensils] which could, in turn, facilitate infection transmission. These, and related issues, are illustrated with research conducted at the Magh Mela [North India]. We conclude with an agenda for future research concerning health practices at mass gatherings.

Health Care Facilities, Manpower, and Services

Relative inequalities in geographic distribution of health care resources in Kermanshah province, Islamic Republic of Iran.

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EMHJ-Eastern Mediterranean Health Journal 2016; 22 (1): 20-27

Keywords: Geography; Delivery of Health Care; Retrospective Studies; Cross-Sectional Studies; Health Resources; Socioeconomic Factors

Abstract: This study aimed to evaluate inequalities in the geographical distribution of human and physical. resources in the health sector of Kermanshah province, Islamic Republic of Iran. In a retrospective, cross-sectional study, data from the Statistical Centre of Iran were used to calculate inequality measures [Gini coefficient and index of dissimilarity] over the years 2005-11. The highest Gini coefficient for human resources was observed for pharmacists in 2005 [0.75] and the lowest for paramedics in 2010 and 2011. [0.10]. The highest indices of dissimilarity were also for pharmacists in 2005 [29%] and paramedics in 2011 [3%]. For physical resources, the highest and lowest Gini coefficients were for rehabilitation centres in 2010 [0.59] and health houses in 2011 [0.12] respectively. Generally, inequalities in the distribution of health care resources were lower at the end of the study period, although there was potential for more equitable distribution of pharmacists, specialists, health houses and beds.

Heat Stroke

diagnosis

Heat stroke in Karachi: An unprece-dented medical emergency.

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Journal of Infection and Public Health 2016; 9 (3): 370-371

Keywords: Emergency Medical Services; Heat Exhaustion

Helicobacter Infections

Helicobacter pylori infection in children presenting with recurrent abdominal pain.

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PAFMJ-Pakistan Armed Forces Medical Journal 2016; 66 (2): 266-269

Keywords: Helicobacter pylori; Child; Abdominal Pain; Recurrence; Cross-Sectional Studies

Abstract: Objective: To determine the frequency of Helicobacter Pylori [H. pylori] infection in children presenting with recurrent abdominal pain [RAP]. Study Design: Descriptive cross-sectional study. Place and Duration of Study: This study was conducted at Combined Military Hospital [CMH] Quetta over a period of 10 months from 01-08-2011 to 31-05-2012. Material and Methods: A total of 83 children with recurrent abdominal pain were included in this study. Blood samples of patients were analyzed in laboratory of CMH Quetta for H. pylori Antibody [Ab] titers. Results: Mean age of the patients was 8.12 +/- 3.46 years. Distribution of gender showed that 44 patients [53.1%] were male while 39 patients [46.9%] were female. Mean duration of symptoms was 15.8% +/- 3.7 months. H. pylori infection was present in 27 [32.5%] patients. Topical ciprofloxacin is more effective in earlier control of congestion and discharge of ear in CSOM; [p value <0.001 and <0.005 respectively] as compared to Neomycin. Conclusion: H. pylori infection is common in children with RAP and presentation of epigastric pain in these patients can be considered as a warning sign to screen for H. pylori infection.

Hemorrhagic Fever, Ebola

therapy

BCX4430 - A broad-spectrum antiviral adenosine nucleoside analog under development for the treatment of Ebola virus disease.

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BioCryst Pharmaceuticals Inc

Journal of Infection and Public Health 2016; 9 (3): 220-226

Keywords: Ebolavirus; Antiviral Agents; Purine Nucleosides; Yellow Fever

Abstract: The adenosine nucleoside analog BCX4430 is a direct-acting antiviral drug under investigation for the treatment of serious and life-threatening infections from highly pathogenic viruses, such as the Ebola virus. Cellular kinases phosphorylate BCX4430 to a triphosphate that mimics ATP; viral RNA polymerases incorporate the drug's monophosphate nucleotide into the growing RNA chain, causing premature chain termination. BCX4430 is active in vitro against many RNA viral pathogens, including the filoviruses and emerging infectious agents such as MERS-CoV and SARS-CoV. In vivo, BCX4430 is active after intramuscular, intraperitoneal, and oral administration in a variety of experimental infections. In nonclinical studies involving lethal infections with Ebola virus, Marburg virus, Rift Valley fever virus, and Yellow Fever virus, BCX4430 has demonstrated pronounced efficacy. In experiments conducted in several models, both a reduction in the viral load and an improvement in survival were found to be related to the dose of BCX4430. A Phase 1 clinical trial of intramuscular administration of BCX4430 in healthy subjects is currently ongoing.

Hepatitis B Surface Antigens

isolation and purification

Seroprevalence of HBsAg among adolescents and adults in the Muhayil Aseer region of KSA: 25 years after the introduction of national vaccination.

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Journal of Taibah University Medical Sciences 2016; 11 (2): 140-144

Keywords: Hepatitis B virus; Hepatitis B Vaccines; Cross-Sectional Studies; Surveys and Questionnaires; Serology; Prevalence; Hepatitis B-epidemiology

Abstract: Objective: The objective of this work was to investigate the seroprevalence and associated risk factors of HbsAg among adolescents and adults in the Muhayil Aseer region of KSA. Methods: A cross-sectional study was conducted on a selected sample of adolescents and adults in the Muhayil Aseer region of KSA. A comprehensive questionnaire-based interview was performed for all participants, blood samples were taken, and sera were tested for HBsAg. Results: The study included 133 adolescents and 938 adults. A seroprevalence of 1.5% and 6.1% were recorded among adolescents and adults, respectively. The study showed that persons without the hepatitis B vaccination carried a significantly higher risk for developing sero-positivity for HBsAg. Conclusion: The present study further endorsed the effectiveness of vaccination in preventing hepatitis B virus [HBV] infection. Strict preventive measures against HBV infection need to be fostered in the study area.

Hepatitis B Vaccines

A longitudinal cohort study of the D relationship between Thimerosal-containing hepatitis B vaccination and specific delays in development in the United States: Assessment of attributable risk and lifetime care costs.

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Journal of Epidemiology and Global Health 2016; 6 (2): 105-118

Keywords: Thimerosal; Cohort Studies; Risk; Ethylmercury Compounds

Abstract: Epidemiological evidence suggests a link between mercury [Hg] exposure from Thimerosal-containing vaccines and specific delays in development. A hypothesis-testing longitudinal cohort study [n = 49,835] using medical records in the vaccine Safety Datalink [VSD] was undertaken to evaluate the relationship between exposure to Hg from Thimerosal-containing hepatitis B vaccines. [T-HBVs] administered at specific intervals in the first 6 months of life and specific delays in development [International Classification of Disease, 9th revision [ICD-9]: 315.xx] among children born between 1991 and 1994 and continuously enrolled from birth for at least 5.81 years. Infants receiving increased Hg doses from T-HBVs administered within the first month, the first 2 months, and the first 6 months of life were significantly more likely to be diagnosed with specific delays in development than infants receiving no Hg doses from T-HBVs. During the decade in which T-HBVs were routinely recommended and administered to US infants [1991-2001] an estimated 0.5-1 million additional US children were diagnosed with specific delays in development as a consequence of 25 µg or 37.5µg organic Hg from T-HBVs administered within the first 6 months of life. The resulting lifetime costs to the United States may exceed \$1 trillion.

Hepatitis C, Chronic

therapy

Hep-net opinion about the management of patients with chronic hepatitis C in Pakistan in the era of available direct acting antivirals.

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JPMI-Journal of Postgraduate Medical Institute 2016; 30 (1): 6-14

Keywords: Antiviral Agents; Hepatitis C, Chronic-therapy; Disease Management; Coinfection

Abstract: In Pakistan, we have 4.9% prevalence of HCV in general population, with 79% genotype 3. Recently Sofosbuvir has been made available at compassionate price in Pakistan. Management of chronic hepatitis C includes counseling of HCV patients, their proper assessment to select those who need antiviral therapy, initiation of appropriate antiviral agents and duration of therapy, along-with careful monitoring for safety and efficacy. Hepatic status as well as previous history of HCV therapy needs to be taken in the consideration before starting antiviral therapy. Other factors include co-morbid conditions like obesity, DM, NASH, etc. Treatment of special populations like liver transplant patients, patients with HBV co-infection, chronic kidney disease and hemoglobinopathies need special considerations when initiating HCV therapy.

Hepatolenticular Degeneration

Synthesis and anti-intracellular Copper overload evaluation of Nanoconjugated D-penicillamine -Dendrimer in Wilson's model cells.

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Journal of Gorgan University of Medical Sciences 2016; 18 (1): 114-119

Keywords: Penicillamine; Dendrimers; Copper

Abstract: Background and Objective: Wilson's disease [WD] is caused by mutation to the copper-transporting gene ATP7B. Chelation therapy is the main protocol of treatment for patients with Wilson's disease. D-penicillamine is one of the well-known chelator agents which is used in WD treatment but it can not enter into the intracellular space. This study was done to evaluate the synthesis and anti-intracellular Copper overload evaluation of Nanoconjugated D-penicillamine -Dendrimer in Wilson's model cells. Methods: In this descriptive-analytic study, initially 0.01 mm polyethylene glycol [PEG] and 0.0018 mm citric acid, Dendrimer was synthesized. After purification by dialysis bag and lyophilization, 10mg dendrimer was conjugated to 3.3mg D-penicillamine. Nanoconjugated D-penicillamine-dendrimer was injected on Wilson's model cells. After incubation and centrifugation intracellular measurement of copper concentration and FTIR test were done. Results: Copper accumulation significantly reduced in the HepG2 WD cell by Nanoconjugated D-penicillamine - Dendrimer in compared to D-penicillamine [P<0.05]. Copper accumulation was determined to be 46.61, MTT assay showed no toxicological damage in HepG2 WD cell. Conclusion: Nanoconjugated D-penicillamine -Dendrimer can reduce intracellular concentration of Copper.

Hernia, Inguinal

complications

Ileoileal knot as a content of obstructed hernia: what are the odds?.

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IJMS-Iranian Journal of Medical Sciences 2016; 41 (3): 238-240

Keywords: Hernia; Intestinal Obstruction

Abstract: An obstructed inguinal hernia is a common surgical emergency, which presents with a variety of contents like the small intestine, omentum, and colon. Intestinal knotting is a rare entity encountered in surgical practice; it occurs when one coil of intestine wraps around the other and eventually leads to complications such as intestinal obstruction, ischemia, and gangrene. Both conditions are considered surgical emergencies and should be dealt with through appropriate surgical measures forthwith. We report the case of an obstructed inguinal hernia, which, on exploration, showed an ileoileal knot as its content. Ileoileal knotting is a very rare phenomenon and, to the best of our knowledge, such an ileoileal knot as a content of obstructed inguinal hernia has not been reported in the surgical literature so far.

Hyaluronic Acid

pharmacology

Efficacy of hyaluronic acid in the selection of human spermatozoa with intact DNA by the swim-up method.

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Cell Journal [Yakhteh] 2016; 18 (1): 83-88

Keywords: Spermatozoa; Semen; Apoptosis; DNA; Cohort Studies

Abstract: Objective: In 2014, enrolled 20 patients who applied to the Unit of Assisted Reproduction Techniques, Konya Necmettin Erbakan University. Based on the presence of hyaluronic acid [HA] in the oocyte-cumulus cell complex, sperm attached to HA in vivo were modeled in vitro. Available healthy sperm obtained in the swim-up procedure using HA were investigated. Materials and Methods: This observational cohort study, a routine analysis was conducted on the ejaculation samples obtained from 20 patients. We divided each sample into two groups and the swim-up method was applied. Human serum albumin [HSA, 0.5%] was added to samples from the first group. HA [10%] was added to samples from the second group. We determined the floating linear and non-linear sperm concentrations of both groups annexin V was used to determine the rate of apoptosis of these sperm. Results: Following swim-up, linear and non-linear sperm concentrations were higher in the group that contained HA compared to the group with HSA. However, there was a significantly higher apoptosis rate in the HSA group compared to the HA group. Conclusion: The addition of HA to the medium in the swim-up procedure positively affected sperm parameters. Thus, healthier sperm cells were obtained without DNA damage and with high motility.

Hydatidiform Mole

epidemiology

Hydatidiform mole: a statistical survey in west of Iran.

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JPMI-Journal of Postgraduate Medical Institute 2016; 30 (1): 80-83

Keywords: Retrospective Studies; Pregnant Women; Gestational Trophoblastic Disease; Surveys and Questionnaires; Pregnancy

Abstract: Objective: To determine the incidence of hydatidiform mole in west of Iran. Methodology: This study was carried out on pregnant women referring for delivery in Hamadan province in west of Iran. We retrospectively evaluated medical records of all referring subjects to medical centers in Hamadan province between 1997 and 2006. All pregnant women referred to 11 referral hospitals as well as obstetric care facility centers in the province were studied. We recorded all cases with hydatidiform mole. Data Processing and statistical analysis were performed using SPSS version 16.0. Results: The incidence of hydatidiform mole in Hamadan province estimated 3.34 per 1000 pregnancies between 1997 and 2006. It means 1 per 298.2 pregnancies had hydatidiform mole. The incidence rate of hydatidiform mole was considerably higher compared to reported from Japan, Turkey, Europe, USA, UK, China, Malaysia, whereas was lower than reported from Indonesia and India. The risk of recurrence rate of mole was higher than that reported in the UK, but lower than that shown in South Africa. Conclusion: The incidence of hydatidiform mole in Hamadan province of Iran seems to be high. Therefore early and rapid diagnosis of gestational tropho-blastic diseases in this region is strongly recommended.

Hypertension

epidemiology

Frequency of undiagnosed hypertension in patients presenting with stroke.

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PAFMJ-Pakistan Armed Forces Medical Journal 2016; 66 (2): 250-253

Keywords: Stroke; Cross-Sectional Studies; Blood Pressure

Abstract: Objective: To determine the frequency of undiagnosed hypertension [HTN] in patients presenting with stroke. Study Design: Descriptive cross sectional study. Place and Duration of Study: Department of medicine, Combined Military Hospital [CMH] Kohat from June 2011 to June 2012. Material and Methods: A total of 190 patients with stroke were included in the study with non-probability, consecutive sampling. Written informed consent and demographics of patients were obtained and permission of the hospital ethical committee was taken. Detailed past history was obtained especially focusing on whether a known hypertensive patient or using any antihypertensive medication. All the patients were subjected to detailed physical examination. Blood pressure [BP] was measured by using standard mercury sphygmomanometer on two different occasions 10 minutes apart and the patient was labeled as hypertensive if both readings showed equal to or more than 140/90mmHg of blood pressure. Results: The mean age of patients was 46.31 +/- 15.30years. There were 126 [66.3%] males and 64 [33.7%] females. The mean systolic BP of patients was 125.59 +/- 19.97mmHg while diastolic BP was 86.32 +/- 12.62 mmHg. In this study, there were 64 [33.7%] cases who had undiagnosed HTN before stroke. The difference was insignificant among different age groups and both genders [p-value>0.05]. Conclusion: The frequency of undiagnosed HTN is high in patients presenting with stroke which calls for a proper screening program to diagnose and treat. HTN at early stage to prevent such deadly complications.

Immunization

Routine immunization services in Pakistan: seeing beyond the numbers.

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EMHJ-Eastern Mediterranean Health Journal 2016; 22 (3): 201-211

Keywords: Vaccination; Vaccines

Abstract: Vaccine-preventable diseases continue to be a major cause of morbidity and mortality among children under 5 years of age in Pakistan, and the country remains one of the last reservoirs of polio, posing a threat of viral spread within the region and globally. This structured review describes challenges in the achievement of vaccination targets and identifies arenas for policy and programmatic interventions and future research. Burdened with limited demand and inefficient vaccination services, the recently devolved Expanded Programme on Immunization [EPI] faces multiple hurdles in increasing immunization volumes, improving the quality of services and ensuring timely vaccination. The EPI requires multi-pronged, multi-level, coordinated interventions to improve programme functioning and to enhance vaccination uptake at community level. Additionally, a lack of rigorous scientific enquiry on vaccination services limits the introduction of well-developed, responsive interventions. The paper describes systemic bottlenecks, proposes potential solutions and suggests lines of further enquiry to understand and reduce the languishing immunization rates in Pakistan.

In Vitro Oocyte Maturation Techniques

Effects of crocin supplementation during in vitro maturation of mouse oocytes on glutathione synthesis and cytoplasmic maturation.

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IJFS-International Journal of Fertility and Sterility 2016; 10 (1): 53-61

Keywords: Antioxidants; Oxidative Stress; Oocytes; Carotenoids-pharmacology; Mice; Glutathione

Abstract: Background: Crocin is an active ingredient of saffron [*Crocus sativus* L] and it's an-tioxidant properties have been previously investigated. This carotenoid scavenges free radicals and stimulates glutathione [GSH] synthesis; consequently, it may protect cells against oxidative stress. The aim of this research is to protect oocytes from oxidative stress by the addition of a natural source antioxidant. Materials and Methods: In the present in vitro experimental study, we collected cumulus oocyte complexes [COCs] from mouse ovaries of euthanized, 6-8 week-old female Naval Medical Research Institute [NMRI] mice. Oocytes were subjected to in vitro maturation [IVM] in the presence of either crocin [5 or 10 microg/ml], 5 mM buthionine-[S-R]-sulfoximine [BSO], or the combination of crocin plus BSO. Oocytes that matured in vitro in a medium without crocin or BSO supplements were considered as controls. Following 16-18 hours of IVM, matured oocytes [n=631] were fertilized by capacitated sperm from NMRI male mice, and cultured in vitro for up to 96 hours to assess preimplantation embryonic development. The levels of GSH in metaphase II [MII] oocytes after IVM [n=240] were also assessed by the 5, 5-dithio-bis [2-nitrobenzoic acid] [DTNB]. -GSH reductase recycling assay. Results: Supplementation of IVM media with 10 microg/ml crocin significantly [P<0.05] increased nuclear maturation, preimplantation development and GSH concentrations compared with the control group. Maturation of oocytes in IVM medium supplemented with BSO alone or the combination of microg/ml crocin and BSO drastically decreased GSH concentrations and subsequently resulted in low rates of maturation, fertilization and blastocyst development. However, the combination of 10 microg/ml crocin with 5 mM BSO increased the level of nuclear maturation which was comparable to the control group. Conclusion: Supplementation of IVM media with crocin can improve nuclear maturation rates and subsequent developmental potential of mouse oocytes. This may occur by its beneficial effect in increasing GSH concentrations in MII oocytes.

Infant Mortality

Neonatal mortality risk factors in Maraveh Tapeh County in Golestan province, north of Iran (2011-13)

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Journal of Gorgan University of Medical Sciences 2016; 18 (1): 86-93

Keywords: Risk Factors; Surveys and Questionnaires; Case-Control Studies; Infant, Low Birth Weight; Infant, Premature; Infant, Newborn

Abstract: Background and Objective: Neonatal mortality rate is one of the most important health criteria, worldwide. Understanding the major neonatal mortality causes will help to plan for better pregnancy, prenatal and neonatal care systems. This study was conducted to determine the neonatal mortality risk factors in Maraveh Tapeh County in Golestan province, north of Iran. Methods: In this case-control study, according to either death or live in 28th day after birth, 52 neonates were considered as case group and 201 neonates were considered as control group. Data collection questionnaire were adjusted and completed for each neonate. Results: Neonatal mortality rate was 11.76, 13.36 and 6.46 per 1000 live birth in 2011, 2012 and 2013, respectively. Five main causes of death were prematurity, events, birth defect, respiratory distress syndrome and sepsis, respectively. There was a significant relation between death and prematurity, birth weight and gender [P<0.05]. There was relationship between birth weight and neonatal mortality [OddsRatio=29.6]. Conclusion: Prematurity and low birth weight were the most important causes of neonatal mortality in Maraveh Tapeh county in Golestan province, north of Iran.

Inferior Wall Myocardial Infarction

physiopathology

Frequency of high degree AV blocks in acute inferior myocardial infarction and their impact on clinical outcomes.

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68- Medical Battalion

PAFMJ-Pakistan Armed Forces Medical Journal 2016; 66 (2): 281-284

Keywords: Atrioventricular Block; Outcome Assessment [Health Care]; Cross-Sectional Studies; Mortality

Abstract: Objective: To evaluate the frequency of high degree AV block in acute inferior wall myocardial infarction and to compare in hospital clinical outcomes in patients with inferior wall MI with and without AV Block. Study Design: Cross sectional descriptive study. Place and Duration of Study: Study was carried out at Armed Forces Institute of Cardiology, National Institute of Heart Diseases [AFIC-NIHD] Rawalpindi from Nov 2011 to June 2012, on patients admitted with acute inferior ML. Patients and Methods: Standard 12 lead ECG was recorded immediately after

admission. Diagnosis of acute inferior wall MI was made in the presence of ST elevation >0.1 mv [1mm] in two or more of leads II, III and aVF. Continuous bed side cardiac monitoring was carried out. Two groups were made out of 193 patients. GROUPE A [AVB+]=Patients having acute inferior wall infarction with AV block, GROUPE B [AVB-]Patients having acute inferior wall infarction without AV block. Each group was compared for different variables. Data analysis was done by SPSS 17 statistical software. Results: AVB was found in 54 of 193 patients with inferior wall MI [28%]. Five patients [9.25%] of group A and 2 patients [1.43%] of group B died during hospital stay showing significantly higher mortality in patients with AVB [$p=0.009$]. Conclusion: Heart blocks are frequent among patients with inferior wall MI and are accompanied with a variety of in hospital complications. These complications can be minimized by early recognition and timely management including interventions like temporary cardiac pacing.

Infertility, Female

Immune aspects of female infertility.

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IJFS-International Journal of Fertility and Sterility 2016; 10 (1): 1-10

Keywords: Female; Semen; Spermatozoa; Immunglobulins; Immunity

Abstract: Immune infertility, in terms of reproductive failure, has become a serious health issue involving approximately 1 out of 5 couples at reproductive age. Semen that is defined as a complex fluid containing sperm, cellular vesicles and other cells and components, could sensitize the female genital tract. The immune rejection of male semen in the female reproductive tract is explained as the failure of natural tolerance leading to local and/or systemic immune response. Present active immune mechanism may induce high levels of anti-seminal/sperm antibodies. It has already been proven that iso-immunization is associated with infertility. Comprehensive studies with regards to the identification of antibody-targets and the determination of specific antibody class contribute to the development of effective immuno-therapy and, on the other hand, potential immuno-contraception, and then of course to complex patient diagnosis. This review summarizes the aspects of female immune infertility.

Investigation of personality traits between infertile women submitted to assisted reproductive technology or surrogacy.

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IJFS-International Journal of Fertility and Sterility 2016; 10 (1): 94-104

Keywords: Personality; Pliability; Happiness; Cross-Sectional Studies; Reproductive Techniques, Assisted; Sensation

Abstract: Background: Personality traits affect human relationships, social interactions, treatment procedures, and essentially all human activities. The purpose of this study is to investigate the personality traits -including sensation seeking, flexibility, and happiness - among a variety of infertile women who were apt to choose assisted reproductive technology [ART] or surrogacy. Materials and Methods: This is a cross-sectional study that was performed on 251 infertile women who visited Isfahan and Tehran Reproductive Medicine Center. These fertility clinics are located in Isfahan and Tehran, Iran. In this study, 201 infertile women who underwent treatment using ART and 50 infertile women who tended to have surrogacy were chosen by convenience sampling. Zuckerman's Sensation Seeking Scale Form V [SSS-V], Psychological Flexibility Questionnaire [adapted from NEO Personality Inventory-Revised] and Oxford Happiness Questionnaire [OHQ] were used as research instruments. All participants had to complete the research instruments in order to be included in this study. Data were analyzed by descriptive-analytical statistics and statistical tests including multivariate analysis of variance [MANOVA] and Z Fisher. Statistically significant effects were accepted for $P<0.05$. Results: In the sensation-seeking variable, there was a meaningful difference between under-study groups. However, the flexibility and happiness variables did not have a significant difference between under-study groups [$P<0.001$]. Interaction between education, employment, and financial status was effective in happiness of infertile women underwent ART [$P<0.05$], while age, education and financial status were also effective in happiness of infertile women sought surrogacy [$P<0.05$]. A positive meaningful relationship was seen between sensation seeking and flexibility variables in both groups [$P<0.05$]. And a negative meaningful relationship was seen between sensation seeking and happiness in infertile women who sought surrogacy [$P<0.05$]. The difference in rate of relationship between sensation seeking and flexibility was meaningful in infertile women who sought either ART or surrogacy [$P<0.05$]. Conclusion: Sensations seeking as a personality trait is lower in infertile women who underwent treatment using ART compared women who tended to have surrogacy. This study shows that demographic variables are effective in happiness of infertile women. Also, there is a significant relation among sensation seeking, flexibility and happiness in infertile women.

Insulin

chemical synthesis

Suspension culture alters insulin secretion in induced human umbilical cord matrix-derived mesenchymal cells.

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Cell Journal [Yakhteh] 2016; 18 (1): 52-61

Keywords: Diabetes Mellitus; Umbilical Cord; Mesenchymal Stromal Cells; Pancreas; Cell Culture Techniques

Abstract: Objective: Worldwide, diabetes mellitus [DM] is an ever-increasing metabolic disorder. A promising approach to the treatment of DM is the implantation of insulin producing cells [IPC] that have been derived from various stem cells. Culture conditions play a pivotal role in the quality and quantity of the differentiated cells. In this experimental study, we have applied various culture conditions to differentiate human umbilical cord matrix-derived mesenchymal cells [hUCMs] into IPCs and measured insulin production. Materials and Methods: In this experimental study, we exposed hUCMs cells to pancreatic medium and differentiated them into IPCs in monolayer and suspension cultures. Pancreatic medium consisted of serum-free Dulbecco's modified eagle's medium Nutrient mixture F12 [DMEM/F12] medium with 17.5 mM glucose supplemented by 10 mM nicotinamide, 10 nM exendin-4, 10 nM pentagastrin, 100 pM hepatocyte growth factor, and B-27 serum-free supplement. After differentiation, insulin content was analyzed by gene expression, immunocytochemistry [IHC] and the chemiluminescence immunoassay [CLIA]. Results: Reverse transcription-polymerase chain reaction [RT-PCR] showed efficient expressions of NKX2.2, PDX1 and INSULIN genes in both groups. IHC analysis showed higher expression of insulin protein in the hanging drop group, and CLIA revealed a significant higher insulin production in hanging drops compared with the monolayer group following the glucose challenge test. Conclusion: We showed by this novel, simple technique that the suspension culture played an important role in differentiation of hUCMs into IPC. This culture was more efficient than the conventional culture method commonly used in IPC differentiation and cultivation.

Intellectual Disability

Patriarchy in family care-giving: experiences of families of children with intellectual disability in Pakistan.

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JPMI-Journal of Postgraduate Medical Institute 2016; 30 (1): 73-79

Keywords: Family Characteristics; Surveys and Questionnaires; Caregivers; Parents; Family; Child

Abstract: Objective: To know the effects of children with intellectual disability [ID] on families in Pakistan with special focus on the experiences of mothers living in nuclear and joint families. Methodology: This was qualitative study in which qualitative methods were employed for this study. Data was collected from parents and family members of children with intellectually disability. Participants from the diverse socio-economic features were selected from the three rehabilitation centres for children with intellectual and physical disability in Peshawar and Haripur districts of Khyber Pakhtunkhwa province. A total of 58 respondents were interviewed including 30 in-depth individual interviews [IDIs] with parents having children with ID and 4 Focus Group Discussions [FGDs] with a total of 28 parents [7 participants in each FGD]. Both mothers and fathers participated in this study for ensuring equal gender ratio. Results: Women in the families were suffering more as compare to men due to socially assigned role of primary care of the children. Women were facing social exclusion, stress/ fatigue due to role strain, rejection in the form of family breakdown and work-family conflict due to gender imbalance in role performances. Moreover, families were also prone to displacements and social hazards like beggary, child labour and drop out of normal female children from schools due poor institutional role in child support and rehabilitation. Conclusion: Patriarchy promotes uneven distribution of roles for men and women in the families having children with ID which causes more agonies for mothers and other female members of the house as compared to male members of the family.

Intensive Care Units, Neonatal

Risk factors for neonatal intensive care unit admission in Amman, Jordan.

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Undergraduate Medical Education

EMHJ-Eastern Mediterranean Health Journal 2016; 22 (3): 163-174

Keywords: Risk Factors; Infant, Newborn; Surveys and Questionnaires; Cohort Studies; Retrospective Studies; Prospective Studies; Gestational Age

Abstract: A better understanding of risk factors for neonatal intensive care unit [NICU] admission can inform interventions to improve neonatal survival. This study aimed to describe a population of newborns admitted to a NICU in Amman Jordan, and compare them with newborns discharged to home. Newborns born within 96 hours at Al-Bashir Hospital were enrolled from February 2010 to June 2011. Demographic and clinical data were collected for mothers and newborns. Of 5466 enrolled neonates, 373 [6.8%] were admitted to the NICU. The median gestational age of NICU infants was 36 weeks, median birth weight was 2.2 kg and 49.5% were delivered by non-elective caesarean section. Lower gestational age, lower birth weight, delivery by caesarean section and birth in the month of May were statistically significant risk factors for NICU admission. Risk factors for NICU admission were consistent with other populations worldwide; however, median gestational age and birth weight were higher than in developed countries.

Keratoconus

genetics

Sequence analysis of the VSX1 and SOD1 genes in families with Keratoconus and a review of the literature.

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Journal of Taibah University Medical Sciences 2016; 11 (2): 115-120

Keywords: Genes; Base Sequence; Review Literature as Topic; Cornea; Corneal Diseases; Family; Eye Proteins; Homeodomain Proteins; Superoxide Dismutase

Abstract: Objective: Keratoconus [KC] is a non-inflammatory disorder of the cornea in which the cornea becomes thin and conical, inducing myopia and irregular astigmatism and resulting in mild to marked impairment of vision. The present study was designed to screen two candidate KC genes to identify pathogenic sequence variants responsible for KC in Saudi families. Methods: Peripheral blood samples from members of five Saudi families with KC from the Northern region were collected. Genomic DNA was isolated, and bidirectional sequencing was performed of all coding exons of VSX1 and SOD1 genes using Sanger sequencing. Results: All five of the KC families showed a pattern of autosomal recessive inheritance. Phenotyping of these families was performed by a senior ophthalmologist. Sequence analysis of the VSX1 and SOD1 genes failed to reveal any pathogenic sequence variant that could account for KC in the affected individuals. Conclusion: Our failure to detect sequence variants in two of the known KC associated genes triggers an interest in other known KC candidate genes, including miR-184, DOCK9, IL1RN and SLC4A11. Future genotyping with dense SNP arrays followed by exome sequencing in these families will be a useful approach to identify the gene[s] underlying KC in this Saudi cohort, which may be different from those reported elsewhere.

Lactobacillus acidophilus

Evaluation of anti-microbial activity of Lactobacillus acidophilus and Lactobacillus ruteri against entero-pathogens by in vitro and in vivo methods.

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Journal of Gorgan University of Medical Sciences 2016; 18 (1): 45-52

Keywords: Lactobacillus ruteri; In Vitro Techniques; Probiotics; Enterobacteriaceae Infections; Anti-Infective Agents; Mice

Abstract: Background and Objective: Probiotics are beneficial organisms therapeutic within microbial flora. Shigella, Escherichia coli and Salmonella are the most common cause of intestinal infectious diseases that lead to morbidity and mortality in infant and children worldwide. The aim of this study was to evaluate. anti-microbial activity of Lactobacillus acidophilus and Lactobacillus ruteri against entero-pathogenes by in vitro and in vivo methods. Methods: In this experimental study, the therapeutic effect of the lactobacillus acidophilus ATCC 4356 and ruteri ATCC 23272 against Shigella sonnei ATCC 9290, Escherichia coli ATCC 25922 and Salmonella enterica BAA-708 were evaluated by in vitro [spot agar] and in vivo [BALB/c mice] methods. Weight improvement and survival rate in mice were recorded. Results: Lactobacillus acidophilus and ruteri had protective and therapeutic effect against diarrhea caused by pathogenic bacteria. Probiotics reduced the weight, colonization of pathogens and increased the survival rate of animals [P<0.05]. Conclusion: Lactobacillus acidophilus and ruteri has anti-microbial activity and their consumption can be effective in the prevention and also the treatment of intestinal disease.

Language Tests

Evaluating the English language scientific writing skills of Saudi dental students at entry level.

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EMHJ-Eastern Mediterranean Health Journal 2016; 22 (2): 148-153

Keywords: Students, Dental; Cross-Sectional Studies; Writing

Abstract: Better knowledge is needed about the effectiveness of preparatory English language courses for the health professions. This study evaluated the scientific writing skills of students finishing their preparatory year of a bachelor of dentistry programme in Saudi Arabia. A cross-sectional study was conducted in. 2014-15 among first-year dental students at the University of Dammam. Students were asked to write a 150-word English language assignment that was analysed for writing statistics and problems using Microsoft Word and plagiarism detection software. Of the 89 respondents, female students used a significantly greater number of words than did male students and their assignments had significantly lower Flesch reading ease scores. Male students had significantly lower odds of using references [OR 0.04] and higherodds of making punctuation and grammar mistakes [OR2.63 and 3.91 respectively]. One course of scientific writing in the preparatory year may not be enough to develop adequate writing skills among undergraduate dental students.

Lasers, Solid-State

Surface treatment by different parameters of erbiumyttrium-aluminum-garnet [ENYAG] laser: scanning electron microscope [SEM] evaluation.

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Journal of Lasers in Medical Sciences 2016; 7 (1): 37-39

Keywords: Electron Microscope Tomography; Tooth; Dentin

Abstract: Introduction: This study aimed to assess the Scanning Electron Microscope [SEM] analysis of tooth surface irradiated by erbium:yttrium-aluminum-garnet [EnYAG] laser with various parameters. Methods: Number of 25 extracted human third molars free of caries were used in this study. The teeth were put into 5 groups for laser irradiation as follows: group 1 [power: 0.5 W, Energy: 50 mj]; group 2 [power: 1 W, Energy: 100 mj]; group 3 [power: 1.5 W, Energy: 150 mj]; group 4 [power: 2 W, Energy: 200 mj]; group 5 [power: 2.5 W, Energy: 250 mj]. All samples were prepared by repetition rate of 10 Hz and duration of 230 us, using a non-contact handpiece at a distance of 4 mm. Then, the samples were prepared for SEM examination. Results: SEM evaluation of every 25 samples, treated by EnYAG, showed that all groups had exposed dentinal tubules without any melted area or cracks. Conclusion: In this study we used SEM to investigate ablated dentine with different parameters of EnYAG laser energy. Our findings support these conclusions. All powers of laser below 3 W are proper for ablation, and make no cracks.

Learning

Assessment of medical students' learning and study strategies in self-regulated learning.

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Journal of Advances in Medical Education and Professionalism 2016; 4 (2): 72-79

Keywords: Students, Medical; Educational Measurement; Cross-Sectional Studies; Surveys and Questionnaires

Abstract: Introduction: Research on medical students shows that adopting self-regulation of effort, time, and study strategies can positively influence academic achievement. The purpose of the current study was to assess learning and study strategies in medical students. Methods: This cross-sectional study was carried out in 2014-2015 at Isfahan University of Medical Sciences. The sample size was determined 360 students. based on the results of a pilot study on 30 members of the study population. Medical students in the first to fourth year of their studies were selected through simple sampling randomly. A valid and reliable Persian translation of Learning and Study Strategies Inventory [LASSI] questionnaire was completed by the students. It measures three latent factors of self-regulated learning: Skill, Will, and Self-Regulation. It consists of 80 questions in ten different scales [each scale including eight questions and a variable score of 8-40]. Data were analyzed using t-test, correlation analysis, and ANOVA. Results: Considering the ten LASSI scales, the highest mean score belonged to test strategies [28.67 +/- 4.44], and the lowest mean to self-testing [21.91 +/- 4.91]. The results showed significant statistical differences between male and female students in selecting the main idea, attitude, and self-testing. ANOVA and post hoc Tukey tests showed a significant difference between the mean scores of different areas of LASSI among students with different grade point average [GPA] in the university. In all areas except the study aids, the mean scores of students with GPA higher than 17.5 were significantly higher than those of students with GPA lower than 14.5. Conclusion: The results showed that students need help and consultation in most areas of learning and study strategies. Using 10 areas of LASSI can determine the strengths and weaknesses of students in various areas. Knowing their own limitations, students will be able to improve their study habits. Hence, it is suggested to evaluate the students when enrolling at universities and design educational programs based on the students' characteristics.

Core components of clinical education: a qualitative study with attending physicians and their residents.

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Journal of Advances in Medical Education and Professionalism 2016; 4 (2): 64-71

Keywords: Hospitals, Teaching; Surveys and Questionnaires; Students, Medical; Education, Medical; Evaluation Studies as Topic; Curriculum

Abstract: Introduction: In medical education, particularly in residency courses, most of the training occurs in real clinical environments. Workplace-based learning profoundly affects students' knowledge, attitudes, and practice; therefore, it should be properly planned. Due to the extensiveness of the clinical environment and its importance in training residents, investigating how residents learn in these environments and detecting factors that influence effectiveness will help curriculum designers to promote residents' learning by improving their learning environment. Therefore, our qualitative content analysis study, aimed to examine the experiences and perspectives of internal and surgical residents and their attending physicians about learning in clinical settings. Methods: This qualitative content analysis study was conducted through purposeful sampling. Semi-structured interviews were conducted with 15 internal and surgical residents and 15 of their attending physicians at educational hospitals of Tehran University of Medical Sciences. Results: The main categories explored in this study were hidden curriculum, learning resources, and learning conditions. In the context of clinical environment and under its individual culture, residents learn professionalism and learn to improve their communication skills with patients and colleagues. Because of clinical obligations such as priority of treating the patients for education or workload of the attending physicians, residents acquire most of their practical knowledge from colleagues, fellows, or follow-up patients in different learning conditions [such as: educational rounds, morning reports and outpatient clinics]. They see some of their attending physicians as role models. Conclusion: Changing cultural and contextual factors is of prime importance to promote a learning-oriented environment in a clinical setting. The present findings will help curriculum planners and attending physicians to improve residents' learning by means of appropriate workplace planning and by considering the components involved in clinical learning.

The effect of web quest and team-based learning on students' self-regulation.

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Journal of Advances in Medical Education and Professionalism 2016; 4 (2): 80-87

Keywords: Nursing; Students; Internet; Surveys and Questionnaires; Students, Medical; Education, Medical

Abstract: Introduction: In this study, the authors aimed to examine the effects of cooperative learning. Methods using Web Quest and team-based learning on students' self-direction, self-regulation, and academic achievement. Methods: This is a comparative study of students taking a course in mental health and psychiatric disorders. In two consecutive years, a group of students were trained using the Web Quest approach as a teaching strategy [n=38], while the other group was taught using team-based learning [n=39]. Data gathering was based on Guglielmino's self-directed learning readiness scale [SDLRS] and Buford's self-regulation questionnaire. The data were analyzed by descriptive test using M [IQR], Wilcoxon. Signed-rank test, and the Mann-Whitney U-test in SPSS software, version 13. $p < 0.05$ was considered as the significance level. Results: The results of the Mann-Whitney U test showed that the participants' self-directed [self-management] and self-regulated learning differed between the two groups [$p = 0.04$ and $p = 0.01$, respectively]. Wilcoxon test revealed that self-directed learning indices [self-control and self-management] were differed between the two strategies before and after the intervention. However, the scores related to learning [students' final scores] were higher in the Web Quest approach than in team-based learning. Conclusion: By employing modern educational approaches, students are not only more successful in their studies but also acquire the necessary professional skills for future performance. Further research to compare the effects of new methods of teaching is required.

Leishmaniasis

etiology

Inter-and intraspecific variations of leishmania strains isolated from patients with cutaneous and visceral leishmaniases in pars province, south of Iran.

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IJMS-Iranian Journal of Medical Sciences 2016; 41 (3): 209-216

Keywords: Leishmaniasis, Cutaneous; Genetic Variation; Leishmania; Leishmaniasis, Visceral

Abstract: Background: Cutaneous and visceral leishmaniases are present in Fars Province in the south of Iran. The current study aimed to evaluate the inter- and intragenic diversities of Leishmania species isolated from patients with leishmaniasis in Fars Province, using PCR-based analyses and DNA sequencing of the N-acetylglucosamine-1-phosphate transferase [nagf] gene. Methods: Clinical samples were taken from the skin lesions of 120 individuals with clinical suspicion of cutaneous leishmaniasis [CL] referred to the major health centers of Shiraz. Along with microscopic examination, a part of each sample was used for in vitro cultivation. DNA was extracted from the cultured parasites and the nagf gene was PCR-amplified. For RFLP analysis, the PCR product of the nagf gene was digested with the *AccI* restriction enzyme. Moreover, the PCR products of 23 isolates were sequenced and analyzed, using MEGA5. Results: From the 120 patients with clinical suspicion of CL, 110[91.7%] cases were found to be positive by direct microscopy while 77[64.1%] of the cultures were positive. Digestion of the PCR product with the *AccI* restriction enzyme detected *L. major* in 57 out of the 77 [74.1%] and *Z. tropica*, in 20 out of the 77 [25.9%] cases with CL. Phylogenetic analysis grouped the Leishmania isolates into 3 main clades, representing *L. major*, *L. infantum*, and *L. rop/ca*, encompassing 2, 2, and 2 haplotypes, respectively. Within the clades, the *L. tropica* intraspecies divergence was more pronounced in *L. major*. Conclusion: The findings of this study demonstrated that the causative agent of CL in Fars Province was mainly *L. major* and that there was considerable heterogeneity between the Leishmania species and also within the *L. major* isolates.

Leukemia, Lymphocytic, Chronic, B-Cell

genetics

Dicer gene expression as a prognostic factor in acute lymphoblastic leukemia and chronic lymphocytic leukemia in pars province.

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IJMS-Iranian Journal of Medical Sciences 2016; 41 (3): 223-229

Keywords: DEAD-box RNA Helicases; Gene Expression; Precursor Cell Lymphoblastic Leukemia-Lymphoma; Ribonuclease III; Cross-Sectional Studies; MicroRNAs

Abstract: Alterations in the expression of microRNAs [miRNAs] have been proposed to play a role in the pathogenesis of acute lymphoblastic leukemia [ALL] and chronic lymphocytic leukemia [CLL]. Dicer is one of the main regulators of miRNA biogenesis, and deregulation of its expression has been indicated as a possible cause of miRNA alterations observed in various cancers. Our aim was to analyze the expression of the Dicer protein and its relationship with ALL and CLL. This cross-sectional study was performed from 2010 to 2012 in Shahid Faghihi Hospital, Shiraz, Iran. In this study, 30 patients with CLL, 21 patients with ALL, 10 child healthy donors, and 19 adult healthy donors were recruited. The patients' samples were checked via flow cytometry, immunohistochemistry, and immunocytochemistry. The controls' samples were also examined in the hematology ward. Total RNA was extracted from the bone marrow and peripheral blood samples of the patients and controls. Then, reverse-transcription polymerase chain reaction was used to estimate the level of Dicer miRNA. The outcomes of the expression analysis of Dicer revealed statistically significant differences between the ALL patients/child healthy controls [mean \pm SD, 0.19 \pm 0.28 vs. 0.73 \pm 0.12; $P < 0.001$] and the CLL patients/adult healthy controls [mean \pm SD, 0.24 \pm 0.25 vs. 0.41 \pm 0.28; $P = 0.033$]. This is the first piece of evidence showing that the expression of the Dicer gene greatly decreased in the patients with ALL in comparison to the child controls. The expression of the Dicer gene was also downregulated in the patients with CLL compared to the adult controls. Given the above findings, the expression of Dicer may play an important role in the progression and prognosis of these diseases.

Leukemia, Myeloid, Acute

Characterization of common chromosomal translocations and their frequencies in acute myeloid leukemia patients of northwest Iran.

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Cell Journal [Yakhteh] 2016; 18 (1):37-45

Keywords: Translocation, Genetic; Geography; Ethnic Groups; Reverse Transcriptase Polymerase Chain Reaction

Abstract: Objective: Detection of chromosomal translocations has an important role in diagnosis and treatment of hematological disorders. We aimed to evaluate the 46 new cases of de novo acute myeloid leukemia [AML] patients for common translocations and to assess the effect of geographic and ethnic differences on their frequencies. Materials and Methods: In this descriptive study, reverse transcriptase-polymerase chain reaction [RT-PCR] was used on 46 fresh bone marrow or peripheral blood samples to detect translocations t [8; 21], t [15; 17], t [9; 11] and inv [16]. Patients were classified using the French-American-British [FAB] criteria in to eight sub-groups [M0-M7]. Immunophenotyping and biochemical test results of patients were compared with RT-PCR results. Results: Our patients were relatively young with a mean age of 44 years. AML was relatively predominant in female patients [54.3%] and most of patients belonged to AML-M2. Translocation t [8; 21] had the highest frequency [13%] and t [15; 17] with 2.7% incidence was the second most frequent. CD19 as an immunophenotypic marker was at a relatively high frequency [50%] in cases with t [8; 21] and patients with this translocation had a specific immunophenotypic pattern of complete expression of CD45, CD38, CD34, CD33 and HLA-DR. Conclusion: Similarities and differences of results in Iran with different parts of the world can be explained with ethnic and geographic factors in characterizations of AML. Recognition of these factors especially in other comprehensive studies may aid better diagnosis and management of this disease.

Leukoencephalitis, Acute Hemorrhagic

Acute hemorrhagic leukoencephalitis in children: a case report.

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IJMS-Iranian Journal of Medical Sciences 2016; 41 (3): 245-248

Keywords: Demyelinating Diseases

Abstract: Acute hemorrhagic leukoencephalitis [AHLE] is a rare demyelinating disease characterized by an acute rapidly progressive fulminant inflammation of the white matter. In this case report, we introduce a case of AHLE in children with an interesting and lengthy process and successful treatment. A previously healthy 13-year-old girl was admitted to the hospital because of fever and loss of consciousness. After 4 days, she was referred to our pediatric intensive care unit in Mashhad, Iran. On admission, she had right-sided parotiditis. With a diagnosis of AHLE, our patient was treated with methylprednisolone, intravenous immunoglobulin, acyclovir, and plasmapheresis. AHLE is a rare and severe demyelinating disease, the mortality and morbidity of which can be decreased by early detection and treatment with steroid therapy, intravenous immunoglobulin, acyclovir, and plasmapheresis.

Levofloxacin

pharmacology

The effects of levofloxacin on testis tissue and spermatogenesis in rat.

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Cell Journal [Yakhteh] 2016; 18 (1): 112-116

Keywords: Testis; Spermatogenesis; Rats, Wistar; Levofloxacin-therapeutic uses

Abstract: Levofloxacin is one of the Fluroquinolone antibiotic groups, which affect on controlling infections, especially in reproductive organs. It has therapeutic use in numerous countries, but little information exists on the effects of Levofloxacin on spermatogenesis when it is used for infectious treatment. The current study was designed to determine whether Levofloxacin influences testis tissue and spermatogenesis in rats. In this survey 50 male Wistar rats 6-8 weeks [250 +/- 10 g] were used: normal saline as sham and control groups and 3 treatment groups [0.03, 0.06 and 0.08 mg Levofloxacin/kg body weight] during 60 days. The experimental groups were daily gavages. After 60 days, they were anesthetized with ether and testes were taken for histopathology studies, sperm parameters evaluation and several hormone concentrations. Although testosterone concentration was not affected by Levofloxacin levels, follicle stimulating hormone [FSH] and luteinizing hormone [LH] concentration significantly increased by Levofloxacin consumption in 0.03 and 0.06 mg Levofloxacin/kg body weight groups [P<0.01]. Moreover, sperm concentration decreased linearly as Levofloxacin was increased [200, 192, 170, 128 and 75×106 sperm for control, sham, 0.03, 0.06 and 0.08 mg Levofloxacin/kg body weight, respectively, P<0.05]. Testis tissue cuts in experimental group when the amount dosage of Levofloxacin increased cells solidarity to the primary and secondary spermatogonia. Adding Levofloxacin linearly reduced spermatocyte cells and amount of all cells in semenifer pipes tube [P<0.05]. Levofloxacin as an antibiotic has histopathology effects on the spermatocyte. cells, especially in high dose. Therefore, it might reduce fertility in male that requires further studies.

Lichen Planus, Oral

diagnosis

Association of oral lichen planus with hepatitis-C and diabetes mellitus.

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Pakistan Oral and Dental Journal 2016; 36 (1): 35-37

Keywords: Hepatitis C; Retrospective Studies; Cohort Studies; Diabetes Mellitus

Abstract: The aim of the study is to determine the association of oral lichen planus with hepatitis C and diabetes mellitus. A retrospective cohort study was carried out at the Department of Oral and Maxillofacial Surgery, Sardar Begum Dental College, Peshawar from January 2011 to July 2015. A total of 34 male and female patients having oral lichen planus were selected with age range 20-60 years and mean age 39.4 +/- 15.8 years. Only clinical features were included to diagnose oral lichen planus which was made through the clinical evaluation of patient's oral cavity by a specialist team at the Department as proposed by van der Meij et al in 2003 based on the WHO definition of oral lichen planus. The data were analyzed through SPSS 22 with significance level of p-value <0.05 and chi-square statistics were applied for association. The results showed that the data was statistically not significant with p-value >0.05 for all diseases having lichen planus and chi-square statistics revealed that no association exist among lichen planus, diabetes mellitus and hepatitis C. This study fails to find any association between oral lichen planus, hepatitis C and diabetes mellitus.

Liver Abscess, Amebic

diagnosis

Simultaneous occurrence of amoebic liver abscess and cecal ameboma.

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Journal of Infection and Public Health 2016; 9 (3): 356-357

Keywords: Amebiasis; Abdominal Pain; Colonoscopy; Cecum-parasitology

Malaria

prevention and control

A cross-sectional study assessing the residual bio-efficacy and durability of field-distributed long-lasting insecticidal nets in malaria endemic ethnic communities of Assam, Northeast India.

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Journal of Infection and Public Health 2016; 9 (3): 298-307

Keywords: Cross-Sectional Studies; Insect Vectors; Culicidae; Insecticides

Abstract: Long-lasting insecticidal nets [LLINs] are being promoted for malaria vector control in the northeastern Indian state of Assam. A cross-sectional study was conducted to assess the current residual bio-efficacy and durability of both the Olyset® and PermaNet®2.0 LLINs that were distributed earlier in 2009, 2011 and 2013 to help formulate informed policy regarding net procurement, supplies and replacement. The study was undertaken in three different malaria endemic blocks of Assam during the period of June to October of 2014. The residual bio-efficacies were ascertained using the WHO. Cone-bioassay method for mosquito mortality post-exposure and corroborated with the ring-net assay for the median knockdown times of both types of LLINs in use by these communities. Cross-sectional community surveys were distributed to assess net ownership, utilization, community practices and the physical conditions of the nets in terms of being torn and the numbers of holes per position. Both the Olyset® and PermaNet®2.0 LLINs that were distributed in 2009 [i.e., nearly after five years of community usage] were completely torn, worn out and obsolete. However, the LLINs distributed in 2011 [i.e., three years of community usage] retained their residual bio-efficacies in susceptibility ranges that varied from 57% to 79%. However, for the LLINs that were distributed in 2013, the observed residual efficacy was adequate and resulted in a mosquito mortality rate >80 percent. Of the two types of LLINs inspected, the Olyset® nets were more durable and robust in terms of being torn less frequently [37.1%, 39/105] compared with the PermaNet®2.0 nets [51.8%, 204/394]. Regarding the LLINs that were distributed in 2013, all were physically intact and in good condition. The majority of the distributed LLINs [99.2%, 639/644] were still in the possession of the householders of the surveyed populations. This study revealed that the serviceable life of the nets was slightly less than three years in terms of waning residual bio-efficacy and durability that warranted replacement. The communities were aware of the benefits of the use of mosquito net for personal protection and regularly used the nets; thus, LLIN-based interventions for sustained vector control should be scaled up.

Malnutrition

epidemiology

Are lhws equipped enough to detect malnutrition in under-5 children? a kap survey of district Rawalpindi.

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PJMR-Pakistan Journal of Medical Research 2016; 55 (1): 20-24

Keywords: Cross-Sectional Studies; Community Health Workers; Surveys and Questionnaires; Child Nutrition Disorders

Abstract: Background: Malnutrition remains one of the major problems in developing countries including Pakistan. Despite raised awareness, there is little improvement in nutrition indicators in Pakistan, which calls for identification of the causes of stagnant rates. Objectives: To assess the proficiency of lady health workers [LHWs] to detect malnourishment in under-5 children using Salter scales and growth charts. Study design, settings and duration: Cross sectional study done in district Rawalpindi from May to August 2013. Subjects and Methods: Knowledge and skills of 59 LHWs related to growth charts were determined by cross-sectional method; and availability of tools were assessed by a short survey in district Rawalpindi. Results: None of the LHWs had growth chart while Salter-weighting scale was available with 34 [57.6%]. In knowledge assessment 78.8% LHWs scored good marks [above 80%] while 19.2% scored average. [60-79% marks]. Skills of LHWs related to child weighing were satisfactory but major deficiencies were noted regarding hanging the Salter-scale to stable support and tarring the scale-needle to zero reading. Conclusion: For timely identification of malnutrition in children, availability of Salter-weighting scales and growth charts must be ensured with the LHWs. Policy message: LHWs trainings should be updated with frequent trainings and refresher courses. They should be provided with updated materials like charts for Weight-for-Height and Mid-Upper Arm Circumference [MUAC] measuring tapes.

Malocclusion

Comparison of collum angle of maxillary central incisors in class ii div 1 and 2 malocclusions.

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Pakistan Oral and Dental Journal 2016; 36 (1): 91-94

Keywords: Malocclusion, Angle Class II; Cross-Sectional Studies; Maxilla; Malocclusion, Angle Class I

Abstract: The Collum angle or the cephalometric crown-root angulation of permanent maxillary central incisors is an angle formed between the long axes of the crown and root of upper central incisors. This study aimed to evaluate the Collum angle in patients with Class II division 1 and 2 malocclusions for identifying the nature of differences, if any. Out of a total of 565 lateral cephalograms available at Lahore Medical and Dental College Orthodontic department during 2013-2014, 60 satisfied the inclusion criteria and 30 each were selected for the two malocclusion groups. The Collum angle of the permanent maxillary central incisors differ significantly among Class II division 1 and 2 permanent maxillary central incisor and showed pronounced axial bending in division 2 incisors [$10.03^\circ \pm 4.37^\circ$] as compared to division 1 [$3.65^\circ \pm 3.79^\circ$]. The mean difference between both groups was $6.38^\circ \pm 5.81^\circ$. This feature could possibly contribute to the development of a deep overbite in Class II division 2 malocclusion and also may limit the amount of root torque during fixed appliance therapy.

Malondialdehyde

blood

Role of malondialdehyde in the serum of rheumatoid arthritis and osteoarthritis.

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JPMI-Journal of Postgraduate Medical Institute 2016; 30 (1): 58-61

Keywords: Arthritis, Rheumatoid; Osteoarthritis; Oxidative Stress

Abstract: Objective: To measure malondialdehyde in order to determine oxidative stress in rheumatoid arthritis and osteoarthritis subjects and comparing them with healthy individuals. Methodology Malondialdehyde estimation were done by using the UV-VIS spectrophotometer in the department of biochemistry SP medical college, Bikaner. Thiobarbituric acid assay method was used to estimate Malondialdehyde. Results: A statistically significant elevation of MDA level in serum of rheumatoid arthritis [RA]and osteoarthritis [OA] subjects was seen [p<0.0001]. The serum MDA level was also significantly increased in the subjects than in the controls. The serum MDA level was also significantly increased in the subjects than in the controls. Conclusion: Oxidative stress is due to increased free radical production which is the main mechanism in the pathogenesis of RA and OA.

Mammoplasty

Prerequisites for histopathological evaluation of reduction mammoplasty specimens: Recommendations based on an audit in a tertiary care hospital.

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Journal of Taibah University Medical Sciences 2016; 11 (2): 134-139

Keywords: Tertiary Care Centers; Breast Neoplasms; Fibrocystic Breast Disease; Retrospective Studies

Abstract: Objective: To recommend prerequisites for the histo-pathological evaluation of reduction mammoplasty [RM] specimens based on an audit in a tertiary care hospital. Methods: All reduction mammoplasty specimens received at department of pathology, in a tertiary care hospital over a 3 years period were re-evaluated retrospectively. Medical records were checked for age, family history of breast cancer, indication for surgery and radiological evaluation. Pathology reports were reviewed for number of blocks sampled and diagnosis. A prerequisites protocol was developed based upon deficiencies and impediments noted. Results: We received a total of 26 cases of reduction mammoplasty. Only 2 [7.69%] specimens were from males. The age of the patients ranged from 26 to 50 years. Indication for surgery was provided in all [100%] of cases, with macromastia being most prevalent indication. Family history of breast carcinoma and radiological evidence was absent or not provided in all cases. The number of blocks prepared were in range of <4 in 17 [73.91%], 5-8 blocks in 5 [19.23%] and 8-12 blocks in 4 cases [15.38%]. The main histopathological finding was fibrocystic change, [n = 12, 46.15%]. Specimen radiography was not conducted in any case. Conclusion: There is a need to stratify RM cases as high, moderate and low risk of breast cancer based on family history of breast carcinoma, clinical and radiological evaluation. The high risk cases should be oriented, with margins inked and extensive sampling done. Specimen radiography should be carried out in younger patients in which mammography is not recommended.

Mandibular Fractures

diagnosis

Pattern of presentation of mandibular condylar fractures in relation with known risk factors.

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Pakistan Oral and Dental Journal 2016; 36 (1): 13-18

Keywords: Mandibular Condyle; Risk Factors; Tertiary Care Centers; Accidents, Traffic

Abstract: Mandibular fractures are one of the most common fractures of facial bones. Parasymphysis is the most common site followed by condylar and subcondylar areas of the mandible. A descriptive study was carried out at Department of Oral and Maxillofacial Surgery, King Edward Medical University Mayo Hospital, Lahore from 27th September 2011 to 26th September 2012. The study was carried out on forty patients with mandibular condylar fractures. The fractures were classified according to the Spiessl and Schroll classification system. Objective of this study was to describe pattern of presentation of mandibular condylar fractures and to evaluate factors leading to mandibular condylar fractures in a tertiary care hospital. 32 [80%] were males and 8 [20%] females. The age ranged from 1% to 65 years with mean of 26 years [SD. +/- 16.90]. Road traffic accidents including motor bike, auto-rickshaw and car accidents were found to be predominant risk factors [15 patients - 37.5%]. Type II fractures [low neck displacement] comprised the highest proportion - 16 out of 48 fractures [33.3%]. Road traffic accidents and falls were the leading risk factors for mandibular condylar fractures identified in this study. Type II fractures were seen to be the most frequent variant of condylar fracture. It was noted that no specific pattern of condylar fracture was associated with any specific risk factors.

Meals

Meals served to hypertensive and cardiac inpatients in Jordan: comparison with WHO and NIH dietary guidelines.

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EMHJ-Eastern Mediterranean Health Journal 2016; 22 (1): 28-33

Keywords: Hypertension; Heart Diseases; Nutrition Policy; World Health Organization; Inpatients

Abstract: This study aimed to evaluate the compliance of daily meals served to hypertensive and cardiac inpatients in Jordan according to WHO guidelines and the Therapeutic Lifestyle Changes [TLC] and Dietary Approach to Stop Hypertension [DASH] diets plans. Weekly cycle menus from the food service department of major hospitals in Jordan [n = 16] were analysed using ESHA Food Processor software to obtain data about macro-and micronutrient contents and food groups represented. The results showed inappropriate amounts of several nutrients in the menus provided, along with a general noncompliance with the DASH, TLC and WHO guidelines. Meals had higher than recommended sodium content coupled with low potassium content. Fatty acid profiles were often outside the recommended ranges. Meals provided to cardiac inpatients in Jordan need to be revised to meet the guidelines specified for the health conditions of these patients.

Measles

epidemiology

Case-control study for measles outbreak in a tertiary care hospital.

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PJMR-Pakistan Journal of Medical Research 2016; 55 (1): 7-10

Keywords: Tertiary Care Centers; Measles Vaccine; Retrospective Studies; Risk; Case-Control Studies

Abstract: Objectives: To compare the profile of measles patients [cases] with non-measles [controls]. admitted in Pediatric units of Civil Hospital, Karachi during the measles epidemic. Study type, settings and duration: Retrospective, case control, hospital record analysis of children admitted in pediatric units of Civil Hospital, Karachi from October 2012-March 2013. Subjects and Methods: From the list provided by the ward authorities, case records of children [cases] admitted in pediatric units of Civil Hospital, Karachi with the clinical diagnosis of measles were selected using convenient sampling. From the same wards, age and gender matched non-measles cases [controls] were also selected. The signs, symptoms, mortality and hospital stay of cases and controls were taken from the hospital record, while some information like socio-economic status, vaccination status, symptoms, number of days ill before presenting to health facility, health status of the child, history of similar illness in the family, neighbors, relatives and history of calamity in the area in recent past was taken from the parents or care givers telephonically. Sample size of 300 children [150 cases, 150 controls] was calculated. Results: Out of 150 children having measles, 84 [56%] were females. Most cases reported to health facility after a median of 8 days of onset of symptoms. Almost

98 [65%] children were vaccinated for measles and 52 [35%] were not vaccinated Median age of cases, vaccinated for measles was 30 months while median age of cases not vaccinated for measles was 21 months. All cases had history of fever and maculo-papular rash. Death occurred in 10 [7%] cases due to pneumonia. There was history of measles in their family in 90 [60%] cases, 54 [36%] had measles in neighbors and 30 [20%] in relatives. Out of 150 controls, 76 [51%] were vaccinated for measles and 74 [49%] were not vaccinated. The main reason for admission was pneumonia in 78 [52%] and bronchial asthma in 45 [30%]. The risk of measles was 0.83 times higher for cases who were vaccinated for measles as compared to controls who were vaccinated for measles. Using univariate analysis, symptoms of breathlessness and lower respiratory tract infection at the time of admission were significantly associated with measles disease. Using multivariate analysis, children between 9 to 60 months of age, presenting with breathlessness and lower respiratory tract infection had a significantly high chance of suffering from measles disease. Conclusion: Almost 65% who had received measles vaccination as per their mothers statement suffered from measles. Policy message: Measles outbreak occurring in many children despite getting measles vaccine needs further workup both for the timing of vaccination, actual verification of vaccination and its efficacy.

Medical Errors

Medical error reporting: is it about physicians' knowledge and their practice, or patient safety culture in the workplace?.

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EMHJ-Eastern Mediterranean Health Journal 2016; 22 (3): 228-229

Keywords: Physicians; Health Knowledge, Attitudes, Practice; Patient Safety; Surveys and Questionnaires

Meningioma

diagnosis

A retrospective analysis of meningioma in Central Texas.

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Journal of Epidemiology and Global Health 2016; 6 (2): 87-93

Keywords: Retrospective Studies; Meningioma-epidemiology; Risk Factors

Abstract: Documented meningioma cases in Central Texas [USA] from 1976 to 2013 were studied utilizing the Scott and White Brain Tumor Registry. All the cases examined were historically diagnosed as meningiomas. Of the 372 cases, most were benign benign tumors [p < 0.05] A majority of the patients were females [p < 0.05]. Elderly individuals [>45 years of age] superseded the younger patients in meningioma incidence [p < 0.05]. Previous data regarding meningioma epidemiology in Texas showed a higher incidence in black patients when compared to white patients. By contrast, this study's findings of Central Texas meningioma demographics show increased incidence of meningiomas in white patients [p<0.05]. This interesting find in meningioma prevalence warrants further investigation with a larger sample size, in order to establish validity and further parse out possible causes of meningioma development among white individuals.

Meningitis, Bacterial

epidemiology

Trend of bacterial meningitis in Bahrain from 1990 to 2013 and effect of introduction of new vaccines.

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EMHJ-Eastern Mediterranean Health Journal 2016; 22 (3): 175-182

Keywords: Pneumococcal Vaccines; Retrospective Studies; Streptococcus pneumoniae; Meningitis

Abstract: Meningitis is among the 10 commonest infectious causes of death worldwide. This retrospective analysis of reported cases of meningitis in Bahrain aimed to assess the trend in the incidence of bacterial meningitis from 1990 to 2013, before and after the introduction of new vaccines. Of 1455 reported cases of meningitis during the study period 73.1% were viral and 26.9% were bacterial etiology [tuberculous meningitis 8.3%; Streptococcus pneumoniae 4.9%, Haemophilus influenzae 3.6% and Neisseria meningitidis 1.7%]. There was a peak of meningitis cases in 1995-1996. The incidence of meningitis due to H. influenzae and N. meningitidis showed a marked reduction after the introduction of the corresponding vaccines in 1998 and 2001 respectively, and S. pneumoniae became the predominant organism after Mycobacterium tuberculosis. The changing trend in the etiology of bacterial meningitis points to the need to study vaccination programme modifications, such as pneumococcal vaccine for the adult population, especially high-risk groups.

Meningococcal Infections

epidemiology

Lifetime cost of meningococcal disease in France: Scenarios of severe meningitis and septicemia with purpura fulminans.

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Journal of Infection and Public Health 2016; 9 (3): 339-347

Keywords: Meningitis, Meningococcal; Sepsis; Purpura Fulminans; Costs and Cost Analysis; Delivery of Health Care

Abstract: Invasive meningococcal disease [IMD] is life-threatening and can result in severe sequelae. In France, no data have been published on the costs of severe IMD cases. Two realistic scenarios were developed with national experts [clinicians and social workers]: a 6-year-old child with purpura fulminans with amputation of both legs below the knee [case A] and a 3-year-old with meningitis and severe neurological sequelae [case B]. Additional scenarios included other typical sequelae of IMD such as chronic kidney disease [CKD] profound deafness and epilepsy. Data on healthcare, disability, educational and other resource use were obtained from experts and families of patients with similar sequelae. Unit costs [2013] were mainly obtained from the literature and the National Health Insurance [NHI]. Time horizon was based on life expectancies of patients [77 and 55 years, respectively]. A 4% discount rate decreasing to 2% after 30 years was applied. Costs are presented from the perspective of the NHI, publicly funded organizations and patients' families or their private health insurances, purpura fulminans with amputations is associated with a lifelong discounted cost of €768,875. Adding CKD doubles the amount [€ 1,480,545]. Meningitis with severe neuro-cognitive sequelae results in a lifelong discounted cost of €1,924,475. Adding profound deafness and epilepsy slightly increases the total cost [€2,267,251]. The first year is the most expensive in both scenarios [€166,890 and €160,647 respectively]. The main cost drivers for each scenario are prostheses and child/adult stays in healthcare facilities, respectively. Overall, patients' families or his private insurance had to pay around 13% of total cost [101,833€ and 258,817€, respectively]. This study fills a gap in the body of knowledge on IMD sequelae care and lifetime costs in France. The potentially high economic burden of IMD, in addition to its physical, psychological and social burden, reinforces the need for prevention.

Microbial Sensitivity Tests

Accuracy of the VITEK 2 system for a rapid and direct identification and susceptibility testing of Gram-negative rods and Gram-positive cocci in blood samples.

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EMHJ-Eastern Mediterranean Health Journal 2016; 22 (3): 193-200

Keywords: Gram-Positive Cocci; Gram-Negative Bacteria; Blood

Abstract: The performance of the VITEK 2 system for direct rapid identification and antimicrobial susceptibility testing of the bacteria responsible for blood infections was determined. The isolates studied included 166 Gram-negative rods and 74 Gram-positive cocci from inpatients. Specially treated monomicrobial samples from positive blood culture bottles were directly inoculated into the VITEK 2 system and the results were compared with those from cards inoculated with standardized bacterial suspensions. Compared with the standard method, 95.8% of Gram-negative rods were correctly identified by VITEK 2 and the overall level of agreement between the two methods in

susceptibility testing was 92.0%. For Gram-positive bacteria, 89.2% were correctly identified by VITEK 2 and susceptibility testing revealed an overall agreement rate of 91.3%. These results suggest that VITEK2 cards inoculated with fluids sampled directly from positive blood culture bottles are suitable for speedy identification and susceptibility testing of Gram-negative bacilli and Gram-positive cocci.

Microbiota

First microbiota assessments of children's paddling pool waters evaluated using 16S rRNA gene-based metagenome analysis.

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Journal of Infection and Public Health 2016; 9 (3): 362-365

Keywords: Metagenome; Genes, rRNA; Swimming Pools; Proteobacteria; Child

Abstract: Insufficient chloric sterilization of children's paddling pool waters increases the risk of diarrheal illness. Therefore, we investigated the micro-biota changes after children use pools. First, we applied 16S rRNA gene-based metagenome analysis to understand the dynamics of microbiota in pool water, especially with respect to the bio-contamination by potential pathogens. Proteobacteria were major taxa detected in every pool water sample after children spent time in the pool. In more detail, Gammaproteobacteria comprised the dominant class, which was followed by Betaproteobacteria. Five phyla, Bacteroidetes, Firmicutes, Actinobacteria and Deinococcus-Thermus phyla were minor groups. The pool water microbiota are likely to be a consortium of intestinal and skin microbiota from humans. Interestingly, the ratio of Gammaproteobacteria and Betaproteobacteria differed according to the age of the children who used the pool, which means the pool water was additionally contaminated by soil microbiota as a result of the children's behavior. Furthermore, potential pathogens, such as *Campylobacter* spp., *Comamonas testosteroni* and *Burkholderia pseudomallei*, were also found. Considering the standard plate counts, the abundances of these human pathogens are unlikely to be a sufficiently infectious dose. We suggest the importance of sanitary measures in paddling pool waters to reduce bio-contamination from both humans and the environment.

Middle East Respiratory Syndrome Coronavirus

isolation and purification

MERS-CoV diagnosis: An update.

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Journal of Infection and Public Health 2016; 9 (3): 216-219

Keywords: Real-Time Polymerase Chain Reaction; Serology; Sequence Analysis, RNA; Coronavirus Infections-diagnosis

Abstract: Diagnosis of MERS-Cov still a major concern in most of diagnostic laboratories. To date the Real-time Polymerase Chain reaction [RT-PCR] is the mainstay for diagnosis of MERS-CoV. RT-PCR has limitations, including a long turnaround time; and lack of common measurements and correlations with Viral Load [VL]. It is recommended to screen for MERS-CoV using RT-PCR of the upstream of envelope gene [upE] followed by confirmation of the presence of one of the following genes; open reading frame 1 A, 1B genes or nucleocapsid [N] gene. Scientists are looking to implement viral sequencing on all negative samples by RT-PCR and they believe that can be exposed to another level of testing using sequencing of the RNA-dependent RNA polymerase [RdRp] gene or N gene and in this case a positive result is diagnostic. It is also very important to maintain a continuous and random sequencing for MERS-Cov samples to be able to pick early viral mutations. Serological assays still not widely or routinely performed, and a lot of studies looking to implement such method in routine patient's testings.

Molar, Third

surgery

Effects of surgery duration on post-extraction sequelae following impacted third molar surgery by using two different bone cutting methods; a double blind randomized trial.

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Pakistan Oral and Dental Journal 2016; 36 (1): 8-12

Keywords: Pain, Postoperative; Mandibular Injuries; Tooth, Impacted-surgery

Abstract: The objective of this research was to analyze the impact of duration of surgery on post-operative pain and swelling after surgical removal of mandibular third molars. This study was planned as double blind, randomized clinical trial that comprised of 60 patients experiencing unilateral mandibular third molar extraction who were recruited into two groups before surgery on the basis of bone cutting method. The study duration was three months, executed at Department of Oral and Maxillofacial Surgery, Dow International Dental College, Dow University of Health Sciences, Karachi. Post-operative complications [pain and swelling] were assessed pre-operatively and then on 3rd and 7th day post-operatively using visual analogue scale and objective scale for swelling measurement using five anatomical points on face. Surgery duration was divided into two groups, 10-20 minutes group and 20 minutes onwards. Mann Whitney test was used to assess the impact of duration on pain and swelling in both groups. In 10-20 minutes group, mean difference for pain on day one, day 3 and day 7 was calculated with p-value of 0.15, 0.641 and 0.081 respectively while in group having surgery duration of 20 minutes and more, the computed p-value were 0.002, 0.0168 and 0.02 respectively. Mean difference for swelling was calculated in both bone cutting groups with p-value of 0.0916 in 10-20 minute group and 0.004 in 20 minute onward group. Increasing time duration was associated with more pain and swelling irrespective of the method used for bone cutting. Conventional slow speed hand piece used for bone cutting was associated with less post-operative complications.

Morus

Abortifacient effect of mulberry white root in mice.

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Journal of Gorgan University of Medical Sciences 2016; 18 (1): 53-57

Keywords: Mice; Abortifacient Agents

Abstract: Background and Objective: Due to an increase in spontaneous abortions finding a safe and secure method is inevitable. Some medicinal herbs have abortifacient properties. This study was done to determine the effect of abortifacient effect of mulberry white root in mice. Methods: In this experimental study, 50 mice dams were randomly allocated into five groups including control, sham and experimental group 1, 2 and 3. Animals in control group did not receive any substance. Animals in sham group were received normal saline, intraperitoneally. Animals in experimental group 1, 2 and 3 were received doses of 50, 70 and 90 mg/kg/bw of the alcoholic extract of root of mulberry white during the 7th to 12th days of pregnancies, intraperitoneally, respectively. At the 16th day of the pregnancy the uterine tubes of mice were removed and the absorbed fetuses were recorded. Results: The mean of absorb fetuses was 7.4, 7.6, 1.8 and 3.1 in the experimental group 1, 2, 3 and sham, respectively. There was a significant relation between the mean number of aborted fetuses and concentration of strawberry root [$P < 0.05$]. The apparent anomaly in fetus was not recorded. Conclusion: Root of mulberry white has abortifacient effect with dose-dependent manner.

Motor Activity

Descriptive epidemiology of physical activity among Omani adults: the Oman World Health Survey, 2008.

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EMHJ-Eastern Mediterranean Health Journal 2016; 22 (2): 103-115

Keywords: Epidemiology; Health Surveys; Surveys and Questionnaires; World Health Organization

Abstract: There is an increasing burden of obesity and obesity-related noncommunicable diseases in Gulf Cooperation Council countries, including Oman. This descriptive, epidemiological study assessed physical activity among 2977 Omani adults using a population-based household survey in 2008. Overall, 54.2% of men and 41.6% of women were physically active; the rate was higher in younger cohorts and varied significantly by region of residence. Physical activity related to the transportation [walking and cycling] domain was higher than in the leisure or work domains. Unmarried men aged 30-39 years were twice as likely to be physically active [OR 2.25] and unmarried women aged 40+ years were half as likely to be active [OR 0.58] than their married counterparts. Young women not working were less active [OR 0.18] than working women. Higher education was significantly associated with leisure activity for men aged 30+ years and women aged 40+ years. Further research to understand regional variations and to identify culturally appropriate strategies to promote physical activity is required.

Mouth Diseases

congenital

Buccal fat pad in reconstruction of oral defects.

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Pakistan Oral and Dental Journal 2016; 36 (1): 3-7

Keywords: Adipose Tissue; Prospective Studies; Intraoperative Complications; Surgery, Oral; Administration, Buccal

Abstract: An ablative surgical procedure in the oral cavity is curative for oral and maxillofacial pathologies, but simultaneously produces hard and soft tissue defects. These defects produce functional and psychological problems in the post operative period. The Objective of the present study was to evaluate the efficacy of buccal fat pad in reconstruction of intra-oral defects, elaborate the surgical technique used and also identify its post operative complications. A prospective study was conducted on patients with oral defects covered by Buccal fat pad between July 2008 and January 2016 in department of oral and maxillofacial surgery of Khyber College of Dentistry Peshawar. The variables of the study were, Age, gender, cause of surgery and location of intraoral defect. Patients were subsequently evaluated for signs of epithelialisation and Post operative complications. A total of 50 patients [33 males and 17 females] were recruited in the study. Male to female ratio of patients was 1.94:1. Mean age of 51.25 years SD + 12.94. The most common cause of intraoral defect was because of excisions of malignant tumors of oral mucosa and salivary glands. Maxilla was the most common site for the surgical defects observed. The epithelialisation process was completed in 3 weeks without any complications in 44 patients. However dehiscence of the graft was seen in 6 patients, yielding success rate of 88%. We also noted limited mouth opening in cases of retro molar area defects, but this problem was resolved with post operative physiotherapy. It was concluded that buccal fat pad is a convenient, feasible and quick method of reconstruction for sealing intraoral defects.

Mouth, Edentulous

The embouchure denture - [a double reed musician's delight]

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Pakistan Oral and Dental Journal 2016; 36 (1): 172-175

Keywords: Denture, Complete; Tooth Loss; Music

Abstract: Wind instrument players are the ones who put their mouth, lips, jaws, teeth, tongue and face to a use which is different from the normal functions of eating, speaking and expression. Hence there is a clear need for an understanding of the dental requirements of players of wind instruments. The problems that may arise for the dental surgeon who is treating a wind instrument player are due to the fact that the eligibility of the musical sound produced and how he produces it while playing a musical passage is directly related to muscles of facial expression, during blowing. Hence it is necessary to design a prosthesis that would well adapt to the functional demands of the wind instrumentalist. The purpose of this article is to create an awareness among dental practitioners, about their role in rehabilitating a completely edentulous wind instrumentalist and also describes the technique to fabricate a specially designed prosthesis for wind instrument players - [The Embouchure denture].

Multiple Sclerosis

Effect of 8 weeks selective training program with instructions focus of internal and external attention on static balance of multiple sclerosis patients.

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Journal of Gorgan University of Medical Sciences 2016; 18 (1): 64-68

Keywords: Education; Patient Education as Topic; Postural Balance

Abstract: Background and Objective: Multiple sclerosis [MS] is the most common progressive neurologic disorder among young adults. This disease leads to lesions regarded to as demyelinating plaques which are scattered in the white matter of CNS hence create various neurological problems. This study was done to evaluate the effect of 8 weeks selective training program with instructions focus of internal and external attention on static balance of MS patients. Methods: In this quasi-experimental study, 23 MS patients were non-randomly divided into, two interventional and one control groups. Training program for two interventional were carried out in 8 weeks, three sessions per week, and each session lasted about one hour. Pre and posttest to evaluate the fall risk of subjects using Biodex system was performed in three groups. Results: Static balance was significantly improved in the two interventional compared to control group [$P<0.05$]. Conclusion: The training program with instructions focus of internal and external attention significantly improves static balance of MS patients.

physiopathology

Comparison of core stabilization, theraband resistance and combined training on functional endurance and postural control in male patients with multiple sclerosis.

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Journal of Gorgan University of Medical Sciences 2016; 18 (1): 58-63

Keywords: Physical Endurance; Postural Balance

Abstract: Background and Objective: Multiple sclerosis [MS] is one of the most common diseases in the central nervous system, caused by damage to myelin sheath. This study was done to compare the effect of eight weeks of core stabilization, theraband resistance and combined training on functional endurance and postural control in male patients with MS. Methods: In this quasi-experimental study, 40 male patients with MS were non-randomly divided into three experimental and one control groups [each group, $n = 10$, age range 25 to 35 years, BMI between 20 and 25, and physical disability scale of 1 to 5.4]. Core stabilization, theraband resistance and combined training, balance berg test and 6-minute walk test were performed in order to exercise protocols. Results: Capacity movement and postural control were significantly improved in experimental groups in comparison with control group [$P<0.05$]. The most variability was related to the combination of training program. Conclusion: Eight weeks of core stabilization, theraband resistance and combined training improves functional endurance and postural control in men with MS.

therapy

Effect of relaxation on the physical symptoms in women with multiple sclerosis.

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Journal of Gorgan University of Medical Sciences 2016; 18 (1): 8-15

Keywords: Relaxation; Women; Fatigue; Pain

Abstract: Background and Objective: Multiple sclerosis [MS] is a chronic inflammatory autoimmune disease, leading to progressive disability, reduces daily activity and function and emerges with a wide range of physical symptoms. This study was done to determine the effect of relaxation on the physical symptoms in women with Multiple Sclerosis. Methods: In this clinical trial study, 50 patients with MS were randomly divided into relaxation and control groups. In the interventional group, Jacobson and Benson method was performed for 4 weeks, twice a week for 40 minutes and patients in the control group were received only care and routine medical treatment. Data was collected via fatigue severity scale [FSS], numerical rating scale [NRS] before, immediately after and two months after intervention. Results: The mean severity of fatigue score, before, immediately and two months after the intervention were not the same and time trends was effective on severity of fatigue score [$P<0.05$]. The mean of

fatigue score were significantly reduced in intervention group [immediately and two months after intervention] in compared to pre-intervention. The mean severity of pain score ,before, immediately and two months after the intervention were not the same and time trends was effective on mean severity of pain score [$P<0,05$]. The mean intensity of pain score over time in the relaxation group non-significantly reduced in compared to the control group. Conclusion: Relaxation technique is effective as a low-cost, safe and easy method to reduce fatigue and pain in patients with MS.

Musculoskeletal Diseases

epidemiology

Prevalence of musculoskeletal disorders in nurses and its relationship with the knowledge of ergonomic and environmental factors.

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Journal of Gorgan University of Medical Sciences 2016; 18 (1): 128-132

Keywords: Nurses; Knowledge; Surveys and Questionnaires; Human Engineering; Prevalence

Abstract: Background and Objective: Musculoskeletal disorder is a professional disease which is due to undesirable work condition and is a disturbing factor of health and welfare in societies. This study was carried out to determine the prevalence of musculoskeletal disorders in nurses and its relationship with the knowledge of ergonomic and environmental factors in north of Iran. Methods: This descriptive-analytic study was carried out on 110 nursing staff in Razi and Imam Khomeini hospitals in north of Iran. Questionnaire of the rate of awareness measurement, general questionnaire of musculoskeletal diseases [Nordik] the questionnaires of the health status and the study relationships between some factors in work place were filled out for each nurse. Results: Prevalence of the pain in neckr back, low back, shoulder, knee, thing pain, arm, leg among nurses was 50%, 49%, 58%, 44.9%, 47.3%, 32.7%, 36.4% and 56.4%, respectively. The condition of work place including air filtration [23.6%], light [22.7%] and air condition [4.5%] was not well. Chair [31%] and work table [34%] for work condition and body position of nurses was unsuitable. There was a significant relationship between low back pain and age and time of working per week of nurses [$P<0.05$]. Nurses knowledge in the filed ergonomy was 77% and 22.2% of nurses trained in body condition during work. 60% of nurses were not trained for correct patient transportation and relocation. Conclusion: Nurses suffered more from pain in low back, knee, neck and legs. Training of nurses for patient transportation and body position during working in hospital is essential.

Mycoplasma hominis

isolation and purification

Comparison of culture and PCR methods for diagnosis of vaginal infection due to Mycoplasma Hominis.

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Journal of Gorgan University of Medical Sciences 2016; 18 (1): 108-113

Keywords: Vaginal Diseases-diagnosis; Culture; Polymerase Chain Reaction; Mycoplasma Infections.

Abstract: Background and Objective: Mycoplasma Hominis is the smallest pathogenic bacteria, with no cell wall and free living organisms. It grows slowly and the conventional clinical microbiology techniques cannot be applied due to difficulties in cultivation in particular slow growth incubation. This study was done to compare the culture and PCR methods for diagnosis of vaginal infection due to Mycoplasma Hominis. Methods: This laboratory test evaluation study was done on 150 patients with bacterial vaginosis and 50 healthy people with no infection as control, whom refereed to Imam Khomeini and Imam Zaman Hospitals in Tehran. Samples were collected in PPLO culture for growth and PBS to perform PCR method. Results: 35.3% and 76% of patients were positive using culture and PCR methods, respectively. Using PCR method 8% of control subjects was positive. There was no significant association between PCR method with abortion, place of residence and also level of educations. There was a significant association between the age [$P<0.05$], times of changing under wear cloths [$P<0.05$] and parity [$P<0.05$]. Conclusion: PCR method is a more reliable technique to detect the vaginal infection due to Mycoplasma Hominis compared to culturing.

Myofascial Pain Syndromes

therapy

Evaluation of the effects of intravenous and percutaneous low level laser therapy in the management of shoulder myofascial pain syndrome.

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Journal of Lasers in Medical Sciences 2016; 7 (1): 16-20

Keywords: Laser Therapy; Low-Level Light Therapy

Abstract: Introduction: Myofascial pain syndrome [MPS] treatment is challenging with a high recurrence rate and still lacks a clear treatment frame. Therefore research on new, more efficient and long lasting effect treatment modalities is necessary. This study looked at the effects of intravenous laser therapy [IVL] and percutaneous low level laser [PLLL] in the management of shoulder MPS. Methods: In this randomized controlled trial, 30 patients fulfilling inclusion criteria were randomly equally allocated to 3 groups, control, IVL and PLLL. Control group received 12 sessions of placebo low level laser, IVL group received 12 sessions of IVL therapy, and PLLL group received 12 sessions of PLLL therapy. All patients were trained for better body posture, body mechanics, gentle massage of trigger points, stretching exercises of affected muscle [trapezius], and received 10 mg of oral nortriptyline regimen every night for 3 months. Outcomes included pain severity, functional disability, and quality of life. Patients were assessed using Numeric Rating Scale [MRS], Pain Disability Index [PDI], and Short Form Health Survey [SF-12]. Data collected were analyzed using analysis of variance [ANOVA], Mann-Whitney and f tests. Results: The mean of PDI and maximum pain intensity during day and night significantly reduced in both PLLL and IVL groups compared to control group. Although pain severity and PDI reduction was more pronounced in IVL group compared to PLLL group, the differences were not statistically significant. Also, quality of life statistically significantly improved in both IVL and PLLL groups compared to control group was more, and although higher in IVL group, the difference was not statistically significant when compared to PLLL group. No side effects were observed in the intervention groups. Conclusion: Intravenous laser and PLLL therapy had a positive effect on pain severity and PDI reduction, and quality of life in this study. Also no adverse event was recorded. Thus, intravenous lasers and PLLL therapy seem to be effective complementary modalities in managing patients with shoulder MPS.

Low level laser therapy versus pharmacotherapy in improving myofascial pain disorder syndrome.

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Journal of Lasers in Medical Sciences 2016; 7 (1): 45-50

Keywords: Drug Therapy; Temporomandibular Joint Disorders; Naproxen; Low-Level Light Therapy

Abstract: Introduction: Temporomandibular disorders [TMD] lead to masticatory muscle pain, jaw movement disability and limitation in mouth opening. Pain is the chief complaint in 90% of the TMD patients which leads to disability and severe socioeconomic costs. The purpose of this study was to evaluate the therapeutic effects of low level laser therapy [LLLT] compared to pharmacotherapy with NSAIDs [naproxen] in myofascial pain disorder syndrome [MPDS]. Methods: In this randomized controlled clinical trial, 40 MPDS patients were divided into two groups. One group received naproxen 500 mg bid for 3 weeks as treatment modality and also had placebo laser sessions. The other group received active laser [diode 810 nm CW] as treatment and placebo drug. Pain intensity was measured by visual analogue scale [VAS] and maximum painless mouth opening was also measured as a functional index every session and at 2 months follow up. Data was collected and analyzed with SPSS software. Independent t test was used to analyze the data. A P<0.05 was considered significant. Results: Low level laser caused significant reduction in pain intensity [P<0.05] and a significant increase in mouth opening. In naproxen group neither pain intensity nor maximum mouth opening had significant improvement. Pain relief, in subjective VAS was observed in third session in LLLT group, but did not occur in naproxen group. Maximum mouth opening increased significantly in laser group compared to the naproxen group from the eighth session. Conclusion: Treatment with LLLT caused a significant improvement in mouth opening and pain intensity in patients with MPDS. Similar improvement was not observed in naproxen group.

Nanoparticles

Nonlinear optical studies of gold and silver nanoparticles.

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Bahrain Medical Bulletin 2016; 38 (2): 125-125

Keywords: Gold; Silver; Refractometry

Abstract: Objective: To measure the nonlinear refractive index and nonlinear absorption coefficient of Ag and Au particles. Design: A Quantitative Measurements. Setting: Royal College of Surgeons in Ireland [RCSI], Kingdom of Bahrain. Method: Ag and Au colloidal solutions were prepared by reduction processes. The nonlinear properties of the samples were investigated using CW laser at 488-514 nm using Z-scan technique. Result: Closed aperture z-scan displayed a pre-focal peak followed by a post-focal valley. These materials showed a large negative nonlinear refractive index of $5.85 \times 10^{-11} \text{ m}^2/\text{W}$ and $3.32 \times 10^{-12} \text{ m}^2/\text{W}$ for silver and gold respectively and negative nonlinear absorption of $3.45 \times 10^{-4} \text{ m/W}$ and $7.48 \times 10^{-5} \text{ m/W}$ for silver and gold respectively. Conclusion: Z-scan showed that Ag and Au nanoparticles exhibit a nonlinear effect of thermal origin.

National Health Programs

Compiling comprehensive national health statistics in a fragmented health information system: lessons learned from Lebanon.

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EMHJ-Eastern Mediterranean Health Journal 2016; 22 (1): 53-58

Keywords: Statistics; Health Information Systems; Health Policy

Abstract: In view of the rapid health transition faced by the country and a highly dominant private sector, the issue of obtaining reliable health statistics is becoming a priority for Lebanon. This paper reviews the process of compiling and disseminating national health statistics from the multitude of public, private and nongovernmental partners in the country. The lessons learned from preparing two editions of the National health statistics report in Lebanon allow identification of some challenges and strengths of the current health information system in Lebanon. The experience emphasizes the need for a close partnership with all stakeholders, an efficient management system, adequate human resources and predefined systems and procedures. The process would benefit from having an interactive website for exchange of data and information among stakeholders and the public. The existence of clear guidelines with consistent definitions and standardized forms would also facilitate the collection and analysis of data.

Nephrostomy, Percutaneous

Complications of percutaneous nephrolithotomy single center experience of 103 cases.

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PAFMJ-Pakistan Armed Forces Medical Journal 2016; 66 (2): 270-274

Keywords: Prospective Studies; Cohort Studies; Kidney Calculi

Abstract: Objective: To present our complications of percutaneous nephrolithotomy [PCNL] during initial one year using modified Calvien system. Study Design: Observational prospective cohort. Place and Duration of Study: Armed Forces Institute of Urology [AFIU] Rawalpindi from 1st January 2014 to 31st December 2014. Material and Methods: The study was conducted at AFIU, Rawalpindi from 1st January 2014 to 31st August 2014. All of the consecutive 103 patients who underwent PCNL were included. Single-stage PCNL was performed in all the cases under general anesthesia. Pneumatic and ultrasound probes [alone or in combination] were used to fragment the calculi. Stone fragments were removed using graspers. A 16 Fr Foley catheter was used as nephrostomy tube. It was clamped on the first postoperative day. Foley catheter and ureteric stent was removed one day later. Intravenous antibiotics were given during admission period, i.e. 3-5 days. The complications were classified according to modified Clavien system. The data was analysed using the Statistical Package for the Social Sciences [SPSS] version 16. Results: Sixty nine [67%] patients were males and thirty four [33%] were females. Their ages ranged from 7 years to 81 years with mean age 41.7 +/- 16.34 years. PCNL was performed on right side in 48 [46.6%] cases while 55 [53.4%] underwent PCNL on left side. Overall complication rate was 21.35%. Grade 1 complications in 7.7%, grade 2 in 7.8%, grade 3a in 2.8% and grade 4a complications in 2.9% were seen. Conclusion: PCNL is associated with low incidence of major complications even in the hands of beginners when carefully performed.

Neuralgia

therapy

Pain relief in neuropathic pain-a comparison between 0.5% bupivacaine and 0.5% bupivacaine streptomycin combination.

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PAFMJ-Pakistan Armed Forces Medical Journal 2016; 66 (2): 244-249

Keywords: Pain; Trigeminal Neuralgia; Neuralgia, Postherpetic; Bupivacaine-therapeutic uses; Streptomycin-therapeutic uses; Drug Therapy, Combination; Treatment Outcome

Abstract: Objective: To compare the effectiveness of a combination of streptomycin and bupivacaine for the management of neuropathic pain against bupivacaine alone. Study Design: A randomized controlled double blinded trial. Place and Duration of Study: Pain clinic Combined Military Hospital [CMH] Rawalpindi, CMH Nowshera, Dermatology Dept. Military Hospital [MH] Rawalpindi, Department of Medicine, Surgery CMH Nowshera Feb 2009 to Feb 2010. Material and Methods: Fifty patients with post herpetic neuralgia [PHN], 10 patients with trigeminal neuralgia and 20 patients with nerve entrapment pain were included in the study. For each type of neuropathic pain, the patients were randomly divided into two groups. Group [B] received nerve blocks using 0.5% bupivacaine and group [BS] received nerve blocks using 0.5% bupivacaine and streptomycin Igm combination. A series of four nerve blocks on alternate days were given. VAS [Visual Analogue Scale] was recorded at four, eight and twelve weeks after the last nerve block. Mean baseline VAS and at 12 weeks post treatment in groups B and BS were compared for pain relief and the mean VAS at 12 week post treatment in both the groups was compared for the difference in pain relief between the two groups. Students't test was used for statistical analysis utilizing SPSS 10 versions. Results: Post herpetic neuralgia - group [B]: at 12 weeks, mean VAS was 5.75 in gp [B] and 2.26 in gp [BS] respectively. Nerve entrapment pain- group [B] at 12 weeks, mean VAS was 6.62 whereas in group [BS] VAS was 1.33. Trigeminal neuralgia-group [B] At 12 weeks mean VAS was 7.0. gp [BS] mean VAS was 1. Pain relief achieved was excellent. Conclusion: Streptomycin and bupivacaine combination is an effective modality to manage neuropathic pain. The pain relief achieved by streptomycin-bupivacaine combination is superior to that achieved with bupivacaine alone.

Nocardia Infections

diagnosis

Nocardia abscessus-related intracranial aneurysm of the internal carotid artery with associated brain abscess: a case report and review of the literature.

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Journal of Infection and Public Health 2016; 9 (3): 358-361

Keywords: Nocardia; Intracranial Aneurysm; Carotid Artery, Internal; Brain Abscess

Abstract: Nocardia infections primarily begin in the lungs and spread hematogenously to other sites in the body. Thus, a Nocardia brain abscess is not a completely uncommon occurrence. However, a Nocardia brain abscess complicated by a middle cerebral artery and infectious intracranial aneurysm is a very rare clinical entity. We present a case of an infectious intracranial aneurysm with an associated Nocardia brain abscess that required surgical intervention and resection. The patient was an immunocompetent, 60-year-old male who presented with a chief complaint of headache and was found to have an infected intracranial aneurysm and cerebral abscess. He underwent drainage of the abscess with subsequent resection of the infected aneurysm. Cultures from both the blood vessel and brain tissue grew Nocardia abscessus. He was successfully treated with 6 weeks of ceftriaxone and high-dose trimethoprim sulfamethoxazole. Infectious intracranial aneurysms of the brain caused by Nocardia are rare occurrences, and only a single previous case has been described in the literature. The outcomes of this condition can be catastrophic if it is not treated with a combination of surgery and intravenous antibiotics. The guidelines for the management of this infection are not well defined at this time.

Nursing Research

Translating nursing research - bedside to bench.

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Bahrain Medical Bulletin 2016; 38 (2): 73-73

Keywords: Point-of-Care Testing; Delivery of Health Care

Nutrition Assessment

Nutritional assessment in critically ill patients.

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IJMS-Iranian Journal of Medical Sciences 2016; 41 (3): 171-179

Keywords: Critical Illness; Intensive Care Units; Anthropometry; Nutritional Status; Malnutrition

Abstract: Background: Malnutrition is an important factor in the survival of critically ill patients. The purpose of the present study was to assess the nutritional status of patients in the intensive care unit [ICU] on the days of admission and discharge via a detailed nutritional assessment. Methods: Totally, 125 patients were followed up from admission to discharge at SICUs in Shiraz, Iran. The patients' nutritional status was assessed using subjective global assessment [SGA], anthropometric measurements, biochemical indices, and body composition indicators. Diet prescription and intake was also evaluated. Results: Malnutrition prevalence significantly increased on the day of discharge [58.62%] compared to the day of admission [28.8%] according to SGA [P<0.001]. The patients' weight, mid-upper-arm circumference, mid-arm muscle circumference, triceps skinfold thickness, and calf circumference decreased significantly as well [P<0.001]. Lean mass weight and body cell mass also decreased significantly [P<0.001]. Biochemical indices showed no notable changes except for magnesium, which decreased significantly [P=0.013]. A negative significant correlation was observed between malnutrition on discharge day and anthropometric measurements. Positive and significant correlations were observed between the number of days without enteral feeding, days delayed from ICU admission to the commencement of enteral feeding, and the length of ICU stay and malnutrition on discharge day. Energy and protein intakes were significantly less than the prescribed diet [26.26% and 26.48%, respectively]. Conclusion: Malnutrition on discharge day increased in the patients in the ICU according to SGA. Anthropometric measurements were better predictors of the nutritional outcome of our critically ill patients than were biochemical tests.

Obesity

Obesity as a noticeable cause of physical stress; a study on relationship of physical exertion and cardiovascular parameters.

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IJEHSR-International Journal of Endorsing Health Science Research 2016; 4 (1): 39-44

Keywords: Body Mass Index; Stress, Physiological; Cardiovascular Diseases; Exercise; Physical Exertion; Body Weight

Abstract: Introduction Physical tension is a response to environmental pressures, needs or demands or any vigorous bodily activity leading in altering physiological responses, is counted as physical stress such as aerobics, work outs, injury or aches. It may also count on physical traumas as cuts, burns, sprains, broken bones, surgery etc. in other words physical stress is bodily response to substantial pressures such as exertion, noise, illness or exercises. Methodology The purpose of this study is to observe the severity of physical stress in individuals with respect to their BMI, subjects were assessed pre and post for blood pressure and pulse while Physical stress scores were calculated through Sadaf stress scale [SSS], the data was then analyzed using SPSS 19.0. Results showed that physical stress increases with increased BMI while it also shows significant difference in obese individuals presystolic and pre diastolic with post systolic and post diastolic pressures. Conclusion From this study we conclude that BMI is directly proportional to physical stress. So maintenance of normal body weight is the utmost requirement for healthier life.

Octamer Transcription Factor-3

Differential expression of OCT4 pseudogenes in pluripotent and tumor cell lines.

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Cell Journal [Yakhteh] 2016; 18 (1): 28-36

Keywords: Pseudogenes; Cell Line, Tumor; Pluripotent Stem Cells; MicroRNAs

Abstract: Objective: The human OCT4 gene, the most important pluripotency marker, can generate at least three different transcripts [OCT4A, OCT4B, and OCT4B1] by alternative splicing. OCT4A is the main isoform responsible for the stemness property of embryonic stem [ES] cells. There also exist eight processed OCT4 pseudogenes in the human genome with high homology to the OCT4A, some of which are transcribed in various cancers. Recent conflicting reports on OCT4 expression in tumor cells and tissues emphasize the need to discriminate the expression of OCT4A from other variants as well as OCT4 pseudogenes. Materials and Methods: In this experimental study, DNA sequencing confirmed the authenticity of transcripts of OCT4 pseudogenes and their expression patterns were investigated in a panel of different human cell lines by reverse transcription-polymerase chain reaction [RT-PCR]. Results: Differential expression of OCT4 pseudogenes in various human cancer and pluripotent cell lines was observed. Moreover, the expression pattern of OCT4-pseudogene 3 [OCT4-pg3] followed that of OCT4A during neural differentiation of the pluripotent cell line of NTERA-2 [NT2]. Although OCT4-pg3 was highly expressed in undifferentiated NT2 cells, its expression was rapidly down-regulated upon induction of neural differentiation. Analysis of protein expression of OCT4A, OCT4-pg1, OCT4-pg3, and OCT4-pg4 by Western blotting indicated that OCT4 pseudogenes cannot produce stable proteins. Consistent with a newly proposed competitive role of pseudogene microRNA docking sites, we detected miR-145 binding sites on all transcripts of OCT4 and OCT4 pseudogenes. Conclusion: Our study suggests a potential coding-independent function for OCT4 pseudogenes during differentiation or tumorigenesis.

Oral Hygiene

Association between socio-demographic features, oral hygiene practices and oral health utilization services among patients seen at afid.

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Pakistan Oral and Dental Journal 2016; 36 (1): 110-115

Keywords: Dental Care; Cross-Sectional Studies; Surveys and Questionnaires; Oral Health; Dental Health Surveys; Tooth brushing

Abstract: Although oral health is an integral part of general health but is ignored both individually and at community level. This study was aimed to find out the association between socio demographic features and oral hygiene practices, and oral health utilization services among individuals seen at a tertiary care hospital of military set up. Descriptive cross sectional study although revealed relatively positive outcome yet 23.3% never visited for dental checkup. People usually visit dentist when they have some kind of symptoms like pain. Individuals living in urban areas significantly tend to avail more oral health utilization services than people living in rural areas because of more facilities available in urban areas than in rural areas. Older age group significantly visited dentists than young individuals. This may explain the reason that older individuals tend to have more dental problems. Education do have impact on the use of modern tools. A very good proportion of individuals [95.6%] know that health of teeth is vital for health of body and it is mainly due to awareness imparted from military based community set up. A wide national coverage is required to make this data more valid on the oral health service utilization and usual oral health practices among Pakistani population as well as socio demographic factors which had a major influence.

Oral Submucous Fibrosis

diagnosis

Oral submucous fibrosis - a study.

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Pakistan Oral and Dental Journal 2016; 36 (1): 19-21

Keywords: Prevalence; Cross-Sectional Studies; Precancerous Conditions

Abstract: Oral submucous fibrosis [OSMF] is a debilitating precancerous condition of oral mucosa characterized by the fibrosis of oral mucosa, burning sensation in mouth, intolerance to spicy food and progression of the disease leading to limitation of mouth opening. Habit of chewing areca nut in various commercially available forms is the main etiological factor for oral submucous fibrosis. The aim of the study was to determine the prevalence of oral submucous fibrosis [OSMF] in patients who came for their dental check-up in Altamash Institute of Dental Medicine, Karachi. A descriptive cross sectional survey was conducted on 300 patients from 25th April till 25th March 2015. A simple data collection form was used. Patients presented with the sign and symptoms of oral submucous fibrosis were included in the study. Out of 300 patients 22 were identified with the condition of OSMF and among them habit of chewing areca nut in the form of gutka was found most common.

Organophosphate Poisoning.

Comparative toxicological study between exposed and non-exposed farmers to organophosphorus pesticides.

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Islamic Azad University - Damghan Branch - Department of Biology

Cell Journal [Yakhteh] 2016; 18 (1): 89-96

Keywords: Pesticides; Toxic Actions; DNA Damage; Farmers; Cross-Sectional Studies; Acetylcholinesterase; Interleukin-6; Surveys and Questionnaires

Abstract: Objective: The purpose of this work was to compare DNA damage, acetylcholinesterase [AChE] activity, inflammatory markers and clinical symptoms in farmers exposed to organophosphorus pesticides to individuals that had no pesticide exposure. Materials and Methods: We conducted a cross-sectional survey with a total of 134 people. The subject group consisted of 67 farmers who were exposed to organophosphorus pesticides. The control group consisted of 67 people without any contact with pesticides matched with the subject group in terms of age, gender, and didactics. Oxidative DNA damage, the activities of AChE, interleukin-6 [IL6], IL10 and C-reactive protein [CRP] in serum were measured and clinical examinations conducted in order to register all clinical signs. Results: Compared with the control group, substantial gains were observed in the farmers' levels of oxidative DNA damage, IL10 and CRP. There was significantly less AChE activity in farmers exposed to organophosphorus pesticides. The levels of IL6 in both groups did not significantly differ. Conclusion: The outcomes show that exposure to organophosphorus pesticides may cause DNA oxidative damage, inhibit AChE activity and increase the serum levels of inflammatory markers. Using biological materials instead of chemical pesticides and encouraging the use of safety equipment by farmers are some solutions to the adverse effects of exposure to organophosphorus pesticides.

Orthomyxoviridae

The environmental deposition of influenza virus from patients infected with influenza A [H1N1] pdm09: Implications for infection prevention and control.

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University of Nottingham - Health Protection and Influenza Research Group - Division of Public Health and Epidemiology

Journal of Infection and Public Health 2016; 9 (3): 278-288

Keywords: Influenzavirus A; Influenza, Human-prevention and control; Prospective Studies; Cohort Studies; Surveys and Questionnaires; Influenza A Virus, H1N1 Subtype

Abstract: In a multi-center, prospective, observational study over two influenza seasons, we sought to quantify and correlate the amount of virus recovered from the nares of infected subjects with that recovered from their immediate environment in community and hospital settings. We recorded the symptoms of adults and children with A [H1N1] pdm09 infection, took nasal swabs, and sampled touched surfaces and room air. Forty-two infected subjects were followed up. The mean duration of virus shedding was 6.2 days by PCR [Polymerase Chain Reaction] and 4.2 days by culture. Surface swabs were collected from 39 settings; 16 [41%] subject locations were contaminated with virus. Overall, 33 of the 671 [4.9%] surface swabs were PCR positive for influenza, of which two [0.3%] yielded viable virus. On illness Day 3, subjects yielding positive surface samples had significantly higher nasal viral loads [geometric mean ratio 25.7; 95% CI 1.75, 376.0, $p = 0.021$] and a positive correlation [$r = 0.47$, $p = 0.006$] was observed between subject nasal viral loads and viral loads recovered from the surfaces around them. Room air was sampled in the vicinity of 12 subjects, and PCR positive samples were obtained for five [42%] samples. Influenza virus shed by infected subjects did not detectably contaminate the vast majority of surfaces sampled. We question the relative importance of the indirect contact transmission of influenza via surfaces, though our data support the existence of super-spreaders via this route. The air sampling results add to the accumulating evidence that supports the potential for droplet nuclei [aerosol] transmission of influenza.

Ossification, Heterotopic

diagnosis

Transpharyngeal approach for Eagle syndrome - case report and literature review.

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Pakistan Oral and Dental Journal 2016; 36 (1): 32-34

Keywords: Temporal Bone-abnormalities; Ligaments; Pain; Surgery, Oral

Abstract: Symptomatic elongation of styloid process or mineralization of stylohyoid ligament is referred to as Eagle's syndrome, which usually presents as a vague head and neck pain radiating to jaws, pharyngodynia, difficulty in swallowing, dysphagia, otalgia, and sensation of foreign body in throat leading to wide range of differential diagnosis. Instead of many hypothesis and studies, the exact etiology of styloid process and role of ectopic calcification are unknown. History and physical examination plays a pivotal role in diagnosis and is confirmed by radiological investigation. Treatment modalities include both conservative and surgical management by intraoral and extra oral approaches.

Otitis Media, Suppurative

therapy

Comparison between the efficacy of topical ciprofloxacin with neomycin in the management of chronic suppurative otitis media.

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Combined Military Hospital

PAFMJ-Pakistan Armed Forces Medical Journal 2016; 66 (2): 235-239

Keywords: Ciprofloxacin-therapeutic uses; Neomycin-therapeutic uses; Drug Therapy, Combination; Treatment Outcome

Abstract: Objective: To compare the efficacy of topical Ciprofloxacin with Neomycin in the management of Chronic Supportive Otitis Media [CSOM]. Study Design: Randomized Clinical Trial [RCT]. Place and Duration of Study: Combined Military Hospital [CMH], Peshawar from Jan 2013 to Dec 2013. Patients and Methods: A total of 186 patients with the diagnosis of chronic suppurative otitis media were included in the study. Patients were randomly allotted to either group I that was treated by topical Ciprofloxacin eardrops [n = 93] or to group II, treated by topical Neomycin eardrops [n = 93]. Outcomes were measured by disappearance of discharge and congestion at follow-up examination. SPSS 16 was used for data analysis. Chi square test was used for analysis and p-values less than 0.05 were considered significant. Results: Topical Ciprofloxacin is more effective in earlier control of congestion and discharge of ear in CSOM; [p value = 0.001 and < 0.005 respectively] as compared to Neomycin. Conclusion: Topical Ciprofloxacin is a better drug for the treatment of CSOM as compared to topical Neomycin.

Otolaryngology

The validity and reliability of script concordance test in otolaryngology residency training.

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Journal of Advances in Medical Education and Professionalism 2016; 4 (2): 93-96

Keywords: Reproducibility of Results; Surveys and Questionnaires; Internship and Residency; Education, Medical

Abstract: Introduction: The script concordance test [SCT] is one the best tools used to evaluate clinical reasoning in ill-defined clinical situations. The aim of this study was to demonstrate SCT application in otolaryngology residency training. Methods: A 20 item otolaryngology SCT containing 60 questions was administered to 26 otolaryngology residents. The test was prepared by two otolaryngologists familiar to medical education. These questions have been validated by otolaryngology experts. The panel consisted of 9 academic staff in the field of otolaryngology. Pearson correlation test was used to assess the reliability of the test. Results: The obtained mean scores were 68.4 +/- 5.8 [out of 100] for residents and 78.2 +/- 6.4 [out of 100] for experts. There was a significant difference between the two scores [$p < 0.005$]. Cronbach's alpha value was 0.80. Conclusion: The SCT is a reliable tool to evaluate clinical reasoning in otolaryngology residents. It should be included in otolaryngology residency training.

Outliers, DRG

Investigation of outliers of evaluation scores among school of health instructors using outlier - determination indices.

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Journal of Advances in Medical Education and Professionalism 2016; 4 (1): 21-25

Keywords: Students; Schools, Medical; Cross-Sectional Studies; Education; Teaching-standards

Abstract: Introduction: Teacher evaluation, as an important strategy for improving the quality of education, has been considered by universities and leads to a better understanding of the strengths and weaknesses of education. Analysis of instructors' scores is one of the main fields of educational research. Since outliers affect analysis and interpretation of information processes both structurally and conceptually, understanding the methods of detecting outliers in collected data can be helpful for scholars, data analysts, and researchers. The present study aimed to present and compare the available techniques for detecting outliers. Methods: In this cross-sectional study, the statistical population included the evaluation forms of instructors completed by the students of Shiraz School of Health in the first and second semesters of the academic year 2012-2013. All the forms related to these years [N=1317] were entered into analysis through census. Then, four methods [Dixon, Gauss, Grubb, and Graphical methods] were used for determining outliers. Kappa coefficient was also used to determine the agreement among the methods. Results: In this study 1317 forms were completed by 203 undergraduate and 1114 postgraduate students. The mean scores given by undergraduates and postgraduates were 17.24 +/- 3.04 and 18.91 +/- 1.82, respectively. The results showed that Dixon and Grubb were the most appropriate methods to determine the outliers of evaluation scores in small samples, because they had appropriate agreement. On the other hand, NPP and QQ plot were the most appropriate methods in large samples. Conclusion: The results showed that each of the studied methods could help us, in some way, determine outliers. Researchers and analysts who intend to select and use the methods must first review the observations with the help of descriptive information and overview of the distribution. Determination of outliers is important in evaluation of instructors, because by determining the outliers and removing the data that might have been recorded incorrectly, more accurate and reliable results can be obtained.

Ovarian Neoplasms

genetics

Association of C/T polymorphism in 3'UTR of E-cadherin gene with ovarian cancer risk.

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Islamic Azad University - Parand Branch - Biology Department

Journal of Gorgan University of Medical Sciences 2016; 18 (1): 94-100

Keywords: Polymorphism, Genetic; Cadherins; Risk; Case-Control Studies

Abstract: Background and Objective: Ovarian cancer is the second most common gynecological malignancy. One of the most important genes in Wnt signaling pathway is E-cadherin [CDH1], which is involved in epithelial cell-cell interaction and plays an important role in the establishment and maintenance of intercellular adhesion, cell polarity and tissue architecture. E-cadherin codes a group of connector proteins which caused to intercellular adhesion. It has an important role in adhesion of blastomere and ability to bind fetal tissues. Nucleotide change in the coding region of this gene may lead to develop ovarian cancer. This study was conducted to evaluate the association of +54C/T [Rs 1801026] 3 UTR of E-cadherin gene polymorphism with ovarian cancer risk. Methods: This case-control study was done on 100 tissue samples of patients with ovarian cancer as cases and 100 age-matched healthy women as control in Imam Khomeini Hospital, Tehran, Iran. The E-cadherin gene polymorphism was determined by using the PCR-RFLP method. Results: There was no association between CT [95% CI: 0.81-4.31; OR=1.87; P<0.14] and TT [95% CI: 0.73-2.38; OR=1.44; P<0.29] genotypes and ovarian cancer. No association was found between genotypes with grade and stage of cancer. Conclusion: There is no correlation between +54C/T [Rs1801026] 3 UTR of E-cadherin gene polymorphism with ovarian cancer.

Pathology, Oral

A 5-years retrospective study of oral pathological lesions in 425 Saudi patients.

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Pakistan Oral and Dental Journal 2016; 36 (1): 45-48

Keywords: Carcinoma, Squamous Cell; Retrospective Studies; Surveys and Questionnaires; Stomatognathic Diseases

Abstract: Objective of this study was aimed to highlight the frequency and prevalence of oral pathological lesions. Four hundred and twenty five patients visiting the Department of Oral and Maxillofacial Surgery/ Oral Medicine of Qurayyat Specialized Dental Center, Al-Qurayyat, Saudi Arabia, were included in the study. The study was conducted from year 2011 to 2015. Frequency of patients was noted. Males were 260/425 [61.2%] and females 165/425 [38.8%]. Age range was 6-77 years with mean 38.4 + 13.65. Reactive lesions were the most common occurrences, diagnosed in 425 cases [8.94%], and followed by fungal infections [7.8%], lichen planus [7.1%] and pulp and periapical lesions [6.82%]. Most common malignant lesion was squamous cell carcinoma 4.7% [30/425]. Most common salivary gland pathology was mucoepidermoid carcinoma 3.1% [13/425].

Phoeniceae

Effect of phoenix dactylifera spathe on seminiferous tubules structure and spermatogenesis in rat.

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Journal of Gorgan University of Medical Sciences 2016; 18 (1): 39-44

Keywords: Seminiferous Tubules; Spermatogenesis; Spermatozoa; Testis; Testosterone; Rats

Abstract: Background and Objective: The spathe of phoenix dactylifera contains protein, fatty, fiber, sugar, moisture, furfural, coumarin, organic compounds of camphor family, phytosterols, 1, 2-Di methoxil 1, 4-Di methyl benzene. This study was done to evaluate the effect of alcoholic extract of phoenix dactylifera spathe on seminiferous tubules and spermatogenesis in adult male rats. Methods: In this experimental study, 50 adult male rats were randomly allocated into five groups including: control, sham and experimental groups 1, 2 and 3. Animals in control group did not receive any treatment. Animals in sham group were received 0.2 ml normal saline intraperitoneally. Animals in experimental group 1, 2 and 3 were received 0.05, 0.1 and 0.2 g/kg/bw of alcoholic extract of phoenix dactylifera spathe intraperitoneally, respectively. After 14 days of study, the testis was removed and the sections of tissue were prepared. Testosterone hormone measured by γ -counter method. Results: Serum levels of testosterone and the spermatozoa count. were significantly reduced in the experimental groups in compared to control and sham groups [P<0.05]. The count spermatogonia, primary spermatocyte, spermatid, sertoli and leydig cells and seminiferous tubules structures did not reduce in the experimental groups in compared to control and sham groups. Conclusion: Phoenix dactylifera Spathe alcoholic extract at doses of minimum and medium in adult male rats reduces sera level of testosterone and spermatozoa number.

Photochemotherapy

Photodynamic therapy - a non-invasive treatment modality for precancerous lesions.

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Journal of Lasers in Medical Sciences 2016; 7 (1): 30-36

Keywords: Precancerous Conditions; Leukoplakia-therapy; Aminolevulinic Acid-analogs and derivatives; Mouth Neoplasms

Abstract: Introduction: Oral premalignant lesions are conditions having high potential tendency for transformation into malignancy. The use of a conservative and effective treatment modality is one of the best strategies for cancer prevention. Photodynamic therapy [PDT] is a non-invasive method for topical and selective treatment of oral precancerous lesions. The present study was taken up to determine the efficacy of PDT in oral precancerous lesions. Methods: The study consisted 13 patients with 24 oral leukoplakia [OL] lesions and 8 with 20 oral lichen planus [OLP] lesions, divided into control and study groups. These lesions were affecting various intraoral sites, the buccal mucosa being the most common site followed by tongue and gingiva. The treatment regimen of PDT included 98% 5-aminolevulinic acid [5-ALA] which is topical applied and irradiated with light emitting diode [LED] of 420 nm wavelengths at several sessions. Results: In OL 16.6% of cases showed complete response, 66.6% partial response and 16.6% no response of the lesions to the treatment. In OLP 80% and 20% of the lesions showed partial and no response respectively. The differences with control groups for OL + OLP were found to be significant [P<0.001]. Conclusion: Based on the results of the present study, we can conclude that PDT appears to be a feasible alternative to conventional therapy for oral premalignant lesions.

Physical Endurance

Effect of eight weeks of endurance and resistance training on serum adiponectin and Insulin resistance index of inactive elderly men.

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Journal of Gorgan University of Medical Sciences 2016; 18 (1): 69-77

Keywords: Adiponectin-blood; Insulin Resistance; Aged; Resistance Training

Abstract: Background and Objective: Adiponectin is one of the adiposaitocines which secret from adipose tissue and is very effective in the pathogenesis of obesity and its associated disorders, especially in elderly people who are at risk for cardiovascular disease. This study was carried out to evaluate the effect of eight weeks of endurance and resistance training on adiponectin level, insulin resistance index in inactive elderly men. Methods: In this quasi-experimental study, 24 inactive elderly men were non-randomly divided into interventional and control groups. The combined training included endurance training [with intensity of 60-70% of maximum heart rate reserve] and resistance training [with intensity of 70% one repetition maximum]. The training performed 3 times per week [one hour session] for 8 weeks. Results: The eight weeks of combined training increased the adiponectin level in interventional group compared to the controls [P<0.05]. Insulin and FBS levels, insulin resistance index, and body fat percentage significantly reduced in interventional group compared to the controls [P<0.05]. Conclusion: The eight weeks of combined training increases the adiponectin level and reduces insulin resistance in elderly men.

Effect of milk consumption on healthy young men rehydration and endurance performance after dehydration due to intermittent exercise in warm environmental condition.

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Journal of Gorgan University of Medical Sciences 2016; 18 (1): 78-85

Keywords: Milk; Fluid Therapy; Dehydration; Exercise; Rehydration Solutions

Abstract: Background and Objective: Rapid and adequate rehydration is important for many athletes, especially those taking multiple sessions of exercise each day, or those involved in weight category sports. The macronutrient and electrolyte concentration of the fluid ingested following exercise can affect the amount retained within the body can influence hydration status. This study was done to compare the effect of milk consumption on healthy young men rehydration and endurance performance after dehydration due to intermittent exercise in warm environmental condition. Methods: In this quasi-experimental study, the laboratory protocol was carried out by ten young healthy

men in three sessions within one week intervals. Participants were on drinking regiment including water, low-fat milk, and powerade. Urine samples were collected pre-exercise, post-exercise, post-drinking and 1, 2 and 3 hours over recovery. Exercise capacity test commenced within 10 min after 3h recovery. This was undertaken in warm environmental condition at a power output corresponding to 70% V02 max. Exercise continued until voluntary exhaustion. Heart rate and RPE were recorded at 5 min intervals throughout exercise. Results: Pre-exercise urine specific gravity value was not different between the milk and the, powerade and the water groups. Total urine output was significantly reduced in the milk group in compared to powerade and the water consumption [P<0.05]. At the end of the study, net fluid balance was significantly positive in milk group compared to powerade and water groups [P<0.05]. Time of exhaustion on the exercise capacity test [70% V02 max] was significantly more in milk in comparison with powerade group [P<0.05]. Conclusion: Low-fat milk is more effective at rehydrating compared to water and exercise capacity in intermittent activity of heat in healthy young men.

Pilomatrixoma

diagnosis

Pilomatrixoma.

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Bahrain Medical Bulletin 2016; 38 (2): 108-109

Keywords: Rare Diseases; Pilomatrixoma-pathology

Abstract: Pilomatrixoma is a benign skin tumor that arises from the hair cell matrix. It is a rare tumor that commonly presents in certain locations of the body. We present a seventeen-year-old female with pilomatrixoma located in the lateral aspect of the right thigh. The tumor is rare and presented in a rare location.

Pneumococcal Infections

epidemiology

Epidemiology of invasive pneumococcal disease in Saudi Arabian children younger than 5 years of age.

Almazrou, Yagob; Shibl, Atef M.; Alkhlaif, Riyadh; Pirson, Jean Yves; Anis, Sameh; Kandeil, Walid; Hausdorff, William P.

Ministry of Health

Journal of Epidemiology and Global Health 2016; 6 (2): 95-104

Keywords: Child; Prospective Studies; Immunologic Deficiency Syndromes; Drug Resistance, Multiple; Streptococcus pneumoniae

Abstract: This study evaluated the incidence, serotype distribution, and antimicrobial susceptibility of invasive pneumococcal disease [IPD] in Saudi Arabian children. This multicenter, prospective, clinical surveillance study included children under 5 years of age, residents of one of the seven study health areas, who were brought to a study hospital with suspicion of IPD. Bacterial isolates from sterile site samples, collected less than 24 h after hospital visit/admission, were identified, serotyped, and tested for antibiotic susceptibility. Between June 2007 and January 2009, 631 episodes of suspected IPD were recorded, and 623 were included in the analysis. One child [0.2%] had previously received one dose of a pneumococcal vaccine. Forty-seven episodes were positive for Streptococcus pneumoniae and three for Haemophilus influenzae. The incidence of confirmed IPD cases was estimated to be 2.5-21.6 per 100,000 children [<5 years]. Among the 46 S. pneumoniae isolates serotyped and tested for antibiotic susceptibility, the most common serotypes were 5 and 23F [20% each], 6B [17%], and 1 and 14 [11% each]. Sixty-three percent of isolates were multidrug-resistant. Vaccination of Saudi Arabian children with expanded-coverage conjugate pneumococcal vaccines containing serotypes 1 and 5 could have a substantial impact to prevent IPD in this population.

Poliomyelitis

prevention and control

Polio eradication: an uphill task.

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PJMR-Pakistan Journal of Medical Research 2016; 55 (1): 1-2

Keywords: Disease Eradication; Poliovirus; Vaccination; Virus Shedding

Polycystic Ovary Syndrome

Correlation of serum lipoprotein ratios with insulin resistance in infertile women with polycystic ovarian syndrome: a case control study.

Ghaffarzad, Aisa; Amani, Reza; Nutr, R.; Sadaghiani, Mahzad Mehrzad; Darabi, Masoud; Cheraghian, Bahman.

Ahvaz Jundishapur University of Medical Sciences - School of Paramedicine - Department of Nutrition.

IJFS-International Journal of Fertility and Sterility 2016; 10 (1): 29-35

Keywords: Lipoproteins-blood; Insulin Resistance; Infertility, Female; Case-Control Studies

Abstract: Background: Dyslipidemia and insulin resistance [IR], occurring in most infertile women with polycystic ovarian syndrome [PCOS], increase the risk of cardiovascular disease [CVD] and type 2 diabetes. This study aimed to assess the relationships between lipoprotein ratios and IR in PCOS women. Materials and Methods: Thirty six infertile women with PCOS selected based on Andro-gen Excess Society [AES] criteria and 29 healthy women matched for age were recruited to this case-control study. After physical measurements, fasting serum glucose [Glu], insulin and lipid profile levels [triglycerides [TGs], total cholesterol [TC], low-density lipoprotein-cholesterol [LDL-C] and high-density lipoprotein-cholesterol. [HDL-C]] were measured, while lipoprotein ratios [TC/HDL-C, LDL-C/HDL-C, TG/HDL-C] were calculated. IR was also calculated using homeostasis model assessment [HOMA]-IR. The optimal cutoffs of lipoprotein ratios in relation to HOMA-IR were calculated based on the Receiver Operating Characteristics [ROC] curve analysis using the area under curve [AUC]. Results: Waist circumference [WC], insulin levels, HOMA-IR, TG levels, and all lipoprotein ratios were significantly higher, while HDL-C was lower in PCOS group as compared to healthy controls. All lipoprotein ratios, TG levels, and WC are significantly correlated with insulin levels and HOMA-IR. Among lipoprotein ratios, the highest AUC of the ROC belonged to TG/HDL-C ratio with sensitivity of 63.6% and specificity of 84.4% [TG/HDL-C0.19] as a marker of IR in infertile PCOS women. Conclusion: Lipoprotein ratios, particularly TG/HDL-C, are directly correlated with insulin levels and can be used as a marker of IR [HOMA-IR] in infertile PCOS patients.

Metabolic and endocrine characteristics of indian women with polycystic ovary syndrome.

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IJFS-International Journal of Fertility and Sterility 2016; 10 (1): 22-28

Keywords: Insulin Resistance; Cross-Sectional Studies; Thyrotropin; Follicle Stimulating Hormone-blood; Luteinizing Hormone-blood; Insulin-blood

Abstract: Background: Polycystic ovary syndrome [PCOS] is one of the most common endocrinological disorders among women of reproductive age and the leading cause of female infertility. This study intends to evaluate the lipid profile, hormonal levels [free T3 [fT3], free T4 [fT4], thyroid stimulating hormone [TSH], insulin, luteinizing hormone [LH], follicle stimulating hormone [FSH], and prolactin] in PCOS women from Nellore and its surrounding districts of Andhra Pradesh, India. Materials and Methods: This cross-sectional study included 80 newly diagnosed PCOS women and an equal number of age and body mass index [BMI] matched healthy controls. We used the photometry methods to determine serum glucose levels and the lipid profile. An immunoturbidometry method was employed to measure high sensitive C-reactive protein [hsCRP]. All hormonal parameters were measured using chemiluminescence immunoassays. Insulin resistance was evaluated using the homeostatic model assessment-insulin resistance [HOMA-IR] method. Statistical analysis was done using SPSS software version 20.0. Results: The PCOS patients presented statistically higher levels of total cholesterol [TC], triglycerides [TG] and low density lipoprotein cholesterol [LDL-c, P<0.0001] when compared to those of controls. PCOS patients had elevated fasting glucose, hsCRP, fasting insulin, TSH, LH and prolactin levels [P0.001]. An increased LH/FSH ratio [>1.5] was seen in

women with PCOS compared with control women. In addition, we observed a direct correlation between fasting insulin with fasting glucose and HOMA-IR. LH was inversely proportional to BMI. Conclusion: The present study showed a higher prevalence of insulin resistance, dyslipidemia, and hypothyroidism in PCOS women. Furthermore this study showed increased LH concentrations, a higher LH/FSH ratio, and higher prolactin levels in PCOS women.

Relationships between serum luteinizing hormone level, endometrial thickness and body mass index in polycystic ovary syndrome patients. with and without endometrial hyperplasia.

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IJFS-International Journal of Fertility and Sterility 2016; 10 (1): 36-41

Keywords: Luteinizing Hormone-blood; Endometrium; Body Mass Index; Body Weight; Endometrial Hyperplasia; Cross-Sectional Studies

Abstract: Background: The endometrial hyperplasia measured by ultrasound in poly cystic ovary syndrome. [PCOS] women is strongly related to pathologic endometrial thickness, but there is no consensus on the relation between serum luteinizing hormone [LH] and either of these factors: pathologic endometrial hyperplasia and body mass index [BMI]. Materials and Methods: In this observational cross-sectional study, three hundred fifty infertile PCOS women were involved in this research. An endometrial biopsy was taken by using a pipelle instrument, regardless of menstrual cycle's day and all samples were reported by the same pathologist. Basal serum LH level was compared between two subgroups [hyperplasia and. non-hyperplasia]. The intended population was divided into three groups according to BMI and basal serum. LH, later on the comparison was made in three groups. Chi-square test was applied to compare nominal variables between groups. Mann-Whitney U, and one way ANOVA tests were used to compare means on the basis of the result of normality test. Results: The frequency of endometrial hyperplasia was 2.6%. Endometrial thickness in the patients with endometrial hyperplasia was significantly higher than that of a normal endometrium [10.78 +/- 3.70 vs. 7.90 +/- 2.86 respectively, P=0.020]. There was no relation between endometrial hyperplasia and serum LH [P=0.600]. The ANOVA test showed serum LH levels were not the same among three BMI groups [P=0.007]. Post hoc test was also performed. It showed that the LH level in normal BMI group was significantly higher than those of other groups [P=0.005 and P=0.004], but there was no statistical difference between overweight and obese groups [P=0.8]. We found no relationship between BMI and endometrial thickness in PCOS patients [P=0.6]. Conclusion: Sonographic endometrial stripe thickness is predictive for endometrial hyperplasia in PCOS women. We could not find out any relationship between serum LH level and BMI with endometrial thickness in PCOS patients. However, our study confirmed a diverse relationship between serum LH level and BMI in PCOS patients.

Preimplantation Diagnosis

The effect of preimplantation genetic screening on implantation rate in women over 35 years of age.

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Cell Journal [Yakhteh] 2016; 18 (1):13-20

Keywords: Embryo Implantation; Maternal Age; Pregnancy; In Situ Hybridization, Fluorescence; Sperm Injections, Intracytoplasmic; Aneuploidy; Women

Abstract: Objective: Advanced maternal age [AMA] is an important factor in decreasing success of assisted reproductive technology by having a negative effect on the success rate of intra-cytoplasmic sperm injection [ICSI] particularly by increasing the rate of embryo aneuploidy. It has been suggested that the transfer of euploid embryos increases the implantation and pregnancy rates, and decreases the abortion rate. Preimplantation genetic screening [PGS] is a method for selection of euploid embryos. Past studies, however, have reported different results on the success of pregnancy after PGS in AMA. Investigating the pregnancy rate of ICSI with and without PGS in female partners over 35 years of age referred to infertility centers in Tehran. Materials and Methods: In this randomized controlled trial, 150 couples with the female partner over age of 35 were included. Fifty couples underwent PGS and the remaining were used as the control group. PGS was carried out using fluorescent in situ hybridization [FISH] for chromosomes 13, 18, 21, X and Y. Results of embryo transfer following PGS were evaluated and compared with those in the control group. Results: Implantation rates obtained in the PGS and control groups were 30 and 32% respectively and not significantly different [P>0.05]. Conclusion: PGS for chromosomes 13, 18, 21, X and Y does not increase implantation rate in women over 35 years of age and therefore the regular use of PGS in AMA is not recommended.

Premature Birth

prevention and control

To compare the effectiveness of nifedipine and glyceryl trinitrate patch in prevention of preterm Labour.

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JPMI-Journal of Postgraduate Medical Institute 2016; 30 (1): 92-96

Keywords: Nitroglycerin-pharmacology; Nifedipine-pharmacology; Pregnancy; Pregnant Women; Nitroglycerin-therapeutic uses; Nifedipine-therapeutic uses

Abstract: Objective: To assess the effectiveness of Nifedipine and Glyceryl trinitrate patch in prolonging the pregnancy for more than 48 hours. Methodology: This was a randomized control study. Fifty patients with preterm labour meeting the inclusion criteria were inducted in study and randomly allocated to the treatment group A [Nifedipine] and group B [Glyceryl trinitrate patch, GTN]. After taking consent from the patients, all the details were documented on a proforma and tocolysis was started with either of these tocolytics according to a preset protocol. Results: Nifedipine was found to be more effective than GTN, as prolongation of pregnancy beyond 48 hours was more frequent [74%] with nifedipine than GTN [40%] with P value <0.05. Similarly prolongation beyond 7 days was also more frequent [32%] with nifedipine as compared with GTN [24%]. Most common adverse effect found with nifedipine was headache followed by palpitations and hypotension. GTN patch had a better side effect profile with most of the patients being asymptomatic. Fetal distress was noticed more in GTN group as compared with nifedipine. Conclusion: Nifedipine, as a tocolytic, is found to be more effective in pregnancy prolongation when compared with Glyceryl trinitrate but has frequent maternal adverse drug effects. Glyceryl trinitrate patch is well tolerated by the patients with preterm labour with relatively fewer side effects.

Prenatal Diagnosis

Fetal Rhd genotyping using real-time polymerase chain reaction analysis of cell-free fetal DNA in pregnancy of rhd negative women in south of Iran.

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IJFS-International Journal of Fertility and Sterility 2016; 10 (1): 62-70

Keywords: Genotype; Prospective Studies; Cohort Studies; Real-Time Polymerase Chain Reaction; Cell-Free System; DNA; Pregnancy; Rh-Hr Blood-Group System; Genotyping Techniques

Abstract: Background: Maternal-fetal RhD antigen incompatibility causes approximately 50% of clinically significant alloimmunization cases. The routine use of prophylactic anti-D immunoglobulin has dramatically reduced hemolytic disease of the fetus and newborn. Recently, fetal RHD genotyping in RhD negative pregnant women has been suggested for appropriate use of anti-D immunoglobulin antenatal prophylaxis and decrease unnecessary prenatal interventions. Materials and Methods: In this prospective cohort study, in order to develop a reliable and non-invasive method for fetal RHD genotyping, cell free fetal DNA. [cffD-NA] was extracted from maternal plasma. Real-time quantitative polymerase chain reaction [qPCR] for detection of RHD exons 7, 5, 10 and intron 4 was performed and the results were compared to the serological results of cord blood cells as the gold standard method. SRY gene and hypermethylated. Ras-association domain family member 1 [RASSF1A] gene were used to confirm the presence of fetal DNA in male and female fetuses, respectively. Results: Out of 48 fetuses between 8 and 32 weeks [wks] of gestational age [GA], we correctly diagnosed 45 cases [93.75%] of RHD positive fetuses and 2 cases [4.16%] of the RHD negative one. Exon 7 was amplified in one sample, while three other RHD gene sequences were not detected; the sample was classified as inconclusive, and the RhD serology result after birth showed that the fetus was RhD-negative. Conclusion: Our results showed high accuracy of the qPCR method using cffDNA for fetal RHD genotyping and implicate on the efficiency of this technique to predict the competence of anti-D immunoglobulin administration.

Professional Autonomy

Autonomy to the teaching hospitals in light of mti 2015 reform act; way forward.

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JPMI-Journal of Postgraduate Medical Institute 2016; 30 (1): 1-5

Keywords: Hospitals, Teaching; Health Care Reform; Health Services; Hospitalization

Abstract: The objective behind any health reform should be better quality, efficiency and sustainability of health care. Reform of the system is needed to achieve this. One important aspect of the reform is greater autonomy to the major teaching hospitals, including selected district hospitals. There should be a major effort to agree what is the intention behind autonomy and exactly what is expected to be passed to the control of the major hospitals in terms of autonomy for management decisions, financial procedures and performance, planning and development, human resource management and clinical performance¹. The principle of decisions made at the lowest level practical should prevail. This means that autonomy and decentralization should also be passed down within hospitals to departmental levels². Needless to mention that success of any reform agenda to be implemented rests on the agreement and full backing of the majority of the stakeholders.

Professionalism

A case-based approach for teaching professionalism to residents with online discussions.

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Journal of Advances in Medical Education and Professionalism 2016; 4 (1): 1-7

Keywords: Teaching; Faculty; Learning; Internet; Residence Characteristics

Abstract: Introduction: Programs must demonstrate that their residents are taught and assessed in professionalism. Most programs struggle with finding viable ways to teach and assess this critical competency. UTHSCSA Family and Community Medicine Residency developed an innovative option for interactive learning and assessment of residents in this competency which would be transferable to other programs and specialties. Methods: The innovative approach uses an asynchronous online format on Blackboard. Threaded discussions on Blackboard require thoughtful reflective writing after case assessment and critical evaluation of other resident posts. Participation, content and progress of all resident postings are monitored by administrative staff and faculty. Faculty can further engage the residents at any point to deepen the discussion and learning. Results: 100% of all senior residents attained the required learning objectives. All were actively engaged in the assignments. Six cases have been developed using a Learning Matrix to demonstrate evaluation areas from the specialty specific competencies. Written feedback from residents verified the validity of case content in context of their current clinical practice. Postings by residents have provided value and insight for the faculty to access the professional development of our Family Medicine residents. The Clinical Competency Committee evaluates all third year residents using this information specific to the professionalism milestones. By using an asynchronous online approach to case discussion, all residents are involved with all aspects of this curriculum. Conclusions: More specific measurable learning outcomes are possible using this approach. Resident participation and engagement is easier to track and monitor than a lecture-based format and easier to capture valuable data than relying on evaluation feedback. Our Annual Review process will identify areas for improvement in the existing cases and help create supplemental cases based on a needs assessment by the faculty.

Progesterone

antagonists and inhibitors

Role of antiprogestosterone on the endometrium receptivity- a review.

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PAFMJ-Pakistan Armed Forces Medical Journal 2016; 66 (2): 290-293

Keywords: Endometrium; Receptors, Progesterone; Mifepristone; Uterine Hemorrhage

Abstract: Estrogen produces proliferation in the functional layer of the endometrium and the differentiation in the ciliated and secretory epithelium of the uterine tube. Progesterone produces differentiation in the functional layer of the endometrium and the produces mitosis in the stroma of the endometrium. These effects of the estrogen and progesterone are mediated through interactions with specific intracellular receptors¹. Mifepristone [RU 486] is a steroid hormone with a chemical structure similar to natural hormone progesterone. It has been proposed that antiprogesterins may be useful in the treatment of endometrial inflammatory disease and carcinoma +breast because these conditions are dependent on the ovarian receptors and have receptors for estrogen and progesterone. Anti-progesterone compounds can antagonize the biological action of the progesterone or inhibit the synthesis of progesterone. Mifepristone, [RU 486] has been found to be the most effective and is now used in practice.

Prostatitis

drug therapy

Efficacy of compound therapy by ginseng and ciprofloxacin on bacterial prostatitis.

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Cell Journal [Yakhteh] 2016; 18 (1): 103-111

Keywords: Ciprofloxacin-pharmacology; Drug Therapy, Combination; Rats, Wistar; Prostate; Panax

Abstract: Objective: Genitourinary tract infections play a significant role in male infertility. Infections of reproductive sex glands, such as the prostate, impair function and indirectly affect male fertility. The general aim of this study is to investigate the protective effect of Korean red ginseng [KRG] on prostatitis in male rats treated with ciprofloxacin [CIPX]. Materials and Methods: In this experimental study, we randomly divided 72 two male Wistar rats into 9 groups. The groups were treated as follows for 10 days: i. Control [no medication], ii. Sham [[normal saline injection into the vas deferens and oral administration of phosphate-buffered saline [PBS]], iii. Ginseng, iv. CIPX, v. CIPX+ginseng, vi. Uropathogenic Escherichia coli [E. coli] [UPEC], vii. UPEC+ginseng, viii. UPEC+CIPX, and ix. UPEC+ginseng+CIPX. The rats were killed 14 days after the last injection and the prostate glands were removed. After sample preparation, routine histology was performed using hematoxylin and eosin staining. The terminal deoxynucleotidyl transferase mediated dUTP-biotin nick end labeling [TUNEL] method was used to determine the presence of apoptotic cells. Results: The severity score for acinar changes and inflammatory cell infiltration in the UPEC+CIPX group did not significantly different from the UPEC group. However this score significantly decreased in the UPEC+CIPX+ginseng group compared to the UPEC group. Apoptotic index of all ginseng treated groups significantly decreased compared to the UPEC and CIPX groups. Conclusion: These results suggested that ginseng might be an effective adjunct in CIPX treatment of prostatitis. The combined use ginseng and CIPX was more effective than ginseng or CIPX alone.

Prosthodontics

Awareness about prosthodontic treatment for missing natural teeth among patients seen at afid.

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Pakistan Oral and Dental Journal 2016; 36 (1): 152-155

Keywords: Dental Prosthesis; Awareness; Developing Countries; Health Knowledge, Attitudes, Practice

Abstract: Loss of teeth significantly impairs oral functions and masticatory efficiency. Due to lack of awareness about importance of prosthodontic replacement, mostly patients do not seek treatment immediately after tooth loss. Patients with different educational and socioeconomic background may have different reasons for not replacing teeth after extraction such as financial issues, lack of time and lack of motivation. The objective of this study was to determine the awareness level about prosthodontic treatment for missing natural teeth among patients seen at prosthodontic department of AFID in Rawalpindi. The study was carried out on 137 subjects over a period of almost six months. Based on the criteria of awareness defined in methodology, 19 patients [13.9%] had low awareness level, 89 [65%] had medium awareness level and 29 [21.2%] had high level of awareness. There was significant association of awareness level with gender [p=0.009], education [p=0.00] and occupation [p=0.001]. It was concluded that patients visiting AFID have medium level of awareness about prosthodontic treatment options. Dentists were the most common source of information for the patients in terms of education about different treatment options available to replace the missing teeth.

Psychotherapy

Effect of group positive psychotherapy on improvement of life satisfaction and the quality of life in infertile woman.

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IJFS-International Journal of Fertility and Sterility 2016; 10 (1): 105-112

Keywords: Quality of Life; Personal Satisfaction; Infertility, Female; Depression; Surveys and Questionnaires

Abstract: Background: Positive psychotherapy is one of the new approaches in psychology which is innovated for treating psychological disorders and enhancing positive emotions. The aim of this study is to investigate the effectiveness of the group positive psychotherapy on elevation of life satisfaction and quality of life in infertile women. Materials and Methods: In a randomized trial study, Beck Depression Inventory II [BDI-II] and clinical interview were used in a pre-test post-test control group design. After analyzing the result of the questionnaire, 36 infertile women who showed signs of mild to moderate depression were randomly placed into two following groups: control [n=18] and intervention [n=18]. Before the treatment, the members of both groups answered BDI-II, Satisfaction With Life Scale [SWLS] and 12 item Short Form Health Survey [SF-12]. The intervention group received six sessions of group positive psychotherapy, but the treatment of the control group began six weeks after the intervention group. Results: The results showed that the life satisfaction scores of the intervention group were significantly elevated from 22.66 in pre-test to 26.13 in post-test [$P < 0.001$], while this improvement was not significant in the control group [$P = 0.405$]. The difference between life satisfaction scores of the intervention and the control groups was also significant [$F = 8.92$, $P = 0.006$]. However, no significant change in the quality of life level of the intervention and control groups was observed [$P = 0.136$]. Conclusion: Thus it can be deduced from the findings that this treatment method could be introduced as solution to increase the life satisfaction in infertile women, but not as a treatment for elevating their quality of life [Registration Number: IRCT2013042810063N3].

Public Health.

WHO events addressing public health priorities.

Aboul Serour, Gamal

EMHJ-Eastern Mediterranean Health Journal 2016; 22 (1): 64-71

Keywords: World Health Organization; Health Priorities; Ethics

Pulpitis

therapy

Effect of occlusal reduction on post instrumentation pain in patients with acute irreversible pulpitis.

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Pakistan Oral and Dental Journal 2016; 36 (1): 119-121

Keywords: Dental Occlusion; Pain; Tooth, Nonvital; Pain Measurement; Pain, Postoperative

Abstract: Pain management in endodontics is of paramount importance for the clinicians. The objective of the present study was to compare pain reduction after instrumentation, in teeth with occlusal reduction and without occlusal reduction. This randomized control trial study was conducted at Outpatient Department of Operative Dentistry at Shaheed Zulfiqar Ali Bhutto Medical University [SZABMU], PIMS, Islamabad from February 2015 to January 2016. A total of 250 patients with irreversible pulpitis and normal periapical radiographic appearance of posterior teeth were included in the present study. After administration of local anesthesia, the root canals were instrumented, and an intracanal calcium hydroxide dressing was placed. The patients were randomly allocated into 2 equal groups by random allocation software. Group 1 included 125 patients whose occlusal surface was reduced while group 2 included 125 patients with no occlusal reduction to be done. The patients were recalled after 24 hours, 2nd day and 3rd day to record their postoperative pain on the visual analogue scale [VAS]. The final outcome that is mean post instrumentation pain score was measured by using t-test at 6th day of post instrumentation. Results were statistically significant and showed that occlusal reduction plays an important role in reducing post-instrumentation pain in patients undergoing endodontic treatment of posterior teeth.

Pyruvates

therapeutic uses

Ethyl pyruvate ameliorates the damage induced by cyclophosphamide on adult mice testes.

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IJFS-International Journal of Fertility and Sterility 2016; 10 (1): 79-86

Keywords: Cyclophosphamide-adverse effects; Testis; Mice; Protective Agents

Abstract: Background: Cyclophosphamide [CP] is a chemotherapy drug which causes deleterious effects on testicular tissue and increases free radicals in the body. The aim of this study is to investigate the protective effects of ethyl pyruvate [EP] on testicular improvement in CP treated animals. Materials and Methods: In this experimental study, 15 male mice [6-8 weeks] were divided into 3 groups. The control group received normal saline [0.1 ml/day] intraperitoneal [IP], CP group received CP [15 mg/kg/week, IP], and the CP+EP group received EP [40 mg/kg/day, IP] plus CP. After 35 days, we assessed serum total antioxidant capacity [TAC] along with histomorphometric and histochemical analyses of the testicles. Results: The mean thickness of the germinal epithelium, diameter of seminiferous tubules, and the number of Leydig cells in the CP+EP group were higher than those of the CP group [P<0.05]. The number of the mast cells in the CP+EP group significantly reduced compared with the CP group [P<0.05]. Alkaline phosphatase [ALP], periodic acid-schiff [PAS] positive reactions and lipid granules in cytoplasm of the Leydig cells in the CP group increased compared with the other groups [P<0.05]. TAC in the CP group significantly reduced compared with the other groups [P<0.05]. Conclusion: This study showed the ability of EP to reduce the destructive side effects of CP in the adult mice reproductive system.

Quality of Life

Measuring health-related quality of life in the population of Tetouan, Morocco, by the SF-36: normative data and the influence of gender and age.

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EMHJ-Eastern Mediterranean Health Journal 2016; 22 (2): 133-141

Keywords: Gender Identity; Surveys and Questionnaires; Age Factors; Mental Health

Abstract: Measuring health-related quality of life [HRQOL] is an essential complement to medical evaluation. However, few studies of this type have been conducted in Morocco. This study aims to develop normative data for the SF-36 and analyse the HRQOL according to gender and age in the population of Tetouan city, Morocco. The SF-36 was administered to a sample selected by quotas containing 385 subjects aged over 16 years living in Tetouan. Comparisons of means were done to determine the significance of differences. The study population perceived mental health to be worse than physical health. Men presented significantly higher mean scores than women for all domains of the SF-36. Perceived health, especially physical health, declines with age, and so participants over the age of 55 years recorded a poor perception of their health in the majority of domains measured. The results highlight the vulnerability of the two groups: women and the elderly.

Radiation-Protective Agents

Micronuclei assessment of the radioprotective effects of melatonin and vitamin c in human lymphocytes.

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Cell Journal [Yakhteh] 2016; 18 (1): 46-51

Keywords: Melatonin; Ascorbic Acid; Free Radical Scavengers; In Vitro Techniques; Lymphocytes

Abstract: Objective: Critical macromolecules such as DNA maybe damaged by free radicals that are generated from the interaction of ionizing radiation with biological systems. Melatonin and vitamin C have been shown to be direct free radical scavengers. The aim of this study was to investigate the in vivo/in vitro radioprotective effects of

melatonin and vitamin C separately and combined against genotoxicity induced by 6 MV x-ray irradiation in human cultured blood lymphocytes. **Materials and Methods:** In this experimental study, fifteen volunteers were divided into three groups of melatonin, vitamin C and melatonin plus vitamin C treatment. Peripheral blood samples were collected from each group before, and 1, 2 and 3 hours after melatonin and vitamin C administration [separately and combined]. The blood samples were then irradiated with 200 cGy of 6 MV x-ray. In order to characterize chromosomal aberrations, the lymphocyte samples were cultured with mitogenic stimulus on cytokinesis-blocked binucleated cells. **Results:** The samples collected 1hour after melatonin and vitamin C [separately and combined] ingestion exhibited a significant decrease in the incidence of micronuclei compared with their control group [$P < 0.05$]. The maximum synergic protection and reduction in frequency of micronuclei [57%] was observed 1 hour after vitamin C and melatonin administration combined. **Conclusion:** We conclude that simultaneous administration of melatonin and vitamin C as radioprotector substances before irradiation may reduce genotoxicity caused by x-ray irradiation.

Radiology, Interventional

Assessment of level of awareness and knowledge of interventional radiology among medical students at a Pakistani institution.

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JPMI-Journal of Postgraduate Medical Institute 2016; 30 (1): 66-70

Keywords: Students, Medical; Health Knowledge, Attitudes, Practice; Cross-Sectional Studies; Surveys and Questionnaires; Awareness

Abstract: **Objectives:** To evaluate the level of knowledge and interest in Interventional Radiology [IR] among medical students at a Pakistani Medical Institution. **Methods:** After ethical review board approval, a cross sectional study was conducted based on a survey distributed among 600 medical students at a Pakistani 5 year medical school. 288 [48%] responses were received. Survey was based on 16 questions assessing knowledge, interest and perception of Interventional Radiology. **Results:** Among 288 respondents, 112 [39%] reported poor knowledge regarding IR; 132 [45%] had never been exposed to IR. Only 46 [16%] students chose to consider a career in IR. Main reasons for not considering a career in IR were lack of knowledge [49%] or lack of interest [34%]. Hundred students [34%] could correctly identify at least one IR procedure; 192 [66%] students were unclear regarding routine duties of Interventional Radiologist as part of a multidisciplinary team; 192 [66%] students stated that a 2 week radiology rotation would be sufficient; 168 [58%] stated that a mandatory 2 week core rotation in IR should be incorporated. IR lectures were rated as the most effective means of learning. **Conclusion:** Although level of knowledge and exposure to IR among medical students was suboptimal, they showed interest in learning more about this specialty. This deficit needs to be addressed in the undergraduate medical curriculum, not only to attract future innovators for continued growth of this specialty, but also to increase awareness among future referring physicians.

Reproductive Health Services

Exploring the characteristics of public reproductive health services in the Islamic Republic of Iran from the perspectives of unmarried women: what needs to be changed?

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EMHJ-Eastern Mediterranean Health Journal 2016; 22 (2): 116-123

Keywords: Reproductive Health; Health Services; Single Person; Public Health; Surveys and Questionnaires; Women

Abstract: This qualitative study in the Islamic Republic of Iran aimed to explore facilitators and barriers to the use of reproductive health services by unmarried women. A purposive sample of unmarried women aged 25-60 years in Isfahan city were interviewed about their experiences of reproductive health services in public health centres. Content analysis of responses revealed that the favourable characteristics of reproductive health services in public centres were services that: were delivered by personnel of the same sex in a woman-friendly environment and available at a suitable price, and did not label clients. In contrast, the following characteristics made public health centres undesirable for unmarried women: not addressing single women for reproductive health services; lack of privacy; failure to maintain confidentiality; doubts about skills and scientific ability of personnel; and lack of integration of services.

Research

Research priorities in medical education at Shiraz University of Medical Sciences: categories and subcategories in the Iranian context.

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Keywords: Education, Medical; Delphi Technique; Surveys and Questionnaires

Abstract: Introduction: Research in education is a globally significant issue without a long history. Due to the importance of the issue in Health System Development programs, this study intended to determine research priorities in medical education, considering their details and functions. By determining barriers existing in research in education progress, it is tried to make research priorities more functional by recommending acceptable strategies. Methods: This is a qualitative-descriptive study in two descriptive phases. The goal of these phases was to determine research priorities subcategories in medical education by Nominal Group Technique [NOT] and two rounds of Delphi method. Through the first phase, subcategories of research priorities were determined, using Nominal Group Technique under medical education experts' supervision. Through two rounds of Delphi, a questionnaire was constructed based on the subcategories. Eventually, research priorities were determined based on their highest score [scores more than 7 out of 10]. Results: In the first phase [NGT], 35 priorities in 5 major fields of medical education were presented. In the second phase, priorities were scored, using Delphi method. Medical Ethics and professionalism gained the highest scores [7.63 +/- 1.26] and educational evaluation the lowest [7.28 +/- 1.52]. In this stage, 7 items were omitted but 2 of them were added again after experts' revision in the third round of Delphi. Conclusion: According to the results of the present study and based on previous studies, it really seems that the fields of [Learning and Teaching Approaches] and [Medical Ethics and Professionalism] were more important. Because of financial and resource limitations in our country and the importance of research priorities, it is recommended to frequently study "research priorities determination program" at universities.

Respiratory Tract Infections

Healthcare-seeking behaviors for acute respiratory illness in two communities of Java, Indonesia: a cross-sectional survey.

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US Centers for Disease Control and Prevention

Journal of Epidemiology and Global Health 2016; 6 (2): 77-86

Keywords: Delivery of Health Care; Surveys and Questionnaires; Public Health; Cross-Sectional Studies

Abstract: Understanding healthcare-seeking patterns for respiratory illness can help improve estimations of disease burden and inform public health interventions to control acute respiratory disease in Indonesia. The objectives of this study were to describe healthcare-seeking behaviors for respiratory illnesses in one rural and one urban community in Western Java, and to explore the factors that affect care seeking. From February 8, 2012 to March 1, 2012, a survey was conducted in 2520 households in the East Jakarta and Bogor districts to identify reported recent respiratory illnesses, as well as all hospitalizations from the previous 12-month period. We found that 4% [10% of those less than 5 years] of people had respiratory disease resulting in a visit to a healthcare provider in the past 2 weeks; these episodes were most commonly treated at government [33%] or private [44%] clinics. Forty-five people [0.4% of those surveyed] had respiratory hospitalizations in the past year, and just over half of these [24/45, 53%] occurred at a public hospital. Public health programs targeting respiratory disease in this region should account for care at private hospitals and clinics as well as illnesses that are treated at home in order to capture the true burden of illness in these communities.

Root Canal Obturation

A comparative analysis of adhesion and bond strength of bioactive obturating materials with root dentin.

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Pakistan Oral and Dental Journal 2016; 36 (1): 130-135

Keywords: In Vitro Techniques; Gutta-Percha; Dentin-Bonding Agents; Dental Pulp Cavity; Dental Bonding; Durapatite; Polyurethanes; Microscopy, Electron, Scanning

Abstract: Obturation of root canal is an important step in root canal therapy. Gutta percha is the most, commonly used material to fill the root canal for obturation. In this study composites of gutta percha with 10% hydroxyapatite [HA] and polyurethane [10% and 20%] were investigated to find out their adhesion and bond strength with root dentin after 7 days. Extracted human teeth were used for this study and in vitro root canal obturation was done. After filling the samples were immersed separately in deionised water solution. Push out test and scanning electron microscopy [SEM] was done to find out the adhesion and bond strength of these materials. Push out test and SEM evaluation of these obturating materials showed that gutta percha had maximum bond strength, whereas gutta percha with 10% hydroxy apatite had minimum bond strength as compared to other bioactive materials used in this study. Polyurethane composite with 20% HA was next to gutta percha in terms of its bond strength followed by polyurethane with 10% HA. Gutta percha obturating material proved to be the best regarding adhesion and bonding with the root dentin but polyurethane [with 10% and 20% HA] also looked promising.

Rubber Dams

Survey on the modalities of rubber dam usage for root canal treatment.

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Journal of Taibah University Medical Sciences 2016; 11 (2): 152-158

Keywords: Dental Pulp Cavity; Surveys and Questionnaires; Cross-Sectional Studies; Endodontics

Abstract: Objectives: To identify the modalities for the use of rubber dam isolation during root canal treatments [RCTs] and to explore clinicians' preferences in isolating challenging cases. Methods: Ethical approval was obtained from the College of Dentistry Research Ethics Committee, Taibah University. Following two pilot studies, a final web-based questionnaire addressed the following aspects: a) respondents classification, b) usage of rubber dam c) frequencies and modalities of rubber dam usage according to teeth location, and d) management of difficult cases. The questionnaire was sent to 375 systematically selected general dental practitioners [GDPs] and 53 endodontists in the Western province of KSA. Data were analysed using the Chi-square test at $p = 0.05$. Results: Only 21% of GDPs used rubber dam compared to 84.8% of endodontists [$p < 0.001$]. 32% of GDPs who did not always using a rubber dam on anterior teeth always used one on posterior teeth. The proportion of GSPs who used rubber dam during complete RCTs increased from 15.6% in anterior teeth to 27.3% in posterior teeth [$p = 0.006$]. The highest proportion of GDPs [40.3%] used the split dam technique on conical or prepared teeth. In addition, 63.3% of GDPs rebuilt broken-down teeth. While 52.9% of endodontists used Ora-seal to seal a leaking rubber dam, 77.3% of GDPs used Cavil. Conclusions: Rubber dam users, especially GDPs, exercised more attention to posterior teeth compared to their anterior counterparts. Rubber dam users opted to manage difficult cases by sealing leaking rubber dam and to use the split dam technique.

Salmonella enterica

genetics

Distribution and factors associated with Salmonella enterica genotypes in a diverse population of humans and animals in Qatar using multi-locus sequence typing [MLST]

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Journal of Infection and Public Health 2016; 9 (3): 315-323

Keywords: Multilocus Sequence Typing; Genotype; Cross-Sectional Studies; Gastroenteritis; Animals; Risk Factors

Abstract: Salmonella enterica is one of the most commonly reported causes of bacterial foodborne illness around the world. Understanding the sources of this pathogen and the associated factors that exacerbate its risk to humans will help in developing risk mitigation strategies. The genetic relatedness among Salmonella isolates recovered from human gastroenteritis cases and food animals in Qatar were investigated in the hope of shedding light on these sources, their possible transmission routes, and any associated factors. A repeat cross-sectional study was conducted in which the samples and associated data were collected from both populations [gastroenteritis cases and animals]. Salmonella isolates were initially analyzed using multi-locus sequence typing [MLST] to investigate the genetic diversity and clonality. The relatedness among the isolates was assessed using the minimum spanning tree [MST]. Twenty-seven different sequence types [STs] were identified in this study; among them, seven were novel,

including ST1695, ST1696, ST1697, ST1698, ST1699, ST1702, and ST1703. The pattern of overall ST distribution was diverse; in particular, it was revealed that ST11 and ST19 were the most common sequence types, presenting 29.5% and 11.5% within the whole population. In addition, 20 eBurst Groups [eBGs] were identified in our data, which indicates that ST11 and ST19 belonged to eBG4 and eBG1, respectively. In addition, the potential association between the putative risk factors and eBGs were evaluated. There was no significant clustering of these eBGs by season; however, a significant association was identified in terms of nationality in that Qataris were six times more likely to present with eBG1 compared to non-Qataris. In the MST analysis, four major clusters were presented, namely, ST11, ST19, ST16, and ST31. The linkages between the clusters alluded to a possible transmission route. The results of the study have provided insight into the ST distributions of *S. enterica* and their possible zoonotic associations in Qatar. Published by Elsevier Limited on behalf of King Saud Bin Abdulaziz University for Health Sciences.

Schizophrenia

drug therapy

Frequency of psychotropic drugs use by patients with schizophrenia in eight years follow-up.

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JPMI-Journal of Postgraduate Medical Institute 2016; 30 (1): 48-51

Keywords: Psychotropic Drugs; Carbamazepine; Risperidone; Benzodiazepines; Fluoxetine

Abstract: Objective: To measure the frequency of various psychotropic drugs used by patients with schizophrenia in 8 years follow up. Methodology: It was a descriptive observational study. This study was conducted at Department of Psychiatry Lady Reading Hospital Peshawar from 2004 to 2012. A sample of 52 patients diagnosed as schizophrenics was included through consecutive sampling. These patients were part of a project known as Severe Mental Illness [SMI]. They were regularly assessed once in a month and were provided antipsychotic, antidepressants and mood stabilizers. Results: The study included 52 [n = 52] patients. Males were 33 [62%] and females were 19 [37%]. Age of patients ranged from 15-60 with the mean age of 28.82 +/- 10.67. Mean age of males was 31.08 +/- 9.66 and of females was 25.84 +/- 11.43. Number of visits missed during the study was 2%. Fifty two% of patients were stable on 4mg of risperidone per day. Fifty percent of the patients were stable on 5 to 10mg of olanzapine per day. Depot preparation was required by 38% and less than 50% of the patients required carbamazepine as mood stabilizers from 200 to 400mg per day. Twenty three percent of the patients required 20gm of fluoxetine per day. Conclusion: During 8 years follow up the most frequent anti psychotic drugs used by patient to remain stable were risperidone 4mg per day followed by olanzapine 5 to 10 mg per day.

Schools, Medical

Technical efficiency of Shiraz school of medicine in research and education domains: a data envelopment analysis.

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Journal of Advances in Medical Education and Professionalism 2016; 4 (1): 13-20

Keywords: Efficiency; Cross-Sectional Studies; Retrospective Studies; Research

Abstract: Introduction: Efficiency evaluation of universities and faculties is one of the tools that help managers to identify the departments' strengths and weakness. The main objective of the present research was to measure and compare the technical efficiency of Shiraz school of medicine departments using Data Envelopment Analysis [DEA] technique. Methods: This cross-sectional and retrospective study was performed on clinical and non-clinical departments in research and education domains over the period of 2006 to 2011. Different inputs and outputs were considered for research and educational domain separately. Efficiency was measured based on the observed optimal performance. Results: Findings showed that pathology and anatomy departments achieved the score of 100 in technical efficiency in education during 2006 to 2011. During this period, parasitology, psychiatric and pediatrics department's achieved the score of 100 for technical efficiency in research domain. The lowest mean of relative educational efficiency belonged to orthopedic department; as to relative research efficiency, the lowest mean was shown in orthopedics and genetics departments. The mean technical efficiency of non-medical departments in education and research domain was 91.93 and 76.08, respectively, while the mean technical efficiency of the clinical

department in educational and research fields was 91.02 and 82.23, respectively. Conclusion: Using multiple input and output in DEA technique provided a comprehensive evaluation of efficiency in Shiraz school of medicine departments. The DEA could successfully estimate the technical efficiency of the departments in research and educational fields. Moreover, the deficiency in each department was found; this could help them to plan for improvement.

Sexual Dysfunction, Physiological

epidemiology

Female sexual dysfunction among overweight and obese women in Kota Bharu, Malaysia.

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Journal of Taibah University Medical Sciences 2016; 11 (2): 159-167

Keywords: Overweight; Obesity; Cross-Sectional Studies; Prevalence

Abstract: Objectives: Overweight and obesity have been identified as risk factors for sexual dysfunction. However, this relationship has not been well documented in women, and the results have been conflicting, perhaps because of the complexity of female sexuality. The aim of our study was to determine the prevalence of and factors associated with female sexual dysfunction [FSD] and its subtypes among overweight and obese women. Methods: This cross-sectional study was conducted from January to June 2012 at Klinik Rawatan Keluarga Hospital Universiti Sains Malaysia. A validated Malay version of the Female Sexual Function Index was administered to 204 overweight and obese women. The socio-demographics and physical and biochemical parameters were obtained. Multiple logistic regression was used to evaluate the confounding factors to sexual dysfunction. Results: The prevalence of FSD among overweight and obese women was reported to be 12.3% [95% CI: 7.79, 16.81]. Sexual desire disorder was the most prevalent dysfunction [23%], followed by arousal disorder [8.3%], lubrication disorder [9.3%], orgasm disorder [4.9%], satisfaction disorder [9.3%] and pain disorder [6.9%]. Parity 1.08 [1.01, 1.15] and duration of marriage 0.70 [0.50, 0.96] were significantly associated with FSD in the study cohort. Conclusions: Sexual dysfunction among overweight and obese women was low. Parity showed a significant positive correlation with FSD, while the duration of marriage appeared to be a protective factor against FSD.

Shigella

The detection and antimicrobial susceptibility profile of Shigella isolates from meat and swab samples at butchers' shops in Gondar town, Northwest Ethiopia.

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Journal of Infection and Public Health 2016; 9 (3): 348-355

Keywords: Cross-Sectional Studies; Drug Resistance, Multiple; Prevalence; Drug Resistance, Microbial; Cattle; Meat; Foodborne Diseases

Abstract: Food borne pathogens are major causes of deaths, illnesses and billions of dollars of expenses. The burden of food borne illness is worsened by the ever increasing rate of antimicrobial resistance microbes. Shigella, a bacterial pathogen associated with food, is reported to account for higher prevalence rates of food borne illness in different settings. A cross-sectional study was conducted from February 10 to June 30, 2013, at the butcher houses of Gondar town in the Northwest of Ethiopia to assess the prevalence and antimicrobial susceptibility pattern of Shigella. Cattle raw meat and swab samples from selected critical control points, including knives, chopping boards, and the hands and noses of butchers, were collected and analyzed. The identification of Shigella was carried out using colony characteristics, the Gram reaction, and biochemical tests. Antimicrobial susceptibility testing was performed using the Kirby-Bauer disc diffusion method. The overall hygienic status of the butcher shops was also assessed using a checklist. An observational analysis revealed that the sanitary condition of the butcher shops and their premises was poor. Of 306 samples screened, 10.5% were positive for Shigella. Approximately 7.4% of meat samples and 10.2% of swab samples were contaminated with Shigella. Out of the total Shigella isolates, 90.6%, 46.9%, 18.8% and 9.4% were resistant to ampicillin, amoxicillin, ceftriaxone and tetracycline, respectively. A multidrug resistance pattern was recorded in 27.8% of the isolates. In conclusion, the safety of meat sold at Gondar butchers houses was poor. The identified Shigella isolates showed high levels of drug resistance and multidrug resistance patterns for commonly used antimicrobials in veterinary and human medicine. Practicing wise use of antimicrobials and strict sanitary interventions at different critical control points is strongly recommended, in addition to further in-depth studies to prevent unprecedented consequences from shigellosis.

Smoking

epidemiology

Prevalence of and factors associated with smoking among students in Sousse, Tunisia.

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EMHJ-Eastern Mediterranean Health Journal 2016; 22 (1): 40-47

Keywords: Cross-Sectional Studies; Surveys and Questionnaires; Students; Prevalence; Tobacco

Abstract: Within the framework of the fight against tobacco among young people, we conducted a descriptive cross-sectional study in 2013 to estimate the prevalence of smoking and to identify associated factors among students in Sousse. A questionnaire was administered to a representative sample of 556 students in 5 academic institutions in Sousse randomly drawn. The age of the participants was between 17 and 35 years. The prevalence of tobacco consumption in the past 12 months was 22.1% and consumption during the past 3 months was 65.3%. The average age of starting smoking was 17 years. Smoking prevalence was significantly higher for males [$P < 0.001$] and those aged over 25 years [$P = 0.002$]. Students from 2 of the institutions were using more tobacco than their colleagues in the other institutions [$P = 0.027$]. The high prevalence of smoking found among the students means that prevention measures are essential; this requires increasing self-esteem and evaluating intervention programmes implemented before smoking the first cigarette.

The prevalence of smoking among male students of Majmaah University, KSA.

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Journal of Taibah University Medical Sciences 2016; 11 (2): 175-178

Keywords: Prevalence; Tobacco; Cross-Sectional Studies; Students; Surveys and Questionnaires

Abstract: Objectives: The objective of this study was to determine the prevalence of tobacco smoking among male students of Majmaah University, KSA. The study also aimed to record the pattern of tobacco use and determine the social factors that influence tobacco smoking. Methods: In this cross-sectional study, 23,424 male students from three faculties of Majmaah University were enrolled and registered to participate in a survey-based research study. We randomly selected the faculties of Applied Sciences, Education, and Business Administration for inclusion. A semi structured questionnaire was administered to the sample, and the Statistical Package for Social Science [SPSS] was used for data analysis. Results: The prevalence of smokers among male students was 30.4%. The majority of tobacco smokers [70.7%] used cigarettes, and most [41.3%] consumed between 10 and 20 cigarettes per day. The majority of smokers started smoking during secondary school. The results showed that 39% of students had attempted to quit smoking once or twice, while 28.2% never tried to quit smoking. Most [73.4%] of the students spent less than 500 Saudi Riyals [SR] on smoking every month. Conclusion: This study has shown that the prevalence of smoking among male students at Majmaah University is higher than the prevalence of smoking reported by other studies in KSA. Most students had previously tried to quit smoking, which is a finding that indicates that healthcare agencies should introduce new smoking cessation campaigns and raise awareness about nonsmoking attitudes in schools and universities.

Smoking Cessation

Factors associated with the willingness to quit smoking among a cohort of university students in the KSA.

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Journal of Taibah University Medical Sciences 2016; 11 (2): 128-133

Keywords: Cross-Sectional Studies; Students; Surveys and Questionnaires; Cohort Studies

Abstract: Objectives: The aim of this study was to determine the predictors of the willingness to quit smoking among a cohort of male Saudi students. Methods: In this cross-sectional study, a questionnaire was administered to a cohort of male students that were recruited from three institutes of higher education. Using the retrieved data, bivariate analysis and logistic regression tests were performed to assess the factors associated with the willingness to quit smoking. Results: Of 467 participants, 24% of respondents were current smokers, while 65% of these smokers were willing to quit smoking. In the bivariate analysis, past attempts to quit smoking and the anti-smoking

messages on TV and in newspapers were significantly associated with the willingness to quit smoking. Only one variable -past attempts to quit smoking - was a significant predictor of the willingness to quit smoking, as shown by the multi-variate logistic regression analysis. Conclusion: The findings of this study indicate that Saudi male students who smoke are willing to quit smoking; having unsuccessfully attempted to quit smoking in the past, they are willing to try again. Successful programs should be developed for male university students in KSA to assist them in their quest to quit smoking and maintain cessation.

Spermatozoa

Combined effect of trolox and EDTA on frozen-thawed sperm quality.

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IJMS-Iranian Journal of Medical Sciences 2016; 41 (3): 230-237

Keywords: Edetic Acid; Chromans; Sperm Motility; Freezing; Acrosome

Abstract: The freezing and thawing process not only is associated with serious damage to sperm such as damage to the plasma membrane and the acrosomal membrane but also changes the membrane permeability to some ions including calcium. Also, the generation of oxygen free radicals is increased during the freezing-thawing process. The purpose of this study was to evaluate of the effects of Trolox as an antioxidant and edetic acid [EDTA] as a calcium chelator on frozen-thawed [FT] sperm and compare these effects with those on fresh sperm. This study was done on these men of 25 healthy men, who referred to Shiraz Infertility Center between 2012 and 2013. Normal samples were transferred to the Reproductive Physiology Laboratory, Department of Physiology, Shiraz University of Medical Sciences, Shiraz. The samples were divided into two groups randomly: fresh and FT sperm groups. Each group was divided into five subgroups: control group, the solvent group [0.1%dimethyl sulfoxide [DMSO]], Trolox group [200microM], EDTA group [1 .ImM], and Trolox+EDTA group. The percentages of motility, viability, and acrosome-reacted sperm were tested. The percentages of motility and viability in the FT sperm were lower than those in the fresh sperm. The progressive motility of the FT sperm was improved no significantly with Trolox+EDTA. However, the effect of Trolox+EDTA on the progressive motility of the FT sperm was much more than that on the fresh sperm. The fewest acrosome-reacted sperm were observed in the. EDTA-containing FT sperm. Antioxidant supplementation or omission of extracellular calcium may partly improve motility and also reduce acrosomal damage in FT sperm.

Spine

surgery

Why and how should we measure outcomes in spine surgery?

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Journal of Taibah University Medical Sciences 2016; 11 (2): 91-97

Keywords: Pain; Treatment Outcome; Outcome Assessment [Health Care]; Quality of Life

Abstract: The objectives of spinal surgery for degenerative disorders are to reduce pain and disability and improve patients' quality of life while allowing an early return to work. The incongruence between surgeons' perspectives, findings of imaging exams in terms of fusion statuses or adequate decompression, and patients' satisfaction levels with treatment have underscored the need to evaluate outcomes of spinal surgery with a specific focus on patients' perspectives. Patient-reported outcomes [PRO] are reports on health status taken directly from patients without interference from physicians. In recent decades, several generic and disease-specific PRO instruments have been developed and validated in patients with spinal disorders. In this paper, we review the most commonly used PRO instruments in patients with spinal disorders, focussing on their characteristics, applicability and minimum clinically important differences.

Staphylococcus aureus

Are the leading drugs against Staphylococcus aureus really toxic to cartilage?

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Journal of Infection and Public Health 2016; 9 (3): 251-258

Keywords: Staphylococcal Infections-therapy; In Vitro Techniques; Drug-Related Side Effects and Adverse Reactions; Chondrocytes; Vancomycin; Teicoplanin; Linezolid; Orthopedics

Abstract: Many studies have shown that the toxic effects of local antibiotics on bone and cartilage limit orthopedic surgeons. In this study, we evaluated three antibacterial agents used locally to treat highly mortal and morbid diseases in the field of orthopedics, such as septic arthritis. Are vancomycin, teicoplanin, and line-zolid, which are archenemies of Staphylococcus aureus, really toxic to chondrocytes? The purpose of the study was to investigate the effects of antibiotics, which are used against S. aureus, on human chondrocytes in vitro. Primary cell cultures obtained from gonarthrosis patients were divided into two main groups. One of these groups was designated as the control chondrocyte culture. The other group was divided into three subgroups, and each group was exposed to vancomycin, teicoplanin, or linezolid. Cell culture samples were characterized by immunophenotyping following incubation with the three different antibiotics. Before and after the agents were administered, the cultures were subjected to inverted and environmental scanning electron microscopy. The number of live cells and the proliferation rate were monitored with the MTT-assay. We found that vancomycin, teicoplanin, and linezolid do not have chondrotoxic effects. Vancomycin, teicoplanin, and linezolid had no chondrotoxic activity during in vitro culture, which supports the argument that these agents can safely be used in orthopedic surgery, especially against methicillin-resistant S. aureus agents.

STAT1 Transcription Factor

Detection of stat-1 in patients co-infected with hepatitis b and c resistant to interferon.

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PAFMJ-Pakistan Armed Forces Medical Journal 2016; 66 (2): 216-220

Keywords: Interferons; Coinfection; Hepatitis B; Hepatitis C; Cross-Sectional Studies

Abstract: Objective: Current study was designed to determine the STAT-1 in co-infected patients of hepatitis B and C resistant to interferon therapy. Study Design: Cross-sectional analytical study. Place and Duration of Study: Department of Biochemistry and Molecular Biology and Gastroenterology departments of various hospitals of Rawalpindi. Material and Methods: The study included 15 co-infected patients of hepatitis B and C resistant to interferon therapy and 15 healthy individuals as control. Methodology: Detection of STAT-1 was done by conventional PCR technique. Results: Sixty seven percent of the patients were expressing STAT-1 in their blood while 33% of the patients did not have STAT-1. Controls showed 57% detection of STAT-1 and 43% did not exhibit STAT-1. Mean age of the patients and controls was 35.90. +/- 8.95. Comparison between patients and controls was done by chi square test. Fisher exact probability value obtained was 0.287 which was not significant. Conclusion: Patients suffering from hepatitis B and C co-infection resistant to interferon therapy revealed higher detection of STAT-1 which indicate greater liver damage, fibrosis and an extensive and severer disease course in co-infection.

Stents

adverse effects

Migrated basilic vein stents.

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Bahrain Medical Bulletin 2016; 38 (2): 122-124

Keywords: Renal Dialysis; Fistula; Arteriovenous Fistula

Abstract: An arteriovenous fistula is the preferred vascular access for hemodialysis. Secondary thrombosis secondary to a venous stenosis is the most common complication seen with AV fistulas, and currently, percutaneous endovascular intervention [balloon angioplasty and stenting] is considered the treatment of choice for venous stenosis. Despite being less invasive than surgery, these interventions present a unique subset of potential complications with limited evidence available on optimal treatment. We report a case of migrated basilic vein stents in

a seventeen-year-old male undergoing hemodialysis through a brachiobasilic AY fistula. The complication was treated by fixing the stents to the venous wall using non-absorbable sutures. The objective was to prevent further stent migration towards the heart and thus, steer away from a probable catastrophic event.

Stress Disorders, Post-Traumatic

The prevalence of post traumatic growth among troops in post deployment phase.

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PAFMJ-Pakistan Armed Forces Medical Journal 2016; 66 (2): 275-280

Keywords: Combat Disorders; Cross-Sectional Studies; Growth; Prevalence

Abstract: Objective: To determine the prevalence of post-traumatic growth [PTG] and its association with socio demographic factors among a cohort of troops in post deployment phase. Study Design: Descriptive cross sectional. Place and Duration of Study: A Military battalion in Lahore from Jan-April 2015, one year after deployment in the combat area. Material and Methods: A sample of 296 combat troops was selected using non-probability convenient sampling technique. After taking informed written consent the data was collected using Urdu version of psychometric tool Post Traumatic Growth Inventory [PTGI]. Data was entered and analyzed SPSS version 20. Results: The mean age of the respondents was 29 +/- 6.2 years. Married and unmarried were 214 [72.3%] and 82 [27.7%] respectively. The mean years of service of the troops were 11. In our study the majority of troops 279[94.3%] exhibited greater degree of positive growth. [75]. 15 [5.1%] had moderate degree of positive growth [74-51] while only 2[0.7%] had no post traumatic growth[<50]. There was a significant negative correlation of PTG with the age [$p < 0.01$] and a significant association of Ethnicity with PTG [$p=0.03$]. However there was no significant association of PTG with marital status [$p= 0.06$], education [$r=0.52$], income [$p=0.71$], rank [$p= 0.96$] and years of service [$p= 0.49$] at 95% confidence level. Conclusion: It was concluded that there was a high prevalence of resilience as PTG in majority of troops one year after deployment in a combat area.

Students, Dental

Assessment of dental students' communication skills with patients.

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Journal of Advances in Medical Education and Professionalism 2016; 4 (1): 33-38

Keywords: Education, Dental; Communication; Patients; Surveys and Questionnaires; Cross-Sectional Studies

Abstract: Introduction: Establishment of effective communication between the clinician and patient is essential in order to increase the effectiveness of treatment. These skills have been less investigated among dental students. This study aimed to evaluate communication skills of dental students in Shiraz with patients through direct observation, patients' perspectives and students' self-assessments. Methods: This cross-sectional study enrolled the fifth and sixth year dental students and one of each student's patients who was chosen using simple random sampling method. We used a checklist for data collection. Students' communication skills were assessed at three steps of the student-patient interview - at the beginning of the interview, during the interview, and at the end of the interview. The checklist was completed by three groups: 1] an observer, 2] the patient and 3] the student, as self-assessment. The validity of the checklist was confirmed by clinical professors and the reliability was determined by Cronbach's alpha test. Data were analyzed using descriptive statistics and Student's t test. A repeated measure MANOVA was used to compare the mean communication skills in the researcher, patients, and students at each step of the patient interviews. Results: There were 110 students [mean age: 22.3 +/- 8.4 years] and 110 patients [mean age: 32. +/- 8.8 years] who completed the checklists. Overall, the communication skills of dental students were rated as good according to the patients. However, the observer and student participants rated the skills at the moderate level. We observed significant differences between communication skills in all three groups and in the three steps of the patient interviews [$p<0.001$]. According to patients' beliefs and students' self-assessments, there were no differences between male and female students in communication skills in the three steps of the patient interviews [all $p>0.05$]. However from the observer's viewpoint, female students showed better communication skills during the interviews [$p<0.001$]. Conclusion: There was a degree of failure in communication skills of dental students with patients in the interview process. It will be necessary that communication skills be taught, particularly for students involved in clinical practice.

Students, Medical

Assessment of students' perspectives about master of public health program in medical school of Shiraz University.

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Journal of Advances in Medical Education and Professionalism 2016; 4 (1): 39-43

Keywords: Schools, Medical; Education, Medical; Cross-Sectional Studies; Surveys and Questionnaires; Public Health

Abstract: Introduction: Integration of public health and medical education has been thought to have an important role in medical students' training. Shiraz University of Medical Sciences has developed an MD/MPH dual degree educational program for the talented volunteer students. The aim of this study was to assess the students' viewpoints about various aspects of Shiraz MD/MPH program. Methods: This. Cross-sectional study was conducted on Shiraz undergraduate medical students, who were enrolled in MD/MPH program. A self-structured questionnaire in Persian consisting of 4 parts was used; it included demographic factors including 16 questions which evaluated the students' perspective of the goals, content, skill development, applicability and meeting their expectations; 7 questions evaluating the self-reported increase of knowledge; and 3 multiple choice questions to assess the students' motivations and opinions on the impact of the program on their future career. Descriptive statistics was used for data analysis. Results: All MD/MPH students [89] with a mean age of 21.4 +/- 1.34 participated in this study. Forty one of the students [46.1%] were male and 48 [53.9%] female. Overall, 86.1% of them had positive views about the goals of the program; also, 83.5%, 81.2% and 81.9% of them reported a positive viewpoint about the contents, the applicability and development of specific skills, and meeting their expectations, respectively. The students' most frequent motivation was [learning how to research systematically] [73%]. The majority of the students reported this program to be moderately to highly effective in increasing their knowledge in the provided courses. Conclusion: The students had a positive view about almost all of the aspects of the MD/MPH program; this may be indicative of the program being successful in delivering the goals, increasing the students' knowledge and skills, and meeting their expectations to date. Students' enthusiasm for the educational program may lead to their motivation for better learning and thus in the program's success.

Students, Nursing

Impact of clinical supervision on field training of nursing students at Urmia University of Medical Sciences.

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Journal of Advances in Medical Education and Professionalism 2016; 4 (2): 88-92

Keywords: Education, Nursing; Organization and Administration; Students; Education

Abstract: Introduction: Obtaining clinical competency in clinical education is one of the problems in nursing and use of the new methods of clinical training is very important. Clinical supervision is one of the methods used as a mechanism to promote knowledge and skill for promoting professional performance in nursing students. This study is carried out to determine the impact of clinical supervision on field training of nursing students at Urmia University of Medical Sciences. Methods: In the present experimental study, 32 nursing students were enrolled in the study based on census and randomly assigned into two groups of experimental and control by block randomization. Clinical supervision was used in the experimental group and the control group received routine clinical trainings in the field. The students' clinical skills were assessed using a researcher-made checklist, the validity of which was confirmed through content validity method by 13 faculty members and its reliability was approved by test-retest method on 20 nursing students in the form of a pilot study and through Cronbach's alpha [87%]. Data were analyzed using SPSS, version. 14. Results: There was a significant difference between the experimental and control groups in clinical skills such as recognition and administration of medication, team participation, patients and their relatives' education, considering the safety, infection prevention and nursing process [$p < 0.005$]. Conclusion: The study demonstrated that in clinical supervision process, students have a better communication and cooperation with their instructor and with each other and their confidence and understanding and the amount of learning in practical skills was enhanced more than routine clinical training. The implementation of this clinical training method for students of nursing and other fields of medical sciences is recommendable.

Substance-Related Disorders

Substance use in youth.

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IJEHSR-International Journal of Endorsing Health Science Research 2016; 4 (1): 20-26

Keywords: Stress, Psychological; Life Change Events; Family; Awareness; Emotions; Adolescent

Abstract: Youth is the time period of vast exploration and curiosity. Young people begin to explore the world around. They acquire pleasure and satisfaction by carrying out risky behaviors to satisfy their impulse. Substance use is one such action that young people get attraction from certain individual, familial, social and environmental variables. Young people's past as well as present stressful experience and maladaptive coping style create strong affinity. Diverse researches have favored that pubertal transition, parenting style, family cohesiveness, maternal use, modeling, conditioning, and socialization reflect on youth's upbringing. It is evident that the substance use is one of the cognitive and behavioral outcome. There is a need to construct a most supportive zone around youth that enables them to broaden their horizon of emotional intelligence. As a health care professional, knowledge about all the levels of prevention can aid communities to have an addiction free environment. Individual counselling, family therapy, national and international awareness programs would help in eradicating substance use. Collaborative work of Governmental and Non-Governmental Organizations [NGO's] would motivate youth to acquire a substance free lifestyle.

Surrogate Mothers

Development and validation of attitude toward gestational surrogacy scale in iranian infertile couples.

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IJFS-International Journal of Fertility and Sterility 2016; 10 (1): 113-119

Keywords: Cross-Sectional Studies; Attitude; Infertility; Reproducibility of Results; Family Characteristics

Abstract: Background: Surrogacy is one of the most challenging infertility treatments engaging ethical, psychological and social issues. Attitudes survey plays an important role to disclosure variant aspects of surrogacy, to help meeting legislative gaps and ambiguities, and to convert controversial dimensions surrounding surrogacy to a normative concept that eliminates stigma. The aim of this study is to develop a comprehensive scale for gestational surrogacy attitudes. Materials and Methods: Development process of gestational surrogacy attitudes scale [GSAS] performed based on a descriptive cross-sectional study and included a rich data pool gathered from literature reviews, a qualitative pilot study on 15 infertile couples [n=30], use of expert advisory panel [EAP] consisting of 20 members, as well as use of content validity through qualitative and quantitative study by the means of content validity ratio [CVR] and content validity index [CVI]. Also internal consistence using Cronbach's alpha and test-retest reliability using intraclass correlation coefficient [ICC] were evaluated. Application of GSAS was tested in a cross-sectional study that was conducted on 200 infertile couples [n=400] at Royan Institute, Tehran, Iran, during 2014. Results: Final version of GSAS had 30 items within five subscales including [acceptance of surrogacy], [Surrogacy and public attitudes], [Child born through surrogacy] [Surrogate mother], and "Intentional attitude and surrogacy future attempt". Content validity was represented with values of CVR=0.73 and CVI =0.98. Cronbach's alpha value was 0.91 for the overall scale, while ICC value due to test-retest responses was 0.89. Conclusion: Acceptable level of competency and capability of GSAS is significantly indicated; therefore, it seems to be an appropriate tool for the evaluation of gestational surrogacy attitudes in Iranian infertile couples.

Temporomandibular Joint Disorders

Association of temporomandibular joint sounds with malocclusion.

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Pakistan Oral and Dental Journal 2016; 36 (1): 95-98

Keywords: Malocclusion; Cross-Sectional Studies; Malocclusion, Angle Class II; Dentition; Malocclusion, Angle Class III

Abstract: Temporomandibular joint disorder is a multi-factorial condition affecting the joint or muscles of the jaw. A descriptive cross-sectional study was conducted to determine association of temporomandibular joint [TMJ] sounds with various categories of malocclusions. 384 subjects, who fulfilled the inclusion criteria of the study, were clinically examined for the presence or absence of temporomandibular joint sounds and type of malocclusion. A Chi-Square test [$p < 0.05$] was used to find any significant association of TMJ sounds with different categories of malocclusion. Joint sounds were found to be present in 100 [26%] subjects. Joint sounds were present in 55 [22.6%] subjects with Class I malocclusion, 36 [32%] subjects with Class II malocclusion and only 9 [31%] subjects with Class III malocclusion. Chi-Square test revealed no significant association of TMJ sounds with malocclusion or gender. TMJ sounds can be a frequent finding in healthy individuals with no other symptoms of TMD. In the light of results of current study and other recent studies that have been carried out around the globe, it can be concluded that clicking itself is not indication of any active disease and it can rarely progress to any significant clinical problem, so there is no need for management must be avoided.

Testosterone

The effects of testosterone on oxidative stress markers in mice with spinal cord injuries.

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IJFS-International Journal of Fertility and Sterility 2016; 10 (1): 87-93

Keywords: Oxidative Stress; Spinal Cord Injuries; Infertility; Mice; Reactive Oxygen Species

Abstract: Background: Spinal cord injury [SCI] causes infertility in male patients through erectile dysfunction, ejaculatory dysfunction, semen and hormone abnormalities. Oxidative stress [OS] is involved in poor semen quality and subsequent infertility in males with SCI. The aim of this study is to examine the effects of SCI on the level of testosterone hormone. Materials and Methods: In this experimental study, we evaluated the effects of exogenous testosterone on the activity of the antioxidant enzymes superoxide dismutase [SOD] and glutathione peroxidase [GPx] as well as the levels of malondialdehyde [MDA] and protein carbonylation [PCO], as markers of OS, in 10 groups of SCI mice. Total antioxidant capacity [TAC] was determined using the 2, 2'-azino-bis-[3-ethylbenzothiazoline-6-sulfonic acid] [ABTS] radical cation assay. Results: Exogenous testosterone administration in mice with SCI significantly reduced SOD and GPx enzyme activities and MDA level. There was no significant decrease in PCO content. In addition, TAC remarkably increased in the sham and SCI groups not treated with testosterone but remained unchanged in all other experimental groups. Exogenous testosterone also reduced serum testosterone levels in all groups except the positive control group. Conclusion: Our cumulative data indicated that SCI could cause sterility by disturbing the plasmatic testosterone balance. The normal level of endogenous testosterone was not completely restored by exogenous testosterone administration.

Tobacco

Moving away from the comfort zone of tobacco control policies to the highest level of implementation.

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World Health Organization Regional Office for the Eastern Mediterranean - Tobacco Free Initiative

EMHJ-Eastern Mediterranean Health Journal 2016; 22 (3): 161-162

Keywords: Health Plan Implementation; Social Control Policies; Risk Factors

Tooth

anatomy and histology

Average tooth size in south Jordanian population.

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Fellow [Ortho, Bent Facial Ortho]

Pakistan Oral and Dental Journal 2016; 36 (1): 84-87

Keywords: Cross-Sectional Studies; Maxilla; Dental Research; Population

Abstract: The aim of this study was to establish the mesiodistal tooth width of permanent teeth among South Jordanian population and to compare it with previous studies in the region. 621 patients were examined, 543 patients fulfilled the requirement used in the studies with average age 14.01 +/- 0.97. Alginate impressions were taken for all patients and were poured in the same day by an orthodontic technician. All teeth were measured by electronic digital caliper and descriptive statistics were used to analyse the data. Upper maxillary permanent lateral incisors and mandibular permanent central incisors showed greatest variations in the mesiodistal width. On the contrary permanent canines and maxillary 1st premolars showed most stability in the mesiodistal width. This study will help in orthodontic research, diagnosis and analysis of spaces during orthodontic assessment in addition to the uses in anthropology and forensic dentistry.

Tooth Abnormalities

epidemiology

Prevalence of dental anomalies in orthodontic patients.

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Pakistan Oral and Dental Journal 2016; 36 (1): 88-90

Keywords: Prevalence; Cross-Sectional Studies; Orthodontics; Patients

Abstract: This study was done to determine prevalence of dental anomalies in orthodontics in a sample of Peshawar population. Panoramic [OPG] examination was done of 150 patients on standard light boxes, under good lighting conditions, standardized screen brightness and resolution to determine the dental anomalies. Patients' dental records and radiographs were examined in order to detect the dental anomalies: congenitally missing teeth, impactions, ectopic eruption, supernumerary teeth, dilacerations, microdontia, and any other unusual finding that can be assessed with OPG. Cleft lip and palate, syndromic and patients with metabolic disorders were excluded from the study. Mean age calculated was 17.11 +/- 3.1 years. Maximum age was 30 years and minimum age was 13. There were 70 male cases and 80 cases of female. Male to Female ratio 1:1.14. Eighty nine [59.3%] patients had dental anomalies of various types. Forty-two patients [28%] were found with missing teeth. Third molar was most common missing tooth. Third molar impaction carried the highest percentage [10.3%] followed by maxillary canine [4.1%]. Six cases had supernumerary teeth [4.1%] while three have odontomes [2%]. Panoramic radiograph have a key role in diagnosis of many dental anomalies. In this sample 59.3% patients have dental anomalies of different kinds.

Tooth Fractures

A comparison of impact strength of reattached incisor tooth fragments using different restorative materials: an in vitro study.

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Pakistan Oral and Dental Journal 2016; 36 (1): 99-104

Keywords: Tooth, Impacted; Incisor; In Vitro Techniques; Dental Bonding; Dental Materials; Resin Cements; Composite Resins

Abstract: Study was done to evaluate and compare the impact strength of reattached fractured incisor tooth, using five different adhesive materials 1] Composite 2] Giomer 3] Dual Cure Resin Cement 4] Resin Modified GIC 5] Compomer. Ninety sound freshly extracted human permanent incisors were selected according to the inclusion criteria. 15 teeth were taken as a control [Group I] and remaining 75 teeth were divided equally and randomly into five Groups; Group II - Composite, Group III - Giomer, Group IV - Dual Cure Resin Cement, Group V - Resin Modified GIC, Group VI - Compomer based upon the materials to be used for reattachment. The specimen teeth in the experimental groups were fractured by Custom-made vice. The fractured fragments were reattached using their respective adhesive materials. Then the impact resistance was recorded in an impact testing machine and data was analyzed. On comparing the mean impact strength by using One Way ANOVA and Unpaired 't' test it was observed that statistically highly significant difference was present when comparison was made between mean impact strength of intact teeth and reattached fractured teeth. Statistically highly significant difference was obtained on comparing impact strength of intact tooth with reattached tooth using adhesive materials. So, no material studied was able to attain the impact strength of intact tooth. However, when materials were compared, decreasing order of their impact strength was Compomer > Composite > Dual Cure Resin Cement > Giomer > Resin Modified GIC.

Tooth Injuries

Tooth embedded in upper lip after dento-alveolar trauma: a case report.

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Pakistan Oral and Dental Journal 2016; 36 (1): 26-28

Keywords: Tooth; Dental Occlusion, Traumatic; Soft Tissue Injuries

Abstract: Most of dental injuries involve maxillary anterior teeth along with soft tissue injury in children as well as in adolescent. Thorough clinical and radiographic examination is necessary to prevent any future complications. Dental trauma accompanied by soft tissue laceration is of careful importance as embedding of tooth or fractured tooth fragment in a soft tissue particularly lip is a common finding. This case report shows embedded tooth in upper lip after trauma that was unnoticed and extruded spontaneously after 5 months of trauma which was then extracted after clinical and radiographic evaluation. This case report enlightens the importance of proper clinical and radiographic examination especially in cases of dental trauma associated with soft tissue laceration.

Tooth Movement

Effect of diabetes mellitus on orthodontic tooth movement in a rat model.

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Pakistan Oral and Dental Journal 2016; 36 (1): 66-70

Keywords: Diabetes Mellitus; Rats, Wistar; Osteoclasts

Abstract: The objective of this study was to observe bone response in terms of osteoclast count and orthodontic tooth movement under optimal orthodontic force in diabetic and normoglycemic rat model. This experimental study was conducted at Animal House and Histopathology Department, Post Graduate Medical Institute, Lahore. Duration of study was June 2013-December 2013. 44 male wistar rats were included in the study and equally divided into two groups; group 1 [Normoglycemic or NG group] and Group 2 [Experimental Diabetic or EDB group]. Type-1 diabetes mellitus was induced by injecting streptozotocin [STZ] in EDB group. Citrate buffer solution was injected in NG group. Maxillary right first molar was moved mesially by applying 10 cN force using closed coil spring. All rats were euthanized on the 21st day after placement of the appliance. The orthodontic tooth movement was recorded by digital vernier caliper. Maxillae of the rats were dissected along with the molar teeth. Serial transverse sections of each maxilla in the interradicular bone at furcation area of first molar distobuccal root of control and appliance side were obtained for quantification of osteoclasts by histomorphometric study. Results showed that mean osteoclast count was significantly more in EDB group as compared to NG group, while no osteoclast was found on the non-appliance control side of both groups. Mean orthodontic tooth movement of rats in EDB group was significantly higher than NG group. It was concluded that Type-1 Diabetes Mellitus result in greater orthodontic tooth movement and increased osteoclasts as compared to normal subjects.

Effects of neodymium-doped yttrium aluminium garnet [Nd:YAG] laser irradiation on bone metabolism during tooth movement.

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Journal of Lasers in Medical Sciences 2016; 7 (1): 40-44

Keywords: Rats, Wistar; Lasers, Solid-State; Low-Level Light Therapy

Abstract: Introduction: The aim of this study is to evaluate the effects of low-level neodymium-doped yttrium aluminium garnet [Nd:YAG] laser irradiation on orthodontic tooth movement and histological examination. Methods: Eleven male Wistar rats [aged 10 weeks] were included. To produce experimental tooth movement in rats, 10 g force was applied to maxillary first molars with nickel titanium closed coil springs. Right molars were irradiated with Nd:YAG laser on days 0, 1, 2, 3, 7, 10, 14, 17, 21 and 24, while un-irradiated left molars were used as control. Distance between mesial side of second molar and distal side of first molar was measured on uCT image during tooth movement and the rats were sacrificed 4 weeks after the initiation of tooth movement. Results: The amount of tooth movement was significantly greater in the irradiation group [0.20 +/- 0.06] than in the control group [0.14 +/- 0.03] during the first week [P<0.05]. However, no statistically significant difference was found afterwards. There was a tendency of higher tartrate-resistant acid phosphatase [TRAP]-positive nuclei count in the pressure zones of the laser irradiation group, but it was not statistically significant. In immuno-histological examination, expressions of

alkaline phosphatase [ALP] and receptor activator of nuclear factor kappa-B ligand [RANKL] were higher at the pressure site of the laser irradiation group than the control group, whereas there was no difference in osteoprotegerin [OPG] expression. Conclusion: The results suggest that low-level Nd:YAG laser may stimulate osteoclast and osteoblast activation and accelerate bone metabolism during tooth movement.

Tooth, Artificial

Preferred methods for the selection of artificial teeth in a complete denture patient in a tertiary care hospital at Rawalpindi.

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Pakistan Oral and Dental Journal 2016; 36 (1): 148-151

Keywords: Denture, Complete; Surveys and Questionnaires; Dentists; Tertiary Care Centers

Abstract: This study was conducted to find the most convenient method for the selection of teeth for complete denture patients between Consultant, Residents and House officers in prosthetic services. A questionnaire was designed specifically prepared and distributed to 45 dentists working in tertiary care hospitals in the twin cities of Rawalpindi and Islamabad. All participants answered questions and responded to the survey. Majority preferred patient's facial form as a guideline in choosing the shape of anterior denture teeth [40%], the most widely used guide in choosing the color of the front teeth was the tone of the patient's skin [48.9%], and more often appearance used in selecting the size of front teeth were the corners of the mouth [35.5%]. Fifty-one percent of dentists prefer to use anatomical teeth for back teeth in prosthesis. Bulk of the participants [97.8%] preferred acrylic resin material for artificial teeth. It can be accomplished as the preferred method to opt for artificial teeth and general dentist in Rawalpindi and Islamabad agree with the approaches by dentists internationally, as evidenced by the data published on the subject.

Tooth, Deciduous

The relation between the mesiodistal crown widths of the deciduous second molars and the permanent first molars.

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Pakistan Oral and Dental Journal 2016; 36 (1): 71-74

Keywords: Cross-Sectional Studies; Molar; Crowns

Abstract: The objective was to determine the relation between mesiodistal dimension of primary second molars and permanent first molars in local population of Peshawar. One hundred children from age 4 to 11 years with healthy and fully erupted primary second molars and permanent first molars were included in the study. After taking impression in alginate and pouring in the dental stone, maximum mesiodistal width was measured with digital vernier caliper for primary second molars and first permanent molars. Data were analyzed using SPSS version 20.0. Pearson co-efficient test was applied for relation between the mesio-distal crown widths of the deciduous second molars and the permanent first molars t-test was used to compare tooth sizes between males and females. One hundred cases; 50 males and 50 females were included in this study. The mean age was 8 +/- 1.2 years. Males had larger mesiodistal widths of than females [p<0.05]. A significant strong correlation existed between primary second molars and first permanent molars. The correlation was weaker in the females than males. A concordance was found between the sizes of the deciduous second molars with the size of the permanent first molars, this might be helpful in prediction for arch length discrepancy.

Tooth, Impacted

Prevalence and localization of impacted canine among al-qurayyat orthodontic patients: a study conducted over the period of 4 years.

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Pakistan Oral and Dental Journal 2016; 36 (1): 75-78

Keywords: Cuspid; Prevalence; Maxilla

Abstract: Objective of this study was to highlight the prevalence of impacted canines in orthodontic patients of Al-Qurayyat, Al-Jouf, Saudi Arabia. Two thousand two hundred and thirty nine patients visiting the Department of Orthodontics, Qurayyat Specialized Dental Center, were included in this study. The study was conducted from year 2012 to 2015. Frequency and percentages of the patients were recorded. Total number of males were n= 836[37.34% and females n= 1403 [62.66%]. The mean age of the patients was. 22.92 +/- 8.43. N=9712239 [4.33%] patients were diagnosed with impacted canines. Maxilla was the most common site of impaction, n=89197 [91.75%]. Within maxilla, impacted canines were seen mostly as unilateral n=75 [84.27%] and on left side n=59 [66.3%].

Toothache

therapy

Comparison between ibuprofen and chewing gum for orthodontic pain control.

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Pakistan Oral and Dental Journal 2016; 36 (1): 79-83

Keywords: Pain Measurement; Pain; Chewing Gum; Ibuprofen

Abstract: Pain is common experience in orthodontic patients that begins two hours after force application and reaches peak at 24 hours, then lasts for 5 to 7 days. The objective of this study was to compare the decrease in pain score with ibuprofen and chewing gums in orthodontic pain control during the first week after initial arch wire placement. This study was conducted at de, Montmorency College of Dentistry, Lahore, from April 2014 to October 2014. 250 patients with age range of 12 to 16 years of both sex were selected and divided in to ibuprofen and chewing gum groups [125 each group] using random number table. The patients in each group received pain control 24 hours after initial arch wire insertion and then at 8-hour interval till 7th day. Patients were asked to complete a Visual Analog Scale [VAS] Questionnaire, at 24 hours after arch wire insertion, then at 24 hours, and 7th day. Two-way ANOVA was used for analyzing significance of mean decrease in VAS between two groups. Results showed that decrease in pain score for ibuprofen group; baseline to 24 hours was 2.35 +/- 1.36 which was significantly lower than decrease in pain score for chewing gum group 3.34 +/- 1.34. At 7th day, ibuprofen group showed decrease in pain score as. 4.07 +/- 1.43 which was significantly lower than decrease in pain score of 5.86 +/- 1.56 for chewing gum group. This was concluded that chewing gums showed more decrease in pain score for orthodontic patients as compared to ibuprofen.

Tourette Syndrome

etiology

Tourette's Syndrome; Is there a causal link to Violence?

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IJEHSR-International Journal of Endorsing Health Science Research 2016; 4 (1): 7-14

Keywords: Violence; Tics; Attention Deficit Disorder with Hyperactivity

Abstract: A narrative review of current literature was carried out to see whether Tourette's syndrome is a cause of violence among patients. Two internet based resources were searched and seventeen eligible original studies were included in the review. Majority of the studies demonstrated that Tourette's syndrome on its own does not cause violence but instead co-morbid conditions like Attention deficit hyperactivity disorder [ADHD] increased the likelihood of violence in patients directed towards self and others.

Toxoplasmosis, Ocular

therapy

Spiramycin: a safe and effective option for treatment of ocular toxoplasmosis.

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Bahrain Medical Bulletin 2016; 38 (2): 116-118

Keywords: Spiramycin-therapeutic uses; Safety; Toxoplasma; Vision Disorders

Abstract: Ocular Toxoplasmosis is a non-curable infectious disease caused by *Toxoplasma Gondii* and is one of the leading causes of severe visual impairment due to the involvement of posterior segment of the eye. Involvement of posterior pole causes severe visual impairment in many patients. We report a case of ocular Toxoplasmosis in a 12-year-old female child. The child was clinically diagnosed as having ocular Toxoplasmosis involving the whole posterior pole of the left eye and few parafoveal lesions in the right eye. Follow-up visit revealed new chorioretinitis lesions in the left eye. The patient was treated with oral Spiramycin 1500 mg/day in two divided doses with prednisolone tablet [1mg/kg body weight] for a period of 6 weeks. The chorioretinitis lesions regressed in 3 weeks and follow-up one year after cessation of treatment revealed no recurrence. Spiramycin proved to be effective, safe, economic and easy to administer as twice daily oral dose.

Tracheostomy

adverse effects

The impact of specialized tracheostomy care team.

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Bahrain Medical Bulletin 2016; 38 (2): 94-96

Keywords: Retrospective Studies; Cohort Studies; Intensive Care Units; Critical Care; Critical Care Outcomes

Abstract: Background: Tracheostomy care begins in the intensive care unit [ICU] and after stabilization, the patient is transferred to a general ward, decannulated or discharged. Insufficient experience of staff caring for tracheostomy patients may lead to suboptimal care and increased morbidity. Objective: To assess the impact of a specialized multidisciplinary tracheostomy team on tracheostomy care. Design: A Retrospective Cohort Study. Setting: ENT Department, Salmaniya Medical Complex, Bahrain. Method: The data was collected from the ICU and medical wards from January 2009 to December 2014. Criteria assessed were tracheostomy tube used, decannulation time and incidence of tracheostomy-related complications. Result: Six hundred forty-four patients post-tracheostomy were reviewed. One hundred twenty-nine [20%] patients were decannulated between one month to 3 years; 28 [4.3%] patients had complications. No death was recorded due to tracheostomy-related complications. Conclusion: There was a significant reduction in tracheostomy complications due to specialized tracheostomy team. The decannulation time was successfully reduced and an increased number of decannulated patients.

Trachoma

therapy

Chronic trachoma: comparison of azithromycin versus topical tetracycline in rural sindh population.

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PAFMJ-Pakistan Armed Forces Medical Journal 2016; 66 (2): 225-229

Keywords: Azithromycin-therapeutic uses; Tetracycline-therapeutic uses; Rural Population

Abstract: Objective: To compare the efficacy of oral azithromycin with topical tetracycline for treating chronic trachoma in rural Sindh population of Pakistan. Study Design: Randomized Control Trial [RCT]. Place and Duration of Study: CMH Pano Aqil from October 2010 to September 2013. Material and Methods: A total of 214 individuals with active trachoma in at least one eye were recruited in the study and randomly assigned to either treatment group. Patients visited after 10 weeks. The outcome was 'resolved disease'. The data was analyzed using SPSS 20. Results: Patients in azithromycin group were significantly more likely to have resolved disease as compared to tetracycline group at 10 weeks of follow up [86% vs 71%; 95% confidence interval CI, 0.28-0.87; p=0.015]. Differences within the age groups were not significant [children, p=0.072; elderly, p=0.091]. Conclusion: Single dose oral azithromycin was significantly more likely to achieve better outcome in chronic trachoma in rural population where compliance had been an issue.

Transforming Growth Factor beta.

Hsa-mir-590-5p interaction with smad3 transcript supports its regulatory Effect on The TGFbeta signaling pathway.

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Cell Journal [Yakhteh] 2016; 18 (1): 7-12

Keywords: MicroRNAs; Smad Proteins; Cell Proliferation; Reverse Transcriptase Polymerase Chain Reaction

Abstract: Objective: SMAD proteins are the core players of the transforming growth factor-beta [TGFbeta] signaling pathway, a pathway which is involved in cell proliferation, differentiation and migration. On the other hand, hsa-miRNA-590-5p [miR-590-5p] is known to have a negative regulatory effect on TGFbeta signaling pathway receptors. Since, RNAhybrid analysis suggested SMAD3 as a bona fide target gene for miR-590, we intended to investigate the effect of miR-590-5p on SMAD3 transcription. Materials and Methods: In this experimental study, miR-590-5p was overexpressed in different cell lines and its increased expression was detected through quantitative reverse transcription-polymerase chain reaction [RT-qPCR]. Western blot analysis was then used to investigate the effect of miR-590-5p overexpression on SMAD3 protein level. Next, the direct interaction of miR-590-5p with the 3'-UTR sequence of SMAD3 transcript was investigated using the dual luciferase assay. Finally, flow cytometry was used to investigate the effect of miR-590-5p overexpression on cell cycle progression in HeLa and SW480 cell lines. Results: miR-590-5p was overexpressed in the SW480 cell line and its overexpression resulted in significant reduction of the SMAD3 protein level. Consistently, direct interaction of miR-590-5p with 3'-UTR sequence of SMAD3 was detected. Finally, miR-590-5p overexpression did not show a significant effect on cell cycle progression of HeLa and SW480 cell lines. Conclusion: Consistent with previous reports about the negative regulatory effect of miR-590 on TGFbeta receptors, our data suggest that miR-590-5p also attenuates the TGFbeta signaling pathway through down-regulation of SMAD3.

Transplantation

The effect of one session low level laser therapy of extracted follicular units on the outcome of hair transplantation.

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Journal of Lasers in Medical Sciences 2016; 7 (1): 26-29

Keywords: Hair Follicle; Alopecia; Low-Level Light Therapy; Treatment Outcome

Abstract: Introduction: Photobiostimulation with low level laser [LLL] has been used in medicine for a long time and its effects have been shown in many diseases. Some studies have evaluated the effect of LLL on androgenic alopecia. One of the most important limitations of the use of LLL in the treatment of alopecia is the requirement for multiple sessions, which is hardly accepted by patients. This study was conducted to evaluate the effect of the irradiation of extracted follicular hair units by LLL on the outcome of hair transplantation. Methods: We enrolled 10 patients with androgenic alopecia and after screening tests for infections and other diseases, we extracted hair follicular units. The hair units were divided in two groups. One group was irradiated by LLL 20 minutes before transplantation [660 nm, 80 Hz, 100 mW] and the other one was used as control. The containing plates were labeled as A and B and sent to the operation room. The surgeon was unaware of the therapy assigned to the plates and transplanted them randomly on the right or left side of the head. One hundred follicular units on each sides of the scalp were transplanted symmetrically. The follicles on both sides were evaluated at 3 and 6 months of transplantation for hair growth rate by another physician, blinded to the treatment assigned to each side. Results: Ten patient with androgenic alopecia and mean [SD] age of 31.5 [6.6] years [range 25-45 years] completed the

study. All patients had 100% hair growth at 3 and 6 months follow-up except one who had hair growth of 20% at three months of transplantation, which changed to 100% at sixth months. There was no significant difference between the groups regarding hair growth [$P>0.8$]. Conclusion: One session of LLL irradiation has no significant effect on the outcome of transplanted hair follicles. Studies with larger sample size are needed to draw a definite conclusion.

Travel Medicine

Knowledge, attitudes, and practices regarding travel health among Muscat International Airport travelers in Oman: Identifying the gaps and addressing the challenges.

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Ministry of health - Directorate general of disease surveillance and control

Journal of Epidemiology and Global Health 2016; 6 (2): 67-75

Keywords: Travel; Health Knowledge, Attitudes, Practice; Attitude; Cross-Sectional Studies; Surveys and Questionnaires

Abstract: Although the majority of travel-associated communicable diseases can be prevented, the public health burden of these diseases remains significant. Relatively little is known about how travelers know and perceive the health risks associated with the travel and how they utilize preventive measures before and while Travel medicine-traveling abroad. This study was conducted to determine the level of the knowledge, attitudes, and practices [KAP] of Muscat International Airport travelers about travel health in order to assess the knowledge gap and the need for travel health services in Oman. A cross-sectional study was conducted over a period of 1 week using a self-administered questionnaire. The overall level of knowledge about vaccine-preventable diseases, food safety, and preventive measures against insect bites of the participants was inadequate. The practice concerning preventive travel health measures, such as the use of specific immunizations and antimalarial prophylaxis, was very limited, and influenced by some personal and travel-related factors. The inadequate level of travelers' knowledge and poor utilization of travel medicine services highlights the need for the provisions of specialized travel medicine services at the national level and to develop educational materials promoting the importance of pre-travel health advice.

Trigeminal Neuralgia

therapy

Trigeminal nerve compression technique for the treatment of trigeminal neuralgia: study of 80 cases in 10 years.

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JPMI-Journal of Postgraduate Medical Institute 2016; 30 (1): 89-91

Keywords: Trigeminal Nerve; Nerve Compression Syndromes

Abstract: Objective: To determine the outcome of trigeminal nerve compression technique [TGNC] treatment for the idiopathic trigeminal neuralgia without decompressing the nerve compressed by the offending vessel. Methodology: This case series study was conducted in Hayatabad medical complex, Lady ready hospital and Abaseen hospital, Peshawar from June 2004 to June 2014. Consent from the ethical committee and patients were taken. All patients of idiopathic trigeminal neuralgia [TGN] were included. Those TGN cases having mass lesion were excluded. All information were put in proforma. Results were analyzed by SPSS version 20 and presented in the form of tables. Results: Total number of patients included in the study were 80 in which males were 45 [56.25%] and females were 35 [43.75%]. Male to female ratio of 1.3:1 The ages ranged from 30 to 70 years and mean age was 50 +/-20. Detail history and clinical examination were performed. Routine investigations of complete blood count, HBsAg, HCV and brain MRI were done in all cases. Follow up ranged from 1 to 10 years. Outcome was 77[96.2%] patients were completely pain free while 3[3.8%] of patients developed recurrence. One patient [1.25%] developed CSF rhinorrhea, otorrhea, facial nerve paresis and deafness each. Conclusion: The compression of TN by vascular loop was not found as a cause of TGN. TGNC Technique for TGN is less invasive, safe and effective.

Tuberculosis

epidemiology

Epidemiology of tuberculosis and evaluation of treatment outcomes in the national tuberculosis control programme, River Nile state, Sudan, 2011-2013.

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EMHJ-Eastern Mediterranean Health Journal 2016; 22 (2): 95-102

Keywords: Tuberculosis-therapy; Treatment Outcome; World Health Organization; Tuberculosis, Pulmonary

Abstract: Tuberculosis is a major health problem in Sudan, a country that carries 11-15% of the tuberculosis burden in the Eastern Mediterranean Region. This study aimed to describe the epidemiology of tuberculosis in River Nile State and to compare treatment outcomes with WHO recommended indicators. A descriptive study was conducted on data collected from records of 1221 patients registered at tuberculosis management units over the 3 years 2011-2013. The mean age of cases was 37.7 [SD 21.5] years and 65.9% were males; 76.3% were pulmonary tuberculosis and 36.9% were sputum smear-positive cases. Average values for all outcome indicators were suboptimal, notably rates of case notification [30.8 per 100 000], case detection [10.3%], treatment success [79.6%], treatment failure [3.0%], default [8.1%] and death [8.0%]. Of the 264 patients tested for HIV, 3.8% were positive. Outcome indicators for the national tuberculosis control programme are lagging behind the required targets.

therapy

Evaluation of factors associated with failure of tuberculosis treatment under DOTS in northern Islamic Republic of Iran.

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EMHJ-Eastern Mediterranean Health Journal 2016; 22 (2): 87-94

Keywords: Treatment Failure; Risk Factors; Surveys and Questionnaires; Retrospective Studies; Cohort Studies; Treatment Outcome

Abstract: Tuberculosis treatment failure remains a major health problem in many parts of the Islamic Republic of Iran. This study was conducted to identify the risk factors associated with failure of tuberculosis treatment under the DOTS strategy in two cities of Golestan province. A retrospective cohort study in 2012-2013 was conducted on 167 smear-positive tuberculosis patients monitored under DOTS. Demographic, clinical and treatment outcome factors and social determinants of health were recorded for each patient. Multivariate regression analysis found that the strongest predictors of tuberculosis treatment failure were: being infected with other diseases [OR 9.35; 95% CI: 3.01-29.1], male sex [OR 5.03; 95% CI: 1.58-16.1], Turkoman ethnicity [OR 11.0; 95% CI: 2.00-60.1], family history of tuberculosis [OR: 0.21; 95% CI: 0.05-0.96] and household size [OR 1.21; 95% CI: 0.99-1.48]. Recommendations include better follow-up for patients with other diseases and facilitating access to treatment, especially for Turkoman patients.

Tuberculosis, Multidrug-Resistant

Antimicrobial resistance and the growing threat of drug resistant tuberculosis.

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Journal of Epidemiology and Global Health 2016; 6 (2): 45-47

Keywords: Drug Resistance, Microbial; Tuberculosis

diagnosis

Multidrug-resistant disseminated tuberculosis in a 9-month-old infant.

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EMHJ-Eastern Mediterranean Health Journal 2016; 22 (1):59-61

Keywords: Tuberculosis; Mycobacterium tuberculosis; Antitubercular Agents; Mass Chest X-Ray

epidemiology

Status of multidrug resistant tuberculosis [MDR-TB] among the Sahariya tribe of North Central India.

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Journal of Infection and Public Health 2016; 9 (3): 289-297

Keywords: Tuberculosis; Prevalence; Mycobacterium tuberculosis

Abstract: Background: The incidence/prevalence of tuberculosis [TB] is reported to be high in the Sahariya tribe of North Central India. The outbreaks of different drug-resistant isolates of Mycobacterium tuberculosis emphasized the need for continuous monitoring of resistance to anti-tuberculosis drugs. This study aimed to assess the profile of multidrug resistant TB among the Sahariya tribe and their non-tribal neighbors for first line drugs through field-based investigations. Methodology: A total of 274 sputum positive pulmonary TB individuals were enrolled and studied for their drug susceptibility profile by the proportion method. Results: A total of 21 cases from Sahariya and 6 from non-tribes were identified with MDR-TB. Thus Sahariya tribe showed a 1.95-fold increased risk of developing drug resistance than non-tribes. Significant differences were observed for developing drug sensitivity between Sahariya males and females when analyzed for resistance developed to any drug and overall drug resistance vs. sensitive isolates, respectively. A 4.46-fold risk was found for MDR-TB among the smokers of Sahariya tribe, whereas, the non-tribes did not show any significant association. Conclusion: The drug susceptibility profile developed in the present study indicates that drug-resistant tuberculosis is emerging as a serious public health concern in Sahariya tribe. Urgent and effective control measures and better management policies are needed for the prevention of MDR-TB in the tribe.

Tuberculosis, Pulmonary

diagnosis

Factors affecting sputum smear conversion time in newly diagnosed pulmonary tuberculosis patients.

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PJMR-Pakistan Journal of Medical Research 2016; 55 (1): 3-6

Keywords: Sputum; Tuberculosis, Pulmonary-therapy; Cross-Sectional Studies

Abstract: Background: Patients having tuberculosis are registered in the TB DOTS program for their treatment. During the treatment sputum samples are sent periodically to the laboratory to check treatment efficacy. Usually after two months of treatment sputum smear becomes negative but presence of multiple cavities in the lung, bacillary load, diabetes mellitus and tobacco smoking, slows the sputum smear conversion time. Objectives: To determine the factors affecting sputum smear conversion time in newly diagnosed pulmonary tuberculosis patients. Study design, settings and duration: This cross sectional, analytical study was done by Pakistan Medical Research Council, TB Research Centre in collaboration with Institute of TB and Chest Medicine King Edward Medical University/Mayo Hospital, Lahore from April 2013 to March, 2014. Patients and Methods: All newly diagnosed pulmonary tuberculosis patients who were registered and given treatment by the DOTS program were included in the study. All patients underwent sputum smear microscopy along with Complete Blood Count and ESR at the time of enrollment. The patients were followed for next 6 months while on treatment. Sputum samples were tested at 2[nd] and 6[th] month to check the sputum conversion rate and indirectly to see the efficacy/compliance to treatment. Results: A total of 400 patients were enrolled with slightly more males [52%] as compared to females [48%]. Smear became negative within two months of starting treatment in 85.7% patients while in 14.2% it remained positive at 2[nd] and 6[th] months of

therapy. There were more females [10.7%] whose sputum smear did not become negative as compared to males [3.5%]. Predominant factors affecting sputum smear conversion were low resistance, raised initial bacillary load, decreased hemoglobin level, and long duration of symptoms at the time of diagnosis. Conclusion: Factors like low resistance, high initial bacillary load and decreased hemoglobin levels affect the sputum smear conversion and should be addressed while assessing efficacy of anti-tuberculosis treatment.

Urinary Bladder Calculi

therapy

Outpatient transurethral cystolithotripsy of large bladder stones by holmium laser.

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Journal of Lasers in Medical Sciences 2016; 7 (1): 12-15

Keywords: Lasers, Solid-State; Prospective Studies; Lithotripsy, Laser; Holmium

Abstract: Introduction: To assessment of the efficacy and safety of transurethral Cystolithotripsy of large bladder stones by holmium laser in the outpatient setting. Methods: In a prospective study 48 consecutive adult patients with large bladder stones, were enrolled for transurethral Cystolithotripsy. Patients older than 18 years, with bladder stones larger than 2 cm were enrolled. Urethral stricture, active urinary infection, and any anesthetic contraindications for operation, were the exclusion criteria. Demographic characteristics of patients, outcomes and complications related to operation and post operation period, were recorded. Results: Patients mean age was 46 +/- 7.3 years. Male to female ratio was 45/3. Mean body mass index of patients was 28.5 +/- 3.5. Mean stone size was 3.7 +/- 1.6 cm. Mean operation time was 43.5 +/- 15.5 minutes. Nearly complete stone clearance [98.5%] was achieved in all patients. Mean hospital stay was 6.5. +/- 1.3 hours. No major complications were seen. Mean visual analog pain score [VAS] was 4.2 +/- 2.1 and. 1.4 +/- 0.6, during and 1 hour after operation, respectively. During follow up of 22.4 +/- 12.5 months, recurrence of bladder stone was not seen. No case of urethral stricture was detected. Conclusion: Transurethral holmium laser lithotripsy is an effective and safe alternative in selected patients with large bladder stones. This procedure can be easily performed in the outpatient setting.

Urinary Tract Infections

Prevalence of multidrug resistant uropathogenic bacteria in pediatric patients of a tertiary care hospital in eastern India.

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Journal of Infection and Public Health 2016; 9 (3): 308-314

Keywords: Anti-Bacterial Agents; Drug Resistance, Bacterial; Prevalence; Tertiary Care Centers; Urine; Aminoglycosides

Abstract: Today, because systemic infections such as urinary tract infection [UTI] affect even pediatric, patients, antibiotic resistant bacteria have become a constant clinical challenge. In the present study, a total of 1054 urine samples were collected from pediatric patients over 18 months. From these samples, 510 isolates of pathogenic bacteria were collected using HiCrome UTI agar. Antibiotic sensitivity tests of isolates. were performed using the Kirby-Bauer method. Two Gram-positive bacteria [Enterococcus faecalis and Staphylococcus aureus] and 7 Gram-negative bacteria [Citrobacter freundii, Enterobacter aerogenes, Escherichia coli, Klebsiella oxytoca, K. pneumoniae, Proteus vulgaris and Pseudomonas aeruginosa] were isolated. Antibiograms of isolated bacteria were ascertained using antibiotics of 4 classes: aminoglycosides, p-lactams, fluoroquinolones and 2 stand-alones [cotrimoxazole and nitrofurantoin]. Based on percent values of antibiotic resistance, isolated bacteria were [in decreasing order of number of isolated isolates]: E. coli [109] > S. aureus [65] > E. faecalis [82] > E. aerogenes [64] > C. freundii [41] > P. aeruginosa [32] > K. pneumoniae [45] > K. oxytoca [50] > P. vulgaris [22]. Surveillance results show that MDR isolates of 9 pathogenic bacteria were prevalent in the environment around the hospital. Thus, revisions to the antimicrobial stewardship program in this area of the country are required to increase clinician confidence in empiric therapy, which is often used for UTI cases.

Ventricular Dysfunction, Left

Left atrium volume as a surrogate marker of left ventricular diastolic dysfunction.

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JPMI-Journal of Postgraduate Medical Institute 2016; 30 (1): 84-88

Keywords: Heart Atria; Diastole; Echocardiography; Mitral Valve Insufficiency

Abstract: Objective: To determine correlation between left atrial volume and left ventricular diastolic dysfunction. Methodology: This was a single center observational study conducted at Lady Reading Hospital, Peshawar. Patients above 18 years of both genders, who were in sinus rhythm and having no significant systolic dysfunction or significant mitral insufficiency on echocardiography, were included in the study, using purposive non-probability sampling technique. A total 339 patients underwent transthoracic echocardiography from July 2013 to June 2014. Detailed cardiac echocardiography was performed to determine left atrial volume, ejection fraction, E and A velocities, deceleration time and e'Ve-locity, E/e. Results: A total of 339 patients were studied. Male were 61.9%. Mean age of study population was 58.42 +/- 10.48 years. Baseline characteristics of patients having some degree of diastolic dysfunction were; mean age 65.5 +/- 12.3, mean body mass index 25.2 +/- 2.5 kg/m², mean ejection fraction 55.1 +/- 7.5%, hypertension 48.6%, diabetes mellitus 10.1% and left ventricular hypertrophy 38.6%. Echocardiographic findings in diastolic dysfunction patients were as follow: mean left atrial volume was 65.3 +/- 10.1 ml, E/A 1.4 +/- 0.6, TDI e' was 6.7 +/- 1.3 m/sec and TDI E/e' was 12.7 +/- 2.1. Increasing left atrial volume was well correlated with increasing severity of left ventricular diastolic dysfunction [$y = +0.8$, Spearman rank correlation]. Conclusion: Increase in left atrial volume is directly correlated with severity of diastolic dysfunction. Severity of diastolic dysfunction increases with increased left atrial volume.

Vibrio cholerae

Isolation frequency and susceptibility pattern of non-O1 and non-O139 Vibrio cholerae in a tertiary health care laboratory, 1999-2012.

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EMHJ-Eastern Mediterranean Health Journal 2016; 22 (2): 142-147

Keywords: Vibrio cholerae non-O1-isolation and purification; Tertiary Healthcare; Tertiary Care Centers.

Abstract: In the past decade the importance of non-O1 and non-O139 strains of Vibrio cholerae has been highlighted globally. This study aimed to evaluate the frequency and antimicrobial susceptibility profile of non-O1 and non-O139 V. cholerae in Pakistan. Data of stool specimens yielding growth of non-O1 and non-O139 V. cholerae isolated at a national referral laboratory from 1999 to 2012 were retrospectively analysed and evaluated for resistance to ampicillin, tetracycline, chloramphenicol, co-trimoxazole and ofloxacin. A total of 95 800 stool samples submitted over 1999-2012 yielded 3668 strains of V. cholerae, of which 6% were non-O1 and non-O139 V. cholerae. A high isolation rate was found in the summer season, with a peak in the year 2003. Antimicrobial susceptibility data revealed increasing resistance to co-trimoxazole and ampicillin, but strains remained highly susceptible to ofloxacin. Active surveillance of serotypes and antimicrobial susceptibility is essential to predict future epidemics and define measures to curtail the disease.

Vitamin A Deficiency

epidemiology

Vitamin A deficiency among school going children affected by flood.

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PJMR-Pakistan Journal of Medical Research 2016; 55 (1): 16-19

Keywords: Students; Child; Floods; Cross-Sectional Studies; Surveys and Questionnaires

Abstract: Background: Vitamin A deficiency increases the risk of night blindness and death due to common childhood illnesses that are prevalent during emergencies like floods. The relief diet provided to flood victims is often deficient in micronutrients and minerals including vitamin A. There is a need to assess the levels of vitamin A among flood affected children to prevent morbidity and mortality caused by malnutrition. Objective: To assess the frequency of Vitamin A deficiency among school going children [8-14 years] affected and unaffected by floods of 2010 in district Nowshera. Subjects and Methods: Study was conducted in Government-registered schools situated in flood affected and unaffected areas of district Nowshera of KPK Province of Pakistan. A total of 353 children [8-14 years] were registered for study, including 190 from flood affected and 163 from unaffected areas. A questionnaire was filled for each child which included the demographic information. Three milliliter blood was drawn from each child which was processed for the estimation of vitamin A levels. Data was entered and analyzed using SPSS 20.0. Results: Among flood affected children frequency of vitamin A deficiency was 18.9%, whereas among flood unaffected children it was 6.1% showing strong association with children affected by floods [$p < 0.001$]. Among illnesses during floods, children who had acute respiratory infection were on an average 3.5 times more likely to have vitamin A deficiency as compared to those who did not suffer from this disease [$p = 0.037$]. Conclusion: Vitamin A deficiency was substantially higher among children affected by floods and those who had acute respiratory infection.

Vitreous Hemorrhage

surgery

Visual outcome after pars plana vitrectomy in diabetic vitreous hemorrhage.

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JPMI-Journal of Postgraduate Medical Institute 2016; 30 (1): 23-29

Keywords: Diabetic Retinopathy; Diabetes Mellitus; Diabetes Complications; Vitrectomy; Vitreous Body

Abstract: Objectives: To determine visual outcome and frequency of complications after pars plana vitrectomy in diabetic vitreous hemorrhage. Methodology: This was interventional case series conducted at department of ophthalmology, Khyber Institute of Ophthalmic Medical Sciences, Hayatabad Medical Complex, Peshawar from January 2013 to June 2014. Known diabetic patients above 16 years of age, having vitreous hemorrhage were included. Standard three ports pars plana vitrectomy [PPV] with membrane peeling, endolaser and without endotamponade by single study surgeon was done in all patients. Best corrected visual acuity was noted pre operatively and on 1st day, 2nd week and 8th week post operatively. P- value < 0.05 was considered statistically significant. Post-operative complications and visual improvement were noted at final visit. Results: Total of 50 patients having diabetic vitreous hemorrhage were included in the study. Mean age was 41.4 years. Male patients were 66%. Clear lens was present in 46% patients and cortical lens vacuoles in 36% patients. Fresh vitreous hemorrhage was present in 80%. Baseline and final post-operative best corrected visual acuity logarithm minimal angle of resolution was 1.01 +/- 0.17 and 0.74 +/- 0.25 respectively. The difference in pre and post-operative best corrected visual acuity logarithm minimal angle of resolution was 0.045 which was statistically significant. There were no post-operative complications in 82% patients. Visual improvement was observed in 82%. Conclusion: Most patients with diabetic vitreous hemorrhage regain or retain useful vision after PPV. Many patients may suffer late complications like recurrent vitreous hemorrhage and retinal detachment after successful initial surgery requiring secondary intervention.

Vitrification

Developmental potential of vitrified mouse testicular tissue after ectopic transplantation.

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Cell Journal [Yakhteh] 2016; 18 (1): 74-82

Keywords: Cryopreservation; Testis; Transplantation; Spermatogenesis; Mice

Abstract: Objective: Cryopreservation of immature testicular tissue should be considered as an important factor for fertility preservation in young boys with cancer. The objective of this study is to investigate whether immature testicular tissue of mice can be successfully cryopreserved using a simple vitrification procedure to maintain testicular cell viability, proliferation, and differentiation capacity. Materials and Methods: In this experimental study, immature mice testicular tissue fragments [0.5-1 mm²] were vitrified-warmed in order to assess the effect of

vitrification on testicular tissue cell viability. Trypan blue staining was used to evaluate developmental capacity. Vitrified tissue [n=42] and fresh [control, n=42] were ectopically transplanted into the same strain of mature mice [n=14] with normal immunity. After 4 weeks, the graft recovery rate was determined. Hematoxylin and eosin [H and E] staining was used to evaluate germ cell differentiation, immunohistochemistry staining by proliferating cell nuclear antigen [PCNA] antibody, and terminal deoxynucleotidyl transferase [TdT] dUTP Nick-End Labeling [TUNEL] assay for proliferation and apoptosis frequency. Results: Vitrification did not affect the percentage of cell viability. Vascular anastomoses was seen at the graft site. The recovery rate of the vitrified graft did not significantly differ with the fresh graft. In the vitrified graft, germ cell differentiation developed up to the secondary spermatocyte, which was similar to fresh tissue. Proliferation and apoptosis in the vitrified tissue was comparable to the fresh graft. Conclusion: Vitrification resulted in a success rates similar to fresh tissue [control] in maintaining testicular cell viability and tissue function. These data provided further evidence that vitrification could be considered an alternative for cryopreservation of immature testicular tissue.

Warfarin

administration and dosage

Interruption of warfarin before dental surgery.

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Pakistan Oral and Dental Journal 2016; 36 (1): 22-25

Keywords: International Normalized Ratio; Anticoagulants; Surgery, Oral; Hemorrhage

Abstract: Objective was to find out whether interruption of warfarin before undergoing dental surgery is necessary and to determine the effects of stopping pre-operative warfarin in Patients undergoing minor oral surgical procedures. After taking full medical history, clinical examination and an orthopantomogram, randomization was then done by convenience sample technique. A preoperative International Normalized Ratio [INR] and coagulation screen were arranged, with Consent on the day of dental surgery. The group I continued taking warfarin as usual [anticoagulant group]. The group II stopped taking warfarin 2 days before their dental surgery procedure. If a patient's INR was >2, a further dose of warfarin was omitted. The dental surgery was performed under local anesthesia. Oral antibiotic prophylaxis was given for patients at risk of endocarditis in both groups. Two hundred and eighteen patients form the study group. 114 were to the anticoagulant group [Group I] and 04 to the warfarin withdrawn group [Group II]. There were no significant differences between the groups in the mean age, gender, number of teeth extracted. Mean INR for the group I was > 2.5 than the group II, at 1.6 [p=0.001]. The overall rate of bleeding complications in the group I was higher than in the group II [30% compared with 14%]. It is concluded that the minor oral surgical procedures can be done without discontinuing the warfarin.

Werner Syndrome

diagnosis

Herlyn werner wunderlich syndrome with hematocolpos: an unusual case report of full diagnostic approach and treatment.

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IJFS-International Journal of Fertility and Sterility 2016; 10 (1): 136-140

Keywords: Hematocolpos; Werner Syndrome-therapy; Amenorrhea; Dysmenorrhea; Vagina; Infertility.

Abstract: Herlyn-Werner-Wunderlich [HWW] syndrome is an uncommon combined millerian duct anomalies [MDAs] and mesonephric duct malformation of female urogenital tract characterized by uterus didelphys and obstructed hemi-vagina and ipsilateral renal agenesis [OHVIRA] syndrome. We present a rare and unusual case of this syndrome in a 19 year-old female who suffered from hypomenorrhoea and abdominal pain. She had an obstructed hemi-vagina on right side which led to marked distention of ipsilateral cervix, while proximal hemi-vagina compressed the contralateral side causing its partial obstruction resulting in hypomenorrhoea. Understanding the imaging findings of this rare condition is important for early diagnosis in order to prevent complications which may lead to infertility.

Zika Virus

Deciphering emerging Zika and dengue viral epidemics: Implications for global maternal-child health burden.

Tambo, Ernest; Chuisseu, Pascal D.; Ngogang, Jeanne Y.; Khater, Emad I.M.

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Journal of Infection and Public Health 2016; 9 (3): 240-250

Keywords: Flavivirus; Flavivirus Infections; Dengue Virus; Maternal-Fetal Relations; Maternal-Fetal Exchange; Epidemics

Abstract: Since its discovery in 1947 in Uganda and control and eradication efforts have aimed at its vectors [*Aedes* mosquitoes] in Latin America in the 1950s, an absolute neglect of Zika programs and interventions has been documented in *Aedes* endemic and epidemic-prone countries. The current unprecedented Zika viral epidemics and rapid spread in the Western hemisphere pose a substantial global threat, with associated anxiety and consequences. The lack of safe and effective drugs and vaccines against Zika or dengue epidemics further buttresses the realization from the West Africa Ebola outbreak that most emerging disease-prone countries are still poorly prepared for an emergency response. This paper examines knowledge gaps in both emerging and neglected arthropod-borne flavivirus infectious diseases associated with poverty and their implications for fostering local, national and regional emerging disease preparedness, effective and robust surveillance-response systems, sustained control and eventual elimination. Strengthening the regional and Global Health Flavivirus Surveillance-Response Network [GHFV-SRN] with other models of socio-economic, climatic, environmental and ecological mitigation and adaptation strategies will be necessary to improve evidence-based national and global maternal-child health agenda and action plans.

Zika Virus Infection

diagnosis

Severe abdominal pain in a patient with Zika infection: a case in Risar-alda, Colombia.

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Journal of Infection and Public Health 2016; 9 (3): 372-373

Keywords: Abdominal Pain; Zika Virus; *Aedes*; Arboviruses.

Appendix I

Author Index

- Aadiil Rahman, Muhammad**
RADIOLOGY, INTERVENTIONAL
- Aalizadeh, A.**
PHOENICEAE
- Aamir Hussain**
ALBUMINURIA
- Aasim, Muhammad**
TUBERCULOSIS, PULMONARY (diagnosis)
VITAMIN A DEFICIENCY (epidemiology)
- Abadi, M.H.**
MUSCULOSKELETAL DISEASES (epidemiology)
- Abbas, Zaigham**
HEPATITIS C, CHRONIC (therapy)
- Abbasabadi, Faranak Moradi**
MYOFASCIAL PAIN SYNDROMES (therapy)
- Abbasi, Homayoun**
ACETYLCYSTEINE
- Abbasi, Mohammadzaki**
MYOFASCIAL PAIN SYNDROMES (therapy)
- Abdallah, Qasem M.**
COMMON COLD
- Abdel Gader, Abdel Galil M.**
CAMELS
- Abdel Hady, Doaa M.**
TRAVEL MEDICINE
- Abdi, Hakimeh**
CERIUM (pharmacology)
- Abdollahi, Mohammad**
ORGANOPHOSPHATE POISONING
- Abdul Aziz, Omer Bin**
ALBUMINURIA
- Abdul Hadi**
VENTRICULAR DYSFUNCTION, LEFT
- Abdul Hakeem**
OTITIS MEDIA, SUPPURATIVE (therapy)
- Abdul Khaliq**
CURING LIGHTS, DENTAL
- Abdul Malik**
ACUTE KIDNEY INJURY (epidemiology)
- Abdul Wahid**
WARFARIN (administration and dosage)
- Abdul, Majid Amal**
DENTAL HEALTH SURVEYS
- Abdulla, Hafsa**
EPILEPSY
- Abdullah, Zainab**
OSSIFICATION, HETEROTOPIC (diagnosis)
- Abdullahi, Masooma**
PRENATAL DIAGNOSIS
- Abdulwahab, Fatema**
NANOPARTICLES
- Abedi, Reyhane**
IN VITRO OOCYTE MATURATION TECHNIQUES
- Abidin, Artini**
SEXUAL DYSFUNCTION, PHYSIOLOGICAL
(epidemiology)
- Abnosi, Mohammad Hussein**
BORON (therapeutic uses)
- Aboulizadeh, Farzaneh**
PRENATAL DIAGNOSIS
- Aboul Serour, Gamal**
PUBLIC HEALTH
- Abu Hijleh, Marwan**
FRUCTOSE (analogs and derivatives)
- Abuelaiash, O.**
MICROBIAL SENSITIVITY TESTS
- Abughosh, Susan M.**
SMOKING CESSATION
- Abuzayed, I.**
EDUCATION, MEDICAL
- Achankunju, Jackson**
GANODERMA
- Addis, Zelalem**
SHIGELLA
- Aelami, Mohammad Hasan**
LEUKOENCEPHALITIS, ACUTE HEMORRHAGIC
- Afzal, Muhammad**
OSSIFICATION, HETEROTOPIC (diagnosis)
- Agha, Durreshawar**
TEMPOROMANDIBULAR JOINT DISORDERS
- Aghababaii, Soudabeh**
HYDATIDIFORM MOLE (epidemiology)
- Ahluwalia, Ajay**
WERNER SYNDROME (diagnosis)
- Ahmad, Faizan**
COMPUTER COMMUNICATION NETWORKS
- Ahmad, Farooq**
VENTRICULAR DYSFUNCTION, LEFT
- Ahmad, Fawad**
ALBUMINURIA
- Ahmad, Imran**
SEXUAL DYSFUNCTION, PHYSIOLOGICAL
(epidemiology)
- Ahmad, Maqbool**
BILE DUCTS (injuries)

- Ahmad, Tariq**
MOUTH DISEASES (congenital)
- Ahmadi, A.**
BACTERIAL INFECTIONS (epidemiology)
- Ahmadi, Abbas**
PYRUVATES (therapeutic uses)
- Ahmadi, Ramesh**
LEVOFLOXACIN (pharmacology)
- Ahmadi, Seyed Mojtaba**
PSYCHOTHERAPY
- Ahmadifar, Mehdi**
LEVOFLOXACIN (pharmacology)
- Ahmadpour, Niloofar Bavarsad**
LEISHMANIASIS (etiology)
- Ahmady, Soleiman**
EDUCATION, MEDICAL
- Ahmed Saad Shahnawaz**
PULPITIS (therapy)
- Ahmed, Adeel**
INFERIOR WALL MYOCARDIAL INFARCTION
(physiopathology)
- Ahmed, Ayesha**
MAMMAPLASTY
- Ahmed, E.O.**
TUBERCULOSIS (epidemiology)
- Ahmed, M.H.**
TUBERCULOSIS (epidemiology)
- Ahmed, Mubashar**
NEURALGIA (therapy)
- Ahmed, Naveed**
ALBUMINURIA
- Ahmed, Saad Shahanawaz**
TOOTH INJURIES
- Ahmed, Sadaf**
OBESITY
- Ahmed, Saqib Qayyum**
CORONARY ARTERY BYPASS
- Ahmed, Shakeel**
INTELLECTUAL DISABILITY
- Ahmed, Wazir**
EDUCATION, MEDICAL
- Ahoei, Kh**
COLORECTAL NEOPLASMS (epidemiology)
- Almazrou, Yagob**
PNEUMOCOCCAL INFECTIONS (epidemiology)
- Ajmi, T.**
SMOKING (epidemiology)
- Akbar, Shazia**
DENTAL CARIES (epidemiology)
- Akbar, Yasir**
TOURETTE SYNDROME (etiology)
- Akbari, Aliakbar Movassaghpour**
LEUKEMIA, MYELOID, ACUTE
- Akhoond, Mohammad Reza**
ENDOMETRIOSIS (diagnosis)
- Akhoundi, Mohammad**
LEISHMANIASIS (etiology)
- Akhtar, Farrukh Mahmood**
NEURALGIA (therapy)
- Akhyani, Vahid**
MYOFASCIAL PAIN SYNDROMES (therapy)
- Akmal, Mohammad**
NEURALGIA (therapy)
- Al Abaidani, Idris S.**
TRAVEL MEDICINE
- Al Abri, Seif S.**
TRAVEL MEDICINE
- Al Agha, Rani**
ANEURYSM (diagnosis)
- Al Ansari, H.**
MENINGITIS, BACTERIAL (epidemiology)
- Al Ansarir, A.**
LANGUAGE TESTS
- Al Aubi, Isra'a**
CALCIUM COMPOUNDS
- Al Barry, Ma'an A.**
KERATOCONUS (genetics)
- Al Buloshi, Mohammed**
GANODERMA
- Al Ghaneem, Saad G.**
SMOKING (epidemiology)
- Al Haddad, Mahmoud S.**
COMMON COLD
- Al Hajjara, A.**
INTENSIVE CARE UNITS, NEONATAL
- Al Hamam, Naif**
HAND (surgery)
- Al Harbi, Essa**
KERATOCONUS (genetics)
- Al Humaid, J.**
LANGUAGE TESTS
- Al Humayed, Suliman M.**
HEPATITIS B SURFACE ANTIGENS (isolation and purification)

- Al Joham, Sameera**
MIDDLE EAST RESPIRATORY SYNDROME
CORONAVIRUS (isolation and purification)
- Al Khawaja, S.**
MENINGITIS, BACTERIAL (epidemiology)
- Al Kindy, Sami A.**
GLOMUS TUMOR (diagnosis)
- Al lawati, J.A.**
MOTOR ACTIVITY
- Al Mohrej, Omar A.**
CORONAVIRUS INFECTIONS
- Al Musa, Hasan M.**
BACTERIURIA (epidemiology)
- Al Nefisah, Osama S.**
SMOKING (epidemiology)
- Al Nemer, Areej M.**
MAMMAPLASTY
- Al Otaibi, Salman K.**
CORONAVIRUS INFECTIONS
- Al Qudah, Mohammed A.**
TOOTH (anatomy and histology)
- Al Raddadi, Huda S.**
KERATOCONUS (genetics)
- Al Saa'da, R.J.**
MICROBIAL SENSITIVITY TESTS
- Al Sayyah, Ahmed A.**
MAMMAPLASTY
- Al Shirian, Sarah D.**
CORONAVIRUS INFECTIONS
- Al Sindi, Mahmood**
TRACHEOSTOMY (adverse effects)
- Al Tamimi, Dalai M.**
MAMMAPLASTY
- Al Yousef, E.**
MENINGITIS, BACTERIAL (epidemiology)
- Al Zahrani, Ali A.**
BULBOURETHRAL GLANDS
- Al Zoub, Tamara Tradi**
TOOTH (anatomy and histology)
- Alam, Altaf**
HEPATITIS C, CHRONIC (therapy)
- Alam, Haji Muhamamd Aftab**
ALBUMINURIA (therapy)
- Alam, Maha Anis**
CORONARY ARTERY BYPASS
- Alam, Maqbool**
BLOOD DONORS
- Alam, Muhammad Anwaar**
DENTAL ENAMEL
- Alanazi, Ousef Musarrah**
PATHOLOGY, ORAL
- Alanazi, Yousef Musarrah**
TOOTH, IMPACTED
- Alasker, Mohammad**
HAND (surgery)
- Albalawi, Alia M.**
KERATOCONUS (genetics)
- Albdour, Emad A Shtaiwi**
TOOTH (anatomy and histology)
- Alenzi, Badar Awadh**
PATHOLOGY, ORAL
- Alenzi, Nasser Attallah**
PATHOLOGY, ORAL
TOOTH, IMPACTED
- Alhaider, Abdulqader A.**
CAMELS
- Alhamyani, Abdulrahman H.**
COMMON COLD
- Ali, Afsheen**
DENTISTS
- Ali, F.M.H.**
CARCINOGENS
- Ali, Farman**
CLEIDOCRANIAL DYSPLASIA (diagnosis)
- Ali, Johar**
INTELLECTUAL DISABILITY
- Ali, Nosheen**
CORONARY ARTERY BYPASS
- Ali, zadeh, Ali Reza**
LEVOFLOXACIN (pharmacology)
- Alikhasi, Marzieh**
DENTAL DEBONDING
- Aljabab, Mohammed Ahmed**
PATHOLOGY, ORAL
TOOTH, IMPACTED
- Alkhlaif, Riyadh**
PNEUMOCOCCAL INFECTIONS (epidemiology)
- Almeman, Ahmad A.**
SMOKING CESSATION
- Almobarak, A.O.**
TUBERCULOSIS (epidemiology)
- Almogbel, Yasser S.**
SMOKING CESSATION

- Almutlaga, Sara**
CELLULITIS (etiology)
- Airwuili, Mohammad Raji**
PATHOLOGY, ORAL
TOOTH, IMPACTED
- Alshaibani, Noof**
PILOMATRIXOMA (diagnosis)
- Alshakhshir, Sami M.**
COMMON COLD
- Alsulaiti, Abdulrahman**
PILOMATRIXOMA (diagnosis)
- Althomali, Abdullah J.**
COMMON COLD
- Alwarawreh, Amjad M.**
TOOTH (anatomy and histology)
- Alwatari, Yahya A.**
FRACTURES, BONE (surgery)
- Alwedaie, Sayed Mohamed**
AMINOLEVULINIC ACID (analogs and derivatives)
- Amani, Maryam**
URINARY BLADDER CALCULI (therapy)
- Amani, Reza**
POLYCYSTIC OVARY SYNDROME
- Ami, Moh Amm Adrez A Dehgh**
STUDENTS, NURSING
- Amidi, Fardin**
VITRIFICATION
- Amin, Fatima**
DRUG PRESCRIPTIONS
- Amini, Afshin**
NUTRITION ASSESSMENT
- Amini, Mitra**
OTOLARYNGOLOGY
- Aminisani, N.**
COLORECTAL NEOPLASMS (epidemiology)
- Aminp, Mitra**
RESEARCH
- Ammoush, Mohammed H.**
TOOTH (anatomy and histology)
- Anamagh, Alireza Nazari**
PSYCHOTHERAPY
- Anavati, Shirin Gh**
STUDENTS, NURSING
- Anis, Sameh**
PNEUMOCOCCAL INFECTIONS (epidemiology)
- Anitha, Medabalmi**
POLYCYSTIC OVARY SYNDROME
- Anjum, Rabia**
CURING LIGHTS, DENTAL
- Anp, Nader Agh Akh**
STUDENTS, NURSING
- Antony, Suresh**
NOCARDIA INFECTIONS (diagnosis)
- Anuroopa, A, Reader**
MOUTH, EDENTULOUS
- Anwar, Javed**
DIABETES COMPLICATIONS
- Arabgol, F.**
CHILD ABUSE
- Arabi, Yaseen M.**
CORONAVIRUS INFECTIONS (epidemiology)
CORONAVIRUS INFECTIONS (transmission)
CORONAVIRUS INFECTIONS
- Arabipoor, Arezoo**
POLYCYSTIC OVARY SYNDROME
- Arafa, Khalid A.**
DENTURES
- Arafa, Khalid Ahmad Omar**
DENTAL IMPLANT-ABUTMENT DESIGN
- Ardalan, A.**
DISASTERS
- Ardestani, Hoda Berenji**
TRANSPLANTATION
- Ardestani, M. Shafiee**
HEPATO LENTICULAR DEGENERATION
- Arias, Ariadna V.**
HAND HYGIENE
- Arias, Katiana F.**
HAND HYGIENE
- Arsalan, Ali**
AZADIRACHTA
- Arshad, Humaira**
PROGESTERONE (antagonists and inhibitors)
- Arvinfar, Mona**
OUTLIERS, DRG
- Asadi, A.**
DISASTERS
- Asenjan, Karim Shams**
LEUKEMIA, MYELOID, ACUTE
- Asgari, A.**
MORUS
- Asgari, Najmeh**
INFERTILITY, FEMALE
- Asgar, Muhammad**
NEPHROSTOMY, PERCUTANEOUS

- Ashfaq, Kamran**
OTITIS MEDIA, SUPPURATIVE (therapy)
- Ashnagar, Sajjad**
LASERS, SOLID-STATE
- Ashraf, Amber**
VENTRICULAR DYSFUNCTION, LEFT
- Ashraf, Babur**
TEMPOROMANDIBULAR JOINT DISORDERS
- Ashraf, Junaid**
MEASLES (epidemiology)
- Ashrafi, M. Heydari**
OVARIAN NEOPLASMS (genetics)
- Ashrafi, Mahnaz**
ENDOMETRIOSIS (diagnosis)
- Ashtiyani, S. Changki**
DIAZINON (pharmacology)
- Asl, Seyed Teymur Seyed**
PSYCHOTHERAPY
- Aslam, Ayesha**
PROSTHODONTICS
DENTISTS
- Aslam, Naeem**
FLOODS
- Asmar, M.K.**
NATIONAL HEALTH PROGRAMS
- Asokan, Govindaraj Vaithinathan**
ACCIDENTS, TRAFFIC
- Assad, Salman**
RADIOLOGY, INTERVENTIONAL
- Assadi, A.**
HEPATOLENTICULAR DEGENERATION
- Atif, Saira**
DENTAL ENAMEL
- Awad, Rashad K.**
FRACTURES, BONE (surgery)
- Awadhalla, Muysar Sabri**
ACCIDENTS, TRAFFIC
- Awais, Rabia**
TOOTH INJURIES
- Awan, Nabeela**
COLORECTAL NEOPLASMS
- Ayachit, Seemantini**
TOXOPLASMOSIS, OCULAR (therapy)
- Ayyub, Mohammad**
CORONARY ARTERY BYPASS
- Azad, Abrar Hussain**
DEPRESSION (epidemiology)
- Azad, Azad Ali**
DENTURE, COMPLETE
TOOTH, ARTIFICIAL
PROSTHODONTICS
- Azadi, Leila**
ACETYLCYSTEINE
- Azam, Kehkishan**
MOLAR, THIRD (surgery)
- Azam, Naila**
STRESS DISORDERS, POST-TRAUMATIC
- Azam, Zahid**
HEPATITIS C, CHRONIC (therapy)
- Azeem, Hammad**
DENTAL RECORDS
- Azeem, Muhammad**
TOOTHACHE (therapy)
- Azer, S.A.**
MEDICAL ERRORS
- Azizjalali, Mir Hadi**
TRANSPLANTATION
- Babannavar, Prashantha**
HERNIA, INGUINAL (complications)
- Babu, Yarlagadda**
HEMORRHAGIC FEVER, EBOLA (therapy)
- Bader, Zaraf Shan**
COLISTIN (administration and dosage)
- Bahador, Abbas**
AGGREGATIBACTER
ACTINOMYCETEMCOMITANS
- Bahreiniian, Mahsa**
ACETYLCYSTEINE
- Baithun, Suhail**
PILOMATRIXOMA (diagnosis)
- Bakhtiari, Mitra**
PSYCHOTHERAPY
- Bakhtiary, Zahra**
PYRUVATES (therapeutic uses)
- Balkhy, Hanan H.**
CORONAVIRUS INFECTIONS (epidemiology)
CORONAVIRUS INFECTIONS (transmission)
CORONAVIRUS INFECTIONS
- Bangash, Kausar Tasneem**
GENITAL NEOPLASMS, FEMALE (therapy)
- Bano, Saira**
TOOTH, DECIDUOUS
- Baqai, Shehla**
ABORTION, SPONTANEOUS (therapy)
- Baradaran, Hamidreza**
LEARNING

- Barekat, Foroogh**
ACETYLCYSTEINE
- Barman, Keshab**
MALARIA (prevention and control)
- Baroudi, K.**
DENTOFACIAL DEFORMITIES (epidemiology)
- Basalamah, M.**
DENTOFACIAL DEFORMITIES (epidemiology)
- Basil, Sulman**
KERATOCONUS (genetics)
- Basiron, Normala**
CLEFT LIP (surgery)
- Basit, Ayesha**
DENTAL RECORDS
- Batool, Madihal**
CALCIUM HYDROXIDE
- Batool, Naila**
DEPRESSION (psychology)
- Bavari, Sina**
HEMORRHAGIC FEVER, EBOLA (therapy)
- Bawadi, H.A.**
MEALS
- Bazrafkan, Leila**
STUDENTS, DENTAL
- Bear, Gurlal Singh**
TOOTH FRACTURES
- Behbahani, Abbas Behzad**
PRENATAL DIAGNOSIS
- Behrouz, A. Barzegar**
HEPATOLENTICULAR DEGENERATION
- Ben Ammar, Mohamed Salah**
ETHICS, MEDICAL
- Ben Cheikh, A.**
SMOKING (epidemiology)
- Benard, Steve**
MENINGOCOCCAL INFECTIONS (epidemiology)
- Bendriss, A.**
QUALITY OF LIFE
- Beng, Veronique P.**
EUPHORBIACEAE
- Bettcher, Douglas**
TOBACCO
- Bhoil, Rohit**
WERNER SYNDROME (diagnosis)
- Bhutta, Nadia**
MALOCCLUSION
- Bideh, Ehsan Ziaei**
FERTILIZATION IN VITRO
- Bideskan, A.R. Ebrahimzadeh**
GLYCOCONJUGATES
- Bigdeli, Mohammad Reza**
IN VITRO OOCYTE MATURATION TECHNIQUES
- Bilgici, M.C.**
TUBERCULOSIS, MULTIDRUG-RESISTANT (diagnosis)
- Bilir, Bulent**
STAPHYLOCOCCUS AUREUS
- Birinci, A.**
TUBERCULOSIS, MULTIDRUG-RESISTANT (diagnosis)
- Blevins, M.**
INTENSIVE CARE UNITS, NEONATAL
- Bolookat, Eftekhar Rajab**
RADIATION-PROTECTIVE AGENTS
- Bonas, F.**
CARCINOGENS
- Brazdova, Andrea**
INFERTILITY, FEMALE
- Brennan, Edwina**
AMINOLEVULINICACID(analogsand derivatives)
- Bukhari, Syed Gulzar Ali**
OSSIFICATION, HETEROTOPIC (diagnosis)
- Bulos, N. Khuri**
INTENSIVE CARE UNITS, NEONATAL
- Bunks, A.D.**
MEALS
- Bushara, S.O.**
TUBERCULOSIS (epidemiology)
- Bushra, A.N.**
HEPATITIS C, CHRONIC (therapy)
- Bushra, Rehman**
DENTISTS
- Butt, Aamir Mehmood**
DENTURE, COMPLETE
- Butt, Ahsan**
HAND (surgery)
- Butt, Muzamal Maqsood**
DENTURE, COMPLETE
- Cakmak, Selami**
STAPHYLOCOCCUS AUREUS
- Calik, Esat**
EMBRYO TRANSFER
- Cardona, Andres F. Cardona**
ZIKA VIRUS INFECTION (diagnosis)

- Carvalho, Heglécia da Luz**
DENTAL SCALING
- Cauchemez, Simon**
ORTHOMYXOVIRIDAE
- Cetiner, Sedat**
GRANULOMA, PYOGENIC (therapy)
- Chandramohan, Giri**
CLEFT LIP (therapy)
MOUTH, EDENTULOUS
- Chang, Yu C.**
SALMONELLA ENTERICA (genetics)
- Chang, Yung Fu**
SALMONELLA ENTERICA (genetics)
- Changiz, Tahereh**
LEARNING
- Chatha Y. M. Rafique**
MALOCCLUSION
- Chaudhry, Asad A.N.**
HEPATITIS C, CHRONIC (therapy)
- Chauhan, Devendra S.**
TUBERCULOSIS, MULTIDRUG-RESISTANT
(epidemiology)
- Chauhan, Narvir**
WERNER SYNDROME (diagnosis)
- Chavoshi, Hadi**
LEUKEMIA, MYELOID, ACUTE
- Cheraghian, Bahman**
POLYCYSTIC OVARY SYNDROME
- Chiniforush, Nasim**
LASERS, SOLID-STATE
- Choobineh, Alireza**
OUTLIERS, DRG
- Choobineh, Hamid**
TESTOSTERONE
- Choobineh, S.**
PHYSICAL ENDURANCE
- Chuisseu, Pascal D.**
ZIKA VIRUS
- Cooper, James**
MENINGIOMA (diagnosis)
- Corbally, Martin**
GASTROSTOMY
ESOPHAGEAL ATRESIA (diagnosis)
- Corti, Davide**
CORONAVIRUS INFECTIONS (therapy)
- Costa, Anna Carolina B. Perei'ra**
BACCHARIS
- Cowman Seamus**
NURSING RESEARCH
- Crithic, Vilas**
HERNIA, INGUINAL (complications)
- Curran, Martin D.**
ORTHOMYXOVIRIDAE
- Dallal, M.M. Soltan**
LACTOBACILLUS ACIDOPHILUS
- Dandashi, Jad A.**
MENINGIOMA (diagnosis)
- Dang, Puneet**
TOOTH FRACTURES
- Darab, Mehraneh**
LEVOFLOXACIN (pharmacology)
- Darabi, Masoud**
POLYCYSTIC OVARY SYNDROME
- Darabi, Shahram**
PROSTATITIS (drug therapy)
- Davani, Shahrbanou Karimi**
LEUKEMIA, LYMPHOCYTIC, CHRONIC,
B-CELL (genetics)
- Dayawansa, Samantha**
MENINGIOMA (diagnosis)
- Deemeh, Mohammad Reza**
ACETYLCYSTEINE
- Dehbozorgian, Mahnaz**
OTOLARYNGOLOGY
- Delavari, Sajad**
SCHOOLS, MEDICAL
- Delavari, Somayeh**
SCHOOLS, MEDICAL
- Denholm, R.**
CARCINOGENS
- Derakhshanpour, F.**
CHILD ABUSE
- Dev, Vas**
MALARIA (prevention and control)
- Dianatpour, Mehdi**
CHROMOSOMES, HUMAN, PAIR 9
- Digard, Paul**
ORTHOMYXOVIRIDAE
- Dilnawaz, Mansoor**
CLOBETASOL (adverse effects)
- Dobo, Sylvia**
HEMORRHAGIC FEVER, EBOLA (therapy)
- Dogan, Mustafa**
STAPHYLOCOCCUS AUREUS

- Doiphode, Sanjay**
SALMONELLA ENTERICA (genetics)
- Doostkam, Aida**
OTOLARYNGOLOGY
- Draman, Nani**
SEXUAL DYSFUNCTION, PHYSIOLOGICAL
(epidemiology)
- Duman, Selcuk**
HYALURONIC ACID (pharmacology)
- Dunne, Kevin**
EPILEPSY
TOXOPLASMOSIS, OCULAR (therapy)
- Durrani, Adil**
DENTAL ENAMEL
- Durrani, Faiza**
SCHIZOPHRENIA (drug therapy)
- Ebadifar, Asghar**
MYOFASCIAL PAIN SYNDROMES (therapy)
- Ebrahimi, Marzieh**
GLYCOPROTEINS
- Ebrahimi, V.**
GLYCOCONJUGATES
- Eftekhar, Maryam**
FERTILIZATION IN VITRO
- Eftekharsadat, Bina**
AMYLOID NEUROPATHIES, FAMILIAL
- El Kattan, Yahya**
HEMORRHAGIC FEVER, EBOLA (therapy)
- Eimani, Hussein**
IN VITRO OOCYTE MATURATION TECHNIQUES
- Eini, Ali Mohammad**
LEVOFLOXACIN (pharmacology)
- El Awa, Fatimah**
TOBACCO
- El Emrani, L.**
QUALITY OF LIFE
- El Feky, Samar**
ETHICS, MEDICAL
- El Ghardallou, M.**
SMOKING (epidemiology)
- El Khoury, C.**
MEALS
- El Nihum, Ibrahim M.**
MENINGIOMA (diagnosis)
- El Tantawi, M.**
LANGUAGE TESTS
- Elmadhoun, W.M.**
TUBERCULOSIS (epidemiology)
- Emamghoreishi, Masoumeh**
CARUM
- Enstone, Joanne E.**
ORTHOMYXOVIRIDAE
- Erbasar, Giizin Neda Hasanoglu**
GRANULOMA, PYOGENIC (therapy)
- Esfahani Mohammad Hossein Nasr**
ACETYLCYSTEINE
- Esfahani, Ali**
LEUKEMIA, MYELOID, ACUTE
- Esfahani, Mohammad Hossein Nasr**
INFERTILITY, FEMALE
- Eslaminejad, Toubia**
INSULIN (chemical synthesis)
- Esteghamatp, Alireza**
LEARNING
- Eyrisofla, Nazila Vahidi**
LEVOFLOXACIN (pharmacology)
- Fadel, Raouf**
FRUCTOSE (analogs and derivatives)
- Faghih, Zahra**
EDUCATION, MEDICAL, CONTINUING
- Faghihi, Seyed Aliakbar**
EDUCATION, MEDICAL, CONTINUING
- Fakhar, Amna**
DENTAL HEALTH SURVEYS
- Fakhar, Syeda Maria**
ORAL SUBMUCOUS FIBROSIS (diagnosis)
- Fakhoury, Hana M.**
CORONAVIRUS INFECTIONS
- Falavigna, Asdrubal**
SPINE (surgery)
- Fallahzadeh, Hossein**
EDUCATION, MEDICAL
- Fani, N.**
HEPATOLENTICULAR DEGENERATION
- Faoyri, S.**
INTENSIVE CARE UNITS, NEONATAL
- Farahangiz, Saman**
STUDENTS, MEDICAL
- Fard, Behrooz Gharesi**
SPERMATOZOA
- Fard, Mohammad Javad Kharazi**
AGGREGATIBACTER
ACTINOMYCETEMCOMITANS
- Fard, Soudeh Ghafouri**
CHROMOSOMES, HUMAN, PAIR 9

- Farooq, Ammara**
OBESITY
- Farooqi, Javed Iqbal**
HEPATITIS C, CHRONIC (therapy)
- Farooqui, Waqas Ahmed**
MOLAR, THIRD (surgery)
- Farran, Yvette**
NOCARDIA INFECTIONS (diagnosis)
- Farsinejad, Alireza**
INSULIN (chemical synthesis)
- Farzaneh, Mohamad Reza**
LEUKEMIA, LYMPHOCYTIC, CHRONIC, B-CELL (genetics)
- Fasih, N.**
VIBRIO CHOLERAЕ
- Fatahian, Reza**
ASPIRIN (pharmacology)
- Fatima, Gulnaz**
DEPRESSION (psychology)
- Fatima, Zahra Tu**
TOOTH, DECIDUOUS
- Fazal, Fazal**
EXERCISE
- Fazel, A.R.**
GLYCOCONJUGATES
- Fcillah, R.**
HEALTHCARE FACILITIES, MANPOWER, AND SERVICES
- Fiekert, K.**
DRUG USERS
- Firoozabadi, Raziieh Deghani**
FERTILIZATION IN VITRO
- Firouzi, Javad**
GLYCOPROTEINS
- Firozeh, Z.**
PHYSICAL ENDURANCE
- Fomeshi, Motahareh Rajabi**
GLYCOPROTEINS
- Fonkem, Ekokobe**
MENINGIOMA (diagnosis)
- Fooladi, A.A. Imani**
BACTERIAL INFECTIONS (epidemiology)
- Forghani, Hosein**
FERTILIZATION IN VITRO
- Fowler, Rob**
CORONAVIRUS INFECTIONS (epidemiology)
- Fowler, Robert A.**
CORONAVIRUS INFECTIONS
- Fujii, Eri**
TOOTH MOVEMENT
- Fujita, Tadashi**
TOOTH MOVEMENT
- Gaidhane, Abhay**
FACULTY
- Garcell, Humberto G.**
HAND HYGIENE
- Garcia, Fayna**
ORTHOMYXOVIRIDAE
- Garedew, Legesse**
SHIGELLA
- Gaudelus, Joel**
MENINGOCOCCAL INFECTIONS (epidemiology)
- Geier, David A.**
HEPATITIS B VACCINES
- Geier, Mark R.**
HEPATITIS B VACCINES
- Geranmayeh, Mehrnaz**
LEARNING
- Ghaffarzad, Aisa**
POLYCYSTIC OVARY SYNDROME
- Ghafoor, Farkhanda**
VITAMIN A DEFICIENCY (epidemiology)
- Ghahramani, Fariba**
OUTLIERS, DRG
- Ghallab, Alaa**
GASTROSTOMY
- Ghalyanchi, Akhgar**
PROSTATITIS (drug therapy)
- Ghanaei, Hamid**
ADIPONECTIN
- Ghanavati, Shirin**
RESEARCH
- Ghanchi, N.K.**
VIBRIO CHOLERAЕ
- Ghani, Eijaz**
BLOOD DONORS
- Gharavi, A.G. Kose**
INFANT MORTALITY
- Ghayoomi, A.**
TUBERCULOSIS (therapy)
- Ghazanfari, Rezvaneh**
DENTAL DEBONDING
- Ghazani, Arash Babaei**
AMYLOID NEUROPATHIES, FAMILIAL

- Gholami, A.**
REPRODUCTIVE HEALTH SERVICES
- Ghorbani, Rostam**
TESTOSTERONE
- Ghumman, Adeel Qamar**
BILE DUCTS (injuries)
- Gilani, M.D.**
TESTOSTERONE
- Girgis, Mina**
PILOMATRIXOMA (diagnosis)
- Gjebrea, O.**
CARCINOGENS
- Gnanapragasam, Sam**
DISASTERS
- Golestanfar, Arefe**
ADIPONECTIN
- Gondal, Zafar Iqbal**
BILE DUCTS (injuries)
- Gopivallabh, Madhusudhan Madihalli**
HERNIA, INGUINAL (complications)
- Greatorex, Jane**
ORTHOMYXOVIRIDAE
- Gul, Asif Alam**
OTITIS MEDIA, SUPPURATIVE (therapy)
- Gul, Faryal**
LICHEN PLANUS, ORAL (diagnosis)
- Gultekin, Sibel Elif**
GRANULOMA, PYOGENIC (therapy)
- Gupta, Vinod K.**
TUBERCULOSIS, MULTIDRUG-RESISTANT (epidemiology)
- Habib, Mahmood**
ANEURYSM (diagnosis)
- Habibullah, Sultana**
MEASLES (epidemiology)
- Hadad, Amin Hasanzadeh**
URINARY BLADDER CALCULI (therapy)
- Hadadnazard, M.**
MULTIPLE SCLEROSIS (physiopathology)
- Hadiimanieh, Mohammad**
STUDENTS, MEDICAL
- Hafeez, Qurat ul Ain**
DRUG INTERACTIONS
- Hafizurehman**
VENTRICULAR DYSFUNCTION, LEFT
- Haghani, Fariba**
LEARNING
- Haghpanah, Sezaneh**
STUDENTS, NURSING
- Hagos, Zenabu**
SHIGELLA
- Haider, A.N.**
TRIGEMINAL NEURALGIA (therapy)
- Haider, Aftab**
HEPATITIS C, CHRONIC (therapy)
- Hajeer, A.M.H.**
MIDDLE EAST RESPIRATORY SYNDROME
CORONAVIRUS (isolation and purification)
- Hajjaran, Homa**
LEISHMANIASIS (etiology)
- Hakkim, Faruck L.**
GANODERMA
- Halasa, N.**
INTENSIVE CARE UNITS, NEONATAL
- Hamaideh, S.H.**
FAMILY PLANNING SERVICES
- Hangar, Santosh**
TOURETTE SYNDROME (etiology)
- Hanouneh, S.I.**
FAMILY PLANNING SERVICES
- Hanumanthaiah, Kunthurdoddi Sanjeevaiah**
HERNIA, INGUINAL (complications)
- Haq, Arfanul**
TOOTHACHE (therapy)
- Harris, Frank S.**
MENINGIOMA (diagnosis)
- Hasan, Isa Y AH**
ESOPHAGEAL ATRESIA (diagnosis)
- Hasan, Khawaja Rashid**
ROOT CANAL OBTURATION
- Hasan, Sadaf**
DEPRESSION (epidemiology)
- Hasdemir, Pinar Solmaz**
EMBRYO TRANSFER
- Hashem, Jamal**
STENTS (adverse effects)
- Hashemi, Mehrdad**
PREIMPLANTATION DIAGNOSIS
- Hashemi, Seyed Basir**
COCHLEAR IMPLANTS
- Hashempour, Mohammad Mahdi**
AMIKACIN (blood)
- Hashim, Rizwan**
COLISTIN (administration and dosage)

- Hashmi, Zahid Yaseen**
HEPATITIS C, CHRONIC (therapy)
- Hassan, Md. Imtaiyaz**
COMPUTER COMMUNICATION NETWORKS
- Hassan, Soaib Ali**
AZADIRACHTA
- Hassan, Syed Hammad**
TOOTH, ARTIFICIAL
PROSTHODONTICS
- Hassanpour, Hossein**
ADIPONECTIN
- Hassanzadeh, Gholamreza**
TESTOSTERONE
- Hatam, Nahid**
SCHOOLS, MEDICAL
- Hattori, Masahira**
MICROBIOTA
- Hausdorff, William P.**
PNEUMOCOCCAL INFECTIONS (epidemiology)
- Hayat, Asma**
DENTAL CARIES (epidemiology)
- Hayden, Frederick G.**
CORONAVIRUS INFECTIONS
- Hayward, Andrew**
ORTHOMYXOVIRIDAE
- Hegazi, Mohammad M.**
MAMMAPLASTY
- Heidari, Mahmood Alipour**
PROSTATITIS (drug therapy)
- Hejazi, K.**
PHYSICAL ENDURANCE
- Hejazi, Najmeh**
NUTRITION ASSESSMENT
- Henari, Fryad**
NANOPARTICLES
- Hooker, Brian S.**
HEPATITIS B VACCINES
- Hopkins, Nick**
HEALTH
- Hossain, M.A.**
DIABETIC FOOT (etiology)
- Hosseini, Fakhrolsadat**
EDUCATION, MEDICAL
- Hosseini, S.R.**
COLORECTAL NEOPLASMS (epidemiology)
- Hosseini, S.R. Attarzadeh**
PHYSICAL ENDURANCE
- Hosseini, Seyed Jalil**
EDUCATION, MEDICAL, CONTINUING
- Huang, Jason H.**
MENINGIOMA (diagnosis)
- Hui, David S.**
CORONAVIRUS INFECTIONS
- Husain, S.**
IMMUNIZATION
- Hussain Umar**
TOOTH, DECIDUOUS
- Hussain, Azmina**
MOLAR, THIRD (surgery)
- Hussain, M Hamaza**
DENTAL CARE
- Hussain, Majid**
CLOBETASOL (adverse effects)
- Hussain, Maryam**
HYPERTENSION (epidemiology)
- Hussain, Sameed**
COLORECTAL NEOPLASMS
- Hussain, Shabbir**
TOOTH MOVEMENT
- Hussain, Tahira**
TOOTH, DECIDUOUS
TOOTH ABNORMALITIES (epidemiology)
- Hussain, Umar**
TOOTH ABNORMALITIES (epidemiology)
- Hussain, Zakir**
EYE FOREIGN BODIES (surgery)
- Ibrahim, Hasan**
GLUCOSEPHOSPHATE DEHYDROGENASE
DEFICIENCY
- Iftikhar, Raheel**
DIABETES MELLITUS, TYPE 2 (therapy)
- Ikramullah**
ACUTE KIDNEY INJURY (epidemiology)
VENTRICULAR DYSFUNCTION, LEFT
- Ilyas, Mohammad Yasir**
DENTAL IMPRESSION TECHNIQUE
- Ilyas, Muhammad**
LICHEN PLANUS, ORAL (diagnosis)
- Imaad, Ur Rehman**
RADIOLOGY, INTERVENTIONAL
- Imran, Farrah Hani**
CLEFT LIP (surgery)
- Imtiaz, Nauman**
ARTERIOVENOUS FISTULA

- Iqbal, Amjad**
HELICOBACTER INFECTIONS
- Iqbal, Asif**
VITREOUS HEMORRHAGE (surgery)
- Iqbal, M. Asif**
VENTRICULAR DYSFUNCTION, LEFT
- Iqbal, Muhammad Zohaib**
DIABETES MELLITUS, TYPE 2 (therapy)
- Iqbal, Rizwan**
TUBERCULOSIS, PULMONARY (diagnosis)
- Irvanpour, Farideh**
SPERMATOZOA
- Irfan, Sameen**
TOOTH MOVEMENT
TOOTHACHE (therapy)
- Ishaque, M Yasir**
DENTAL CARE
- Ishfaq, Mohammad**
TRIGEMINAL NEURALGIA (therapy)
- Ishrat, Romana**
COMPUTER COMMUNICATION NETWORKS
- Islam, Asimul**
COMPUTER COMMUNICATION NETWORKS
- Ismael, Ghazi Y.**
STENTS (adverse effects)
- Ismail, Iqra**
FAST FOODS
- Ismail, Shaiful B.**
SEXUAL DYSFUNCTION, PHYSIOLOGICAL
(epidemiology)
- Isra, Shumaila**
DENTAL IMPRESSION TECHNIQUE
- Israr, Munaid**
MALOCCLUSION
- Jaafar, Nisreen A.**
CALCIUM COMPOUNDS
- Jabeen, Bushra**
DENTAL IMPRESSION TECHNIQUE
- Jafarabadi, M. Asghari**
COLORECTAL NEOPLASMS (epidemiology)
- Jafarzadeh, Meisam**
TRANSFORMING GROWTH FACTOR BETA
- Jaganmaya, Kajekar**
HERNIA, INGUINAL (complications)
- Jahanzad, Issa**
TESTOSTERONE
- Jahromf, Zohreh Badiyepaymaie**
LEARNING
- Jain, Sanjay**
TUBERCULOSIS, MULTIDRUG-RESISTANT
(epidemiology)
- Jalili, Cyrus**
CAROTENOIDS
- Jameel, Afey Ahmed**
DENTAL RECORDS
- Jan, Sanaulah**
VITREOUS HEMORRHAGE (surgery)
EYE FOREIGN BODIES (surgery)
- Javaid, Arshad**
PROFESSIONAL AUTONOMY
- Javanmard, Babak**
URINARY BLADDER CALCULI (therapy)
- Jawad, Marya**
ORAL HYGIENE
- Jehangir, Maham**
RADIOLOGY, INTERVENTIONAL
- Jorge, Antonio Olavo C.**
BACCHARIS
- Jouhari, Zahra**
LEARNING
- Jr, David Garrett**
MENINGIOMA (diagnosis)
- Julander, Justin**
HEMORRHAGIC FEVER, EBOLA (therapy)
- Kadivar, Ali**
ADIPONECTIN
- Kaleem, Muhammad**
ORAL HYGIENE
- Kallar, Shiminder**
TOOTH FRACTURES
- Kamal, Ahmed**
GASTROSTOMY
- Kamal, Anila**
FLOODS
- Kamal, Dhafer M.**
STENTS (adverse effects)
- Kamali, Melek Bulut**
EMBRYO TRANSFER
- Kamaneh, Elnaz Amanollahi**
LEUKEMIA, MYELOID, ACUTE
- Kamani, Lubna**
HEPATITIS C, CHRONIC (therapy)
- Kamyariravani**
OTOLARYNGOLOGY
- Kandeil, Walid**
PNEUMOCOCCAL INFECTIONS (epidemiology)

- Karagoz, F.**
TUBERCULOSIS, MULTIDRUG-RESISTANT (diagnosis)
- Karami, Hosein**
URINARY BLADDER CALCULI (therapy)
- Karimfar, Mohammad Hassan**
PROSTATITIS (drug therapy)
- Karli, G. Sensoyi A.**
TUBERCULOSIS, MULTIDRUG-RESISTANT (diagnosis)
- Karmaker, Mousumi**
DIABETIC FOOT (etiology)
- Karyani, A.K.**
HEALTHCARE FACILITIES, MANPOWER, AND SERVICES
- Katoch, Vishwa M.**
TUBERCULOSIS, MULTIDRUG-RESISTANT (epidemiology)
- Katpar, Shahjehan**
WARFARIN (administration and dosage)
- Katuli, H. Eimani**
INFANT MORTALITY
- Kazerooni, Marjaneh**
SPERMATOCYTES
- Kazim, Mohammad**
DENTAL IMPRESSION TECHNIQUE
- Keivan, Mona**
CAROTENOIDS
- Kelly, Enda Gerard**
CLEFT LIP (surgery)
- Kerkhove, Maria D. Van**
CORONAVIRUS INFECTIONS
- Kermani, Hamed Reihani**
ASPIRIN (pharmacology)
- Kermani, Iraj Asvadi**
LEUKEMIA, MYELOID, ACUTE
- Kern, Janet K.**
HEPATITIS B VACCINES
- Keshavarz, Zeinab**
PRENATAL DIAGNOSIS
- Keshatgar, Sara**
SPERMATOCYTES
- Keshatvarz, M.**
LACTOBACILLUS ACIDOPHILUS
- Khademi, Gholam Reza**
LEUKOENCEPHALITIS, ACUTE HEMORRHAGIC
- Khader, A.**
EDUCATION, MEDICAL
- Khalifa, Ahmed Majdi**
ESOPHAGEAL ATRESIA (diagnosis)
- Khalifa, Fahad KAI**
FRACTURES, BONE (surgery)
- Khalighi, Hamid Reza**
MYOFASCIAL PAIN SYNDROMES (therapy)
- Khalil, Khalilullah**
SCHIZOPHRENIA (drug therapy)
- Khalili, Gholamreza**
POLYCYSTIC OVARY SYNDROME
- Khan, Aamina**
HAND (surgery)
- Khan, Ajab**
ACUTE KIDNEY INJURY (epidemiology)
- Khan, Amjad**
HYPERTENSION (epidemiology)
- Khan, Anwaar A.**
HEPATITIS C, CHRONIC (therapy)
- Khan, Arfaraz**
CLEIDOCRANIAL DYSPLASIA (diagnosis)
- khan, Asif Ullah**
HYPERTENSION (epidemiology)
- Khan, Aurangzeb**
BILE DUCTS (injuries)
- Khan, E.**
VIBRIO CHOLERAE
- Khan, Imtina Akram**
AZADIRACHTA
- Khan, Juanaidullah**
DENTURE, COMPLETE (adverse effects)
- Khan, Maryam**
OTITIS MEDIA, SUPPURATIVE (therapy)
- Khan, Muhammad Sarwar**
GLUCOSEPHOSPHATE DEHYDROGENASE DEFICIENCY
- Khan, Muhammad Tariq**
VITREOUS HEMORRHAGE (surgery)
- khan, Munir**
DENTURE, COMPLETE (adverse effects)
- Khan, Muslim**
MOUTH DISEASES (congenital)
- Khan, Nabeel Qutub**
TEMPOROMANDIBULAR JOINT DISORDERS
- Khan, Rao Mushkbaar Ali**
SCHIZOPHRENIA (drug therapy)
- Khan, Riaz Anwar**
ACUTE KIDNEY INJURY (epidemiology)

- Khan, Rukhsana**
MALNUTRITION (epidemiology)
- Khan, Sadique Ullah**
EYE FOREIGN BODIES (surgery)
- Khan, Salman**
LICHEN PLANUS, ORAL (diagnosis)
- Khan, Shakeel Qutub**
TEMPOROMANDIBULAR JOINT DISORDERS
- Khan, Turab**
DENTURE, COMPLETE (adverse effects)
- Khan, Yawar Hayat**
ACRYLIC RESINS
- Khani, Parisa**
FERTILIZATION IN VITRO
- Khankeh, Hamid Reza**
EDUCATION, MEDICAL, CONTINUING LEARNING
- Khater, Emad I.M.**
ZIKA VIRUS
- Khattak, Azmatullah**
TRIGEMINAL NEURALGIA (therapy)
- Khattak, Irfan Aslam**
TOOTH ABNORMALITIES (epidemiology)
- Khattak, Muhammad Shahid Khan**
LICHEN PLANUS, ORAL (diagnosis)
- Khayamzadeh, Mina**
AGGREGATIBACTER
ACTINOMYCETEMCOMITANS
- Khayatan, Tayebah**
PSYCHOTHERAPY
- Khazaei, Mozafar**
CAROTENOIDS
- Khinda, Paramjit**
TOOTH FRACTURES
- Khinda, Vineet Inder Singh**
TOOTH FRACTURES
- Khoei, Heidar Heidari**
ADIPONECTIN
- Khoshhal, Khalid I.**
SPINE (surgery)
- Khosravani, Pardis**
GLYCOPROTEINS
- Khound, Kamal**
MALARIA (prevention and control)
- Kian Fatemeh Rahimi**
SURROGATE MOTHERS
- Kiani, Ehsan Masud**
GASTROSTOMY
- Kiani, Faran**
NEPHROSTOMY, PERCUTANEOUS
- Killingley, Benjamin**
ORTHOMYXOVIRIDAE
- King, Paul G.**
HEPATITIS B VACCINES
- Kirubakaran, Richard**
ACCIDENTS, TRAFFIC
- Kodangal, Srikanth**
PHOTOCHEMOTHERAPY
- Kohan, S.**
REPRODUCTIVE HEALTH SERVICES
- Kotian, Pravin**
HEMORRHAGIC FEVER, EBOLA (therapy)
- Kreslake, Jennifer**
RESPIRATORY TRACT INFECTIONS
- Krishnan, Suresh Palamadai**
EPIDERMIS
- Kuete, Victor**
EUPHORBIACEAE
- Kumar, Amar Nagesh**
POLYCYSTIC OVARY SYNDROME
- Kumar, Dilip**
TUBERCULOSIS, MULTIDRUG-RESISTANT (epidemiology)
- Kumar, Ramesh**
CLEFT LIP (surgery)
- Kundi, Jawad Ahmad**
LICHEN PLANUS, ORAL (diagnosis)
- Kunimatsu, Ryo**
TOOTH MOVEMENT
- Kussaibi, Haitham A.**
MAMMAPLASTY
- Lafond, Kathryn E.**
RESPIRATORY TRACT INFECTIONS
- Lakdawala, Yousuf A.**
ORAL SUBMUCOUS FIBROSIS (diagnosis)
- Laleh, Parvin Akbarzadeh**
LEUKEMIA, MYELOID, ACUTE
- Lankarani, Marges Bagheri**
POLYCYSTIC OVARY SYNDROME
- Lanzavecchia, Antonio**
CORONAVIRUS INFECTIONS (therapy)
- Latif, Khurram**
MANDIBULAR FRACTURES (diagnosis)
PATHOLOGY, ORAL
TOOTH, IMPACTED

- Latifi, M.F.**
DISASTERS
- Ibrahim, Mariamma**
SALMONELLA ENTERICA (genetics)
- Limam, M.**
SMOKING (epidemiology)
- Liporoni, Priscila Christiane S.**
BACCHARIS
- Lowenthal, John**
COMMUNICABLE DISEASES
- Irfan, S.**
VIBRIO CHOLERAEE
- Isyar, Mehmet**
STAPHYLOCOCCUS AUREUS
- Iuliano, Angela D.**
RESPIRATORY TRACT INFECTIONS
- Luni, Sfandyar**
OSSIFICATION, HETEROTOPIC (diagnosis)
- Mabry, R.M.**
MOTOR ACTIVITY
- Madarati, Ahmad A.**
RUBBER DAMS
- Madeha M Al Nuami**
CALCIUM COMPOUNDS
- Maghsoudloo, D.**
TUBERCULOSIS (therapy)
- Mahani, Seyed Amirmahdi Nematollahi**
INSULIN (chemical synthesis)
- Mahani, Seyed Nouredin Nematollahi**
INSULIN (chemical synthesis)
- Mahirogullari, Mahir**
STAPHYLOCOCCUS AUREUS
- Mahjour, Jaouad**
CORONAVIRUS INFECTIONS (epidemiology)
- Mahmodzade, Aziz**
ARBUTIN
- Mahmood, Asad**
BLOOD DONORS
- Mahmood, Hafiz Shaker**
TOOTH MOVEMENT
TOOTHACHE (therapy)
- Mahmud, Ghazala**
GENITAL NEOPLASMS, FEMALE (therapy)
- Majeed, Asifa**
STAT1 TRANSCRIPTION FACTOR
- Majid, Shahid**
HEPATITIS C, CHRONIC (therapy)
- Maleki, Elham Mokhber**
IN VITRO OOCYTE MATURATION TECHNIQUES
- Malekiran, Ali Akbar**
ORGANOPHOSPHATE POISONING
- Malik, Mamunur Rahman**
CORONAVIRUS INFECTIONS (epidemiology)
- Malik, Qudratullah**
HELICOBACTER INFECTIONS
- Malik, Saad Mushtaq**
GLAUCOMA (pathology)
- Malik, Sumera**
GENITAL NEOPLASMS, FEMALE (therapy)
- Malik, Zaka Ullah**
BILE DUCTS (injuries)
- Malkawi, A.O.**
FAMILY PLANNING SERVICES
- Mallouli, M.**
SMOKING (epidemiology)
- Maloth, Kotya Naik**
PHOTOCHEMOTHERAPY
- Mambe, Flora T.**
EUPHORBIACEAE
- Mandil, Ahmed**
ETHICS, MEDICAL
- Mangiri, Amalya**
RESPIRATORY TRACT INFECTIONS
- Mansour, A.M. Hamdan**
FAMILY PLANNING SERVICES
- Manzoor, Naveeda**
STAT1 TRANSCRIPTION FACTOR
- Maqsood, Afsheen**
MOLAR, THIRD (surgery)
- Marcantonio, Rosemary Adriana Chierici**
DENTAL SCALING
- Marhabi, Saranaz Azari**
MYOFASCIAL PAIN SYNDROMES (therapy)
- Marhamati, Saadat**
RESEARCH
- Maroufizadeh, Saman**
SURROGATE MOTHERS
- Masood, Sumaira**
STRESS DISORDERS, POST-TRAUMATIC
- Masuadi, Emad M.**
CORONAVIRUS INFECTIONS
- Masud, Manan**
BILE DUCTS (injuries)

- Matin, B.K.**
HEALTHCARE FACILITIES, MANPOWER, AND SERVICES
- Matooq, Amina**
ACCIDENTS, TRAFFIC
- Maxood, Anser**
TOOTH INJURIES
- Mazloom, Zohreh**
NUTRITION ASSESSMENT
- Mehmood, Arshad**
NEPHROSTOMY, PERCUTANEOUS
- Mehmood, Shaker**
MANDIBULAR FRACTURES (diagnosis)
- Mehran, Abbas**
SURROGATE MOTHERS
- Mehranjani, M. Soleimani**
CAMELLIA SINENSIS
- Mehreen, Sobia**
INFERIOR WALL MYOCARDIAL INFARCTION (physiopathology)
- Meka, Nagajyothi**
PHOTOCHEMOTHERAPY
- Memarpour, Mahtab**
STUDENTS, DENTAL
- Memish, Ziad A.**
TUBERCULOSIS, MULTIDRUG-RESISTANT
- Mir, E.**
PHYSICAL ENDURANCE
- Mir, Mohammadi MT**
MUSCULOSKELETAL DISEASES (epidemiology)
- Miranda, Fernando R.**
HAND HYGIENE
- Mirani, Shahid Ali**
CLEFT LIP (psychology)
- Mirbeigi, S.**
DISASTERS
- Miri, Maryam**
PROSTATITIS (drug therapy)
- Mirjalali, Named**
LEISHMANIASIS (etiology)
- Miryounesi, Mohammad**
CHROMOSOMES, HUMAN, PAIR 9
- Mirza, Faizan**
EXERCISE
- Mirza, Mahwish**
EPILEPSY
- Mishra, Monali P.**
URINARY TRACT INFECTIONS
- Moayeri, Mina**
PREIMPLANTATION DIAGNOSIS
- Mobaiyen, H.**
MYCOPLASMA HOMINIS (isolation and purification)
- Mobeen, Ahmed**
RADIOLOGY, INTERVENTIONAL
- Modarresi, Mohammad Hossein**
PREIMPLANTATION DIAGNOSIS
- Moeen, Faisal**
ACRYLIC RESINS
- Moezzi, Leili**
PRENATAL DIAGNOSIS
- Moghadam, Hassan Dianat**
RADIATION-PROTECTIVE AGENTS
- Moghadamnia, D.**
PHOENICEAE
DIAZINON (pharmacology)
- Mohamed, Ahmed**
GASTROSTOMY
- Mohammad, Fahad**
GLIOMA (therapy)
- Mohammad, Syed Hosseinpanah**
HYDATIDIFORM MOLE (epidemiology)
- Mohammadi, F.**
REPRODUCTIVE HEALTH SERVICES
- Mohammadzadeh, Kh. Ali**
TUBERCULOSIS (therapy)
- Mohammed, Hussni O.**
SALMONELLA ENTERICA (genetics)
- Mohan, Aparna**
CLEFT LIP (therapy)
MOUTH, EDENTULOUS
- Mohebali, Mehdi**
LEISHMANIASIS (etiology)
- Mohsin, Saima Naz**
VITAMIN A DEFICIENCY (epidemiology)
- Mohsin, Shamaila**
STRESS DISORDERS, POST-TRAUMATIC
- Moini, Ashraf**
POLYCYSTIC OVARY SYNDROME
- Mojahedi, Seyed Masoud**
MYOFASCIAL PAIN SYNDROMES (therapy)
- Mokhtari, M.**
PHOENICEAE
- Momayyezi, Mahdieh**
EDUCATION, MEDICAL

- Momayyezi, Mohammad**
EDUCATION, MEDICAL
- Momenzadeh, Sirous**
MYOFASCIALPAIN SYNDROMES(therapy)
- Monajemi, Alireza**
LEARNING
- Monfared, Ali Shabestani**
ARBUTIN
- Monshizadeh, Leila**
COCHLEAR IMPLANTS
- Monzavi, Abbas**
LASERS, SOLID-STATE
- Moosavi, Seyed Akbar**
RADIATION-PROTECTIVE AGENTS
- Moradi, B.**
MULTIPLE SCLEROSIS (physiopathology)
- Morales, Alfonso J. Rodriguez**
ZIKA VIRUS INFECTION (diagnosis)
- Morsi, M.**
MOTOR ACTIVITY
- Mortazavi, Hamed**
MYOFASCIALPAIN SYNDROMES(therapy)
- Mosalanejad, Leili**
LEARNING
- Mostafavi, F.**
REPRODUCTIVE HEALTH SERVICES
- Motaghi, B.**
MORUS
- Motazedian, Mohammad Hossein**
LEISHMANIASIS (etiology)
- Mougahi, Seyed Mohammad Hossein Noori**
VITRIFICATION
- Mousavi, M.**
MYCOPLASMA HOMINIS (isolation and purification)
- Mowla, Seyed Javad**
OCTAMER TRANSCRIPTION FACTOR-3
- Mozdarani, Hossein**
ARBUTIN
- Mtiraoui, A.**
SMOKING (epidemiology)
- Mubarak, Sana**
DENTAL CARIES (epidemiology)
- Muhammad, Khurshid**
DIABETES MELLITUS, TYPE 2 (therapy)
- Muhammad, Salma**
TOOTH, ARTIFICIAL
- Muhammadi, Salma**
PROSTHODONTICS
- Mukhtar, Uzair**
AZADIRACHTA
- Mullick, M. Shakeel Aamir**
MEASLES (epidemiology)
- Muneer, Hamza**
ANEURYSM (diagnosis)
- Munir, Muhammad Arif**
AZADIRACHTA
- Munir, Muhammad Kashif**
POLIOMYELITIS (prevention and control)
TUBERCULOSIS, PULMONARY (diagnosis)
- Murray, Virginia**
DISASTERS
- Mushtaq, Mamoona**
DENGUE (psychology)
- Mushtaq, Rubina**
PROGESTERONE (antagonists and inhibitors)
- Mushtaq, Saleem**
NEURALGIA (therapy)
- Mushtaq, Shomaila**
AZADIRACHTA
- Mustafa, H.**
TUBERCULOSIS (epidemiology)
- Mustaffa, Izadora**
SEXUAL DYSFUNCTION, PHYSIOLOGICAL
(epidemiology)
- Nabeiei, Parisa**
RESEARCH
- Nabi, Ikram**
GLUCOSEPHOSPHATE DEHYDROGENASE
DEFICIENCY
- Nadeau, Mark T.**
PROFESSIONALISM
- Nadi, Saba**
ARBUTIN
- Nagi, Ah**
CURING LIGHTS, DENTAL
- Naidu, Jupalle Nagaiah**
POLYCYSTIC OVARY SYNDROME
- Naisir, A.**
EDUCATION, MEDICAL
- Najafabadi, Bent al hoda Movahedi**
BORON (therapeutic uses)
- Najafi, Shamsoulmolouk**
AGGREGATIBACTER
ACTINOMYCETEMCOMITANS

Najar, Ahmad Gholamhosseinian
ASPIRIN (pharmacology)

Najib, Tayyeba
HEAT STROKE (diagnosis)

Nakhaee, Nouzar
ASPIRIN (pharmacology)

Namazi, Soha
AMIKACIN (blood)

Naqvi, Altaf Baqir
HEPATITIS C, CHRONIC (therapy)

Narenji, Afsane Golkar
IN VITRO OOCYTE MATURATION TECHNIQUES

Naseem Ullah
ACUTE KIDNEY INJURY (epidemiology)

Naseem, Nadia
CURING LIGHTS, DENTAL

Naseh, V.
OVARIAN NEOPLASMS (genetics)

Nasir, L.
EDUCATION, MEDICAL

Nasser, K.
MENINGITIS, BACTERIAL (epidemiology)

Nawaz, Arif Amir
HEPATITIS C, CHRONIC (therapy)

Nazar, Zahid
SCHIZOPHRENIA (drug therapy)

Nazari, F.
MULTIPLE SCLEROSIS (therapy)

Nejad, Nahid Ataei
VITRIFICATION

Ngogang, Jeanne Y.
ZIKA VIRUS

Niazi, Saifullah Khan
BLOOD DONORS

Nicholson, Karl G.
ORTHOMYXOVIRIDAE

Nikanfar, Alireza
LEUKEMIA, MYELOID, ACUTE

Nikbakht, H.A.
COLORECTAL NEOPLASMS (epidemiology)

Nikkhah, K.
MULTIPLE SCLEROSIS

Nimer, N.A.
MICROBIAL SENSITIVITY TESTS

Nisar, Saleha
ACRYLIC RESINS

Nokhbatolfighahaei, Hanieh
DENTAL DEBONDING
LASERS, SOLID-STATE

Noor, S.K.
TUBERCULOSIS (epidemiology)

Nor, Ahmad Muhsin Mohammad
CLEFT LIP (surgery)

Noreini, S. Naderi
CAMELLIA SINENSIS

Nouri, Z. Haji Mehdi
MYCOPLASMA HOMINIS (isolation and purification)

Noushad, Shamoan
OBESITY

Nutr, R.
POLYCYSTIC OVARY SYNDROME

Obeidat, Lana A.
TOOTH (anatomy and histology)

Ochoa, Yagdeline R.
HAND HYGIENE

Oftadegan, Somayeh
CARUM

Ohshima, Kenshi'ro
MICROBIOTA

Oliveira, Guilherme Jose Pimentel Lopes de
DENTAL SCALING

Olivier, Catherine W.
MENINGOCOCCAL INFECTIONS (epidemiology)

Olsson, A.C.
CARCINOGENS

Omer, S.B.
IMMUNIZATION

Onsory, Kh
MYCOPLASMAHOMINIS(isolationand purification)
OVARIAN NEOPLASMS (genetics)

Orakzai, Omer Khan
VITREOUS HEMORRHAGE (surgery)

Orr, M.G.
DRUG USERS

Osman, Shatha
EPILEPSY

Othman, Manal
FRUCTOSE (analogs and derivatives)

Owen, N.
MOTOR ACTIVITY

Ozcakir, Hasan Tayfun
EMBRYO TRANSFER

- Pachani, Nazish Hussain Ali**
SUBSTANCE-RELATED DISORDERS
- Padhy, Rabindra N.**
URINARY TRACT INFECTIONS
- Paknejad, Mojgan**
AGGREGATIBACTER
ACTINOMYCETEMCOMITANS
- Panaghi, L.**
CHILD ABUSE
- Panchal, Rekha**
HEMORRHAGIC FEVER, EBOLA (therapy)
- Parikh, Sagar V.**
EDUCATION, MEDICAL, CONTINUING
- Pasalar, Parvin**
TESTOSTERONE
- Pasha, Babar**
OSSIFICATION, HETEROTOPIC (diagnosis)
- Passim, Nadia**
CORONAVIRUS INFECTIONS (therapy)
- Pater , Muzna**
OBESITY
- Pearl, E Eshona**
CLEFT LIP (therapy)
- Pearl, E. Eshona**
MOUTH, EDENTULOUS
- Peltre, Gabriel**
INFERTILITY, FEMALE
- Pereira, Cristiane A.**
BACCHARIS
- Perl, Irish M.**
CORONAVIRUS INFECTIONS (transmission)
- Pinotti, Felipe Eduardo**
DENTAL SCALING
- Pirson, Jean Yves**
PNEUMOCOCCAL INFECTIONS (epidemiology)
- Poncet, Pascal**
INFERTILITY, FEMALE
- Pordel, Edris**
LASERS, SOLID-STATE
- Pour, Azin Asadollah**
CERIUM (pharmacology)
- Pouramir, Mahdi**
ARBUTIN
- Pourmand, Gholamreza**
VITRIFICATION
- Poursani, Ensieh M.**
OCTAMER TRANSCRIPTION FACTOR-3
- Poursepanj, Golfam**
AGGREGATIBACTER
ACTINOMYCETEMCOMITANS
- Prakash, Ravi**
TUBERCULOSIS, MULTIDRUG-RESISTANT
(epidemiology)
- Praptiningsih, Catharina Y.**
RESPIRATORY TRACT INFECTIONS
- Punhal, Muhammad**
HELICOBACTER INFECTIONS
- Qadeer, Mustafa**
DENTAL ENAMEL
- Qamar, Khadija**
PROGESTERONE (antagonists and inhibitors)
- Qayyum, Rashid**
DEPRESSION
- Qazi, Samir Riaz**
DENTAL HEALTH SURVEYS
- Quinn, C.E.**
INTENSIVE CARE UNITS, NEONATAL
- Rady, A.**
NATIONAL HEALTH PROGRAMS
- Rafieian, M.**
MORUS
- Rahimi, A.**
DIAZINON (pharmacology)
- Rahimi, S.**
DIAZINON (pharmacology)
- Rajaei, M.H.**
DISASTERS
- Raji, G Tasneem**
CLEFT LIP (therapy)
- Raji, G. Tasneem**
MOUTH, EDENTULOUS
- Ramalingam, Krishnan**
POLYCYSTIC OVARY SYNDROME
- Ramezanali, Fariba**
POLYCYSTIC OVARY SYNDROME
- Ramezani, Amin**
PRENATAL DIAGNOSIS
- Ramezani, S.**
PHYSICAL ENDURANCE
- Rana, Atif Iqbal**
GASTROSTOMY
- Rana, Mowadat Hussain**
STRESS DISORDERS, POST-TRAUMATIC
- Rana, Muzzamil Jamil Ahmed**
CALCIUM HYDROXIDE

- Ranjbaran, Reza**
PRENATAL DIAGNOSIS
- Rashbrook, Elaine**
DISASTERS
- Rasheed, Dil**
CLEIDOCRANIAL DYSPLASIA (diagnosis)
- Rashid, Amir**
STAT1 TRANSCRIPTION FACTOR
- Rashid, Sadia**
ROOT CANAL OBTURATION
- Rasool, Ghulam**
TOOTH, DECIDUOUS
TOOTH ABNORMALITIES (epidemiology)
- Rauf, Ali**
GLAUCOMA (pathology)
- Raza, Muhammad**
WARFARIN (administration and dosage)
- Razaghi, Mohammad Reza**
URINARY BLADDER CALCULI (therapy)
- Razaghi, Zahra**
MYOFASCIAL PAIN SYNDROMES (therapy)
- Razak, Suhail**
STAT1 TRANSCRIPTION FACTOR
- Read, Robert C.**
ORTHOMYXOVIRIDAE
- Rego, Marcos A.**
BACCHARIS
- Reicher, Stephen**
HEALTH
- Rezaci, S.**
HEALTHCARE FACILITIES, MANPOWER, AND SERVICES
- Rezaee, Rita**
LEARNING
SCHOOLS, MEDICAL
STUDENTS, MEDICAL
- Rezaianzadeh, Abbas**
NUTRITION ASSESSMENT
- Riaz, Muhammad Akram**
DEPRESSION (psychology)
- Riaz, Muhammad Naveed**
DEPRESSION (psychology)
- Ridaarshad**
ORAL SUBMUCOUS FIBROSIS (diagnosis)
- Rizwan, Muhammad**
ROOT CANAL OBTURATION
- Rodrigues, Gabriel**
LIVER ABSCESS, AMEBIC (diagnosis)
- Rokni, M.**
MUSCULOSKELETAL DISEASES (epidemiology)
- Rose, Angela**
HEMORRHAGIC FEVER, EBOLA (therapy)
- Rossignol, Jean Francois**
CORONAVIRUS INFECTIONS (therapy)
- Rostami, Aram**
RADIATION-PROTECTIVE AGENTS
- Rouhi, N.**
DISASTERS
- Roushdy, R.**
CHILD HEALTH
- Rozebahani, Shahla**
ACETYLCYSTEINE
- Sabir, Samina**
PREMATURE BIRTH (prevention and control)
- Sabsabi, Mohamad Mosbah**
TOOTH, IMPACTED
- Sadafiand, S.**
LANGUAGE TESTS
- Sadaghiani, Mahzad Mehrzad**
POLYCYSTIC OVARY SYNDROME
- Sadatmahalleh, Shahideh Jahanian**
ENDOMETRIOSIS (diagnosis)
- Sadatsharifi, Arman**
AMIKACIN (blood)
- Sadeequa, Saleha**
DRUG PRESCRIPTIONS
- Sadeghi, Kheirollah**
PSYCHOTHERAPY
- Sadighi, Mohammad A.M.**
TESTOSTERONE
- Saeed, N.**
MENINGITIS, BACTERIAL (epidemiology)
- Saeed, Saqib**
TUBERCULOSIS, PULMONARY (diagnosis)
- Saeed, Shahzad**
GLAUCOMA (pathology)
- Saeidi, Hojatolah**
PREIMPLANTATION DIAGNOSIS
- Safaei, Akbar**
LEUKEMIA, LYMPHOCYTIC, CHRONIC,
B-CELL (genetics)
- Safarpour, Elham**
LEVOFLOXACIN (pharmacology)
- Sagheb, Mohammad Mahdi**
AMIKACIN (blood)

- Sahito, Muhammad Ameen**
CLEFT LIP (psychology)
- Sahito, Muhammad Amin**
DENTURE, COMPLETE
- sahli, J.**
SMOKING (epidemiology)
- Sajid, Hassan**
MANDIBULAR FRACTURES (diagnosis)
- Salahshoor, Mohammad Reza**
CAROTENOIDS
- Salam, Arsalan Ahmad**
TUBERCULOSIS, PULMONARY (diagnosis)
- Saleem, Hassan**
GASTROSTOMY
- Salehf, Alireza**
STUDENTS, MEDICAL
- Salehnia, Mojdeh**
VITRIFICATION
- Salem, Abdel Halim**
FRUCTOSE (analogs and derivatives)
- Salih, Muhammed**
HEPATITIS C, CHRONIC (therapy)
- Samaan, Gina**
RESPIRATORY TRACT INFECTIONS
- Samad, Fauzia Abdus**
COLORECTAL NEOPLASMS
- Samani, Reza Omani**
SURROGATE MOTHERS
- Samejo, Jmran**
DENTURE, COMPLETE
- Samman, Mohammed I.**
KERATOCONUS (genetics)
- Samsami, Alamtaj**
PRENATAL DIAGNOSIS
- Sana Rehman**
POLIOMYELITIS (prevention and control)
TUBERCULOSIS, PULMONARY (diagnosis)
- Sanauddin, Noor**
INTELLECTUAL DISABILITY
- Sangmesh, Mithare**
PHOTOCHEMOTHERAPY
- Sanggiry, Sujit S.**
SMOKING CESSATION
- Sanyal, Santonu K.**
DIABETIC FOOT (etiology)
- Sarangi, Rachita**
URINARY TRACT INFECTIONS
- Saremi, M.**
MUSCULOSKELETAL DISEASES (epidemiology)
- Sarfraz, Brig Tariq**
EDUCATION
- Sarkari, Bahador**
LEISHMANIASIS (etiology)
- Sarwani, Omran**
TRACHEOSTOMY (adverse effects)
- Sarwani, Saadeya Naser**
TRACHEOSTOMY (adverse effects)
- Sato, T.**
FAMILY PLANNING SERVICES
- Sattar, Nigam**
MOUTH DISEASES (congenital)
- Satyanarayana, Uppala**
POLYCYSTIC OVARY SYNDROME
- Sawabe, Toko**
MICROBIOTA
- Sawabe, Tomoo**
MICROBIOTA
- Sayeedi, M Mir**
PHYSICAL ENDURANCE
- Saylan, Aslihan**
HYALURONIC ACID (pharmacology)
- Scardueli, Cassio Rocha**
DENTAL SCALING
- Scaria, Joy**
SALMONELLA ENTERICA (genetics)
- Schuz, J.**
CARCINOGENS
- Seita, A.**
EDUCATION, MEDICAL
- Selmi, Amina Aitsi**
DISASTERS
- Senechal, Helene**
INFERTILITY, FEMALE
- Senguven, Burcu**
GRANULOMA, PYOGENIC (therapy)
- Senhaji, M.**
QUALITY OF LIFE
- Sequeira, Reginald**
FRUCTOSE (analogs and derivatives)
- Seyed Javad Mowla**
GLYCOPROTEINS
- Seyedi, Fatemeh**
INSULIN (chemical synthesis)

- Shabkhiz, F.**
PHYSICAL ENDURANCE
- Shadmani, Zahra**
CHROMOSOMES, HUMAN, PAIR 9
- Shah, Dania A.**
HEAT STROKE (diagnosis)
- Shah, Murad Ali**
LICHEN PLANUS, ORAL (diagnosis)
- Shah, Syed Amjad**
WARFARIN (administration and dosage)
- Shah, Syed Asif Haider**
CLEIDOCRANIAL DYSPLASIA (diagnosis)
- Shah, Syed Murad A.N.**
ACUTE KIDNEY INJURY (epidemiology)
- Shah, Syed Muzzamil Ali**
DENTAL RECORDS
- Shah, Yousif Ali**
CLEFT LIP (psychology)
- Shaheen, Rafia**
DRUG PRESCRIPTIONS
- Shahmohammadi, R.**
CAMELLIA SINENSIS
- Shahnam, Tariq**
EYE FOREIGN BODIES (surgery)
- Shahrooz, Rasoul**
PYRUVATES (therapeutic uses)
- Shahryari, Jahanbanoo**
LEUKEMIA, LYMPHOCYTIC, CHRONIC, B-CELL (genetics)
- Shaki, Fatemeh**
CERIUM (pharmacology)
- Shams, A.**
MULTIPLE SCLEROSIS
- Shariati, M.**
DIAZINON (pharmacology)
- Shariatzadeh, S.M.A.**
CAMELLIA SINENSIS
- Sharif, Mubashir**
DENTURE, COMPLETE TOOTH, ARTIFICIAL
- Sharifzadeh, Sedigheh**
PRENATAL DIAGNOSIS
- Sharma, Anjali**
FACULTY
- Sharma, Hemlata**
MALONDIALDEHYDE (blood)
- Shaygannejad, V.**
MULTIPLE SCLEROSIS (therapy)
- Sheikh, Muhammad Muneeb**
TRACHOMA (therapy)
- Shekhli, Alia Razookial**
CALCIUM COMPOUNDS
- Sher, Akhtar**
ACUTE KIDNEY INJURY (epidemiology)
- Sheridan, William P.**
HEMORRHAGIC FEVER, EBOLA (therapy)
- Shibl, Atef M.**
PNEUMOCOCCAL INFECTIONS (epidemiology)
- Shirakura, Maya**
TOOTH MOVEMENT
- Shirazi, M.**
LACTOBACILLUS ACIDOPHILUS
- Shirazi, Mandana**
EDUCATION, MEDICAL, CONTINUING
- Shirazi, Reza**
PROSTATITIS (drug therapy)
- Shoaib Rahim**
DENTAL CARE
PROSTHODONTICS
- Shobeiri, Fatemeh**
HYDATIDIFORM MOLE (epidemiology)
- Shojaedin, S.**
MULTIPLE SCLEROSIS (physiopathology)
- Shokri, Saeid**
PROSTATITIS (drug therapy)
- Shokrzadeh, Mohammad**
CERIUM (pharmacology)
- Shoraka, H.R.**
INFANT MORTALITY
- Showraki, Alireza**
CARUM
- Shrikhande, Sunanda**
FACULTY
- Shwarby, Mohamed A.**
MAMMAPLASTY
- Sicvrdrin, M.**
CHILD HEALTH
- Siddiq, Masood**
HEPATITIS C, CHRONIC (therapy)
- Siddique, Wasif**
OTITIS MEDIA, SUPPURATIVE (therapy)
- Siddiqui, Muhammad Adeel**
CLOBETASOL (adverse effects)
- Siddiqui, Salma**
DEPRESSION

- Sifton, C.**
CARCINOGENS
- Sikander, Sihani**
MALNUTRITION (epidemiology)
- Sinha, M. Tech**
EPIDERMIS
- Sirin, Duygu Y.**
STAPHYLOCOCCUS AUREUS
- Sivasubramaniam, P.**
INTENSIVE CARE UNITS, NEONATAL
- Sofizadeh, A.**
INFANT MORTALITY
- Soheili, M.**
MULTIPLE SCLEROSIS (therapy)
- Sohmbizadeh, S.**
DISASTERS
- Soltanalinejad, Farhad**
PYRUVATES (therapeutic uses)
- Soltani Bahram M.**
TRANSFORMING GROWTH FACTOR BETA
- Soltani, Bahram Mohammad**
OCTAMER TRANSCRIPTION FACTOR-3
- Soltani, Behrouz**
STUDENTS, NURSING
- Soltaniarabshahp, Seyed Kamran**
EDUCATION, MEDICAL, CONTINUING
- Soltanpour, J.**
BACTERIAL INFECTIONS (epidemiology)
- Sreelal, T.**
CLEFT LIP (therapy)
MOUTH, EDENTULOUS
- Stanekzai, M.R.**
DRUG USERS
- Storey, Douglas**
RESPIRATORY TRACT INFECTIONS
- Storms, Aaron D.**
RESPIRATORY TRACT INFECTIONS
- Straif, K.**
CARCINOGENS
- Strathdee, S.A.**
DRUG USERS
- Stroberg, Edana**
MENINGIOMA (diagnosis)
- Su, Shao Ching**
TOOTH MOVEMENT
- Suda, Wataru**
MICROBIOTA
- Sulaiman, A.A.**
TUBERCULOSIS (epidemiology)
- Sultan, A.M.**
SALMONELLA ENTERICA (genetics)
- Sultana, Munawar**
DIABETIC FOOT (etiology)
- Syed, Abdus Samad**
COLORECTAL NEOPLASMS
- Sykes, Lisa K.**
HEPATITIS B VACCINES
- Tabaie, Seyed Mehdi**
TRANSPLANTATION
- Tabassum, Arfa**
GENITAL NEOPLASMS, FEMALE (therapy)
- Tabatabaee, Hamidreza**
OUTLIERS, DRG
- Tabibi, Narjes**
LEUKEMIA, LYMPHOCYTIC, CHRONIC,
B-CELL (genetics)
- Taghavian, Fariba**
ORGANOPHOSPHATE POISONING
- Taherii, H.**
MULTIPLE SCLEROSIS
- Tahir, Muhamamd**
DIABETES COMPLICATIONS
- Tahir, Muhammad**
ALBUMINURIA (therapy)
INFERIOR WALL MYOCARDIAL INFARCTION
(physiopathology)
- Taklimi, Amin Golmohammadi**
URINARY BLADDER CALCULI (therapy)
- Talebi, Mehrak**
ENDOMETRIOSIS (diagnosis)
- Talebzadeh, S.**
MYCOPLASMA HOMINIS (isolation and
purification)
- Tam, Jonathan S. Nguyen Van**
ORTHOMYXOVIRIDAE
- Tambo, Ernest**
ZIKA VIRUS
- Tamim, Ham M.**
CORONAVIRUS INFECTIONS
- Tanimoto, Kotaro**
TOOTH MOVEMENT
- Tarabichi, Majd**
FRACTURES, BONE (surgery)
- Tariq, Anum**
DENTISTS

- Tasleem, Munazzah**
COMPUTER COMMUNICATION NETWORKS
- Tasnim, Nasira**
GENITAL NEOPLASMS, FEMALE (therapy)
- Taubenheim, Brian**
HEMORRHAGIC FEVER, EBOLA (therapy)
- Tavalaee, Marziyeh**
ACETYLCYSTEINE
- Taylor, Raymond**
HEMORRHAGIC FEVER, EBOLA (therapy)
- Tayyab Rahman, Daoud**
RADIOLOGY, INTERVENTIONAL
- Tayyem, R.F.**
MEALS
- Teles, Alisson R.**
SPINE (surgery)
- Titaley, Christiana R.**
RESPIRATORY TRACT INFECTIONS
- Tiwari, Pramod K.**
TUBERCULOSIS, MULTIDRUG-RESISTANT (epidemiology)
- Todd, C.S.**
DRUG USERS
- Toorani, Mohamed Qasim**
AMINOLEVULINIC ACID (analogues and derivatives)
- Tsuka, Yuji**
TOOTH MOVEMENT
- Tufail, Shazia**
EDUCATION, MEDICAL
- Tysinger, James**
PROFESSIONALISM
- Uddin, Fares**
HAND (surgery)
- Ugrappa, Sridevi**
PHOTOCHEMOTHERAPY
- UI Ehsan, Hafiz Rabbi**
CALCIUM HYDROXIDE
- UI Hamid, M. Waheed**
TOOTHACHE (therapy)
- UI Hamid, Waheed**
TOOTH MOVEMENT
- UI Haq, Arfan**
TOOTH MOVEMENT
- UI Hassan, Wahaj**
ALBUMINURIA (therapy)
- Umar, Shaaray Abrar**
DEPRESSION (epidemiology)
- Ur Rahman, Mahmood**
STRESS DISORDERS, POST-TRAUMATIC
- Ur Rehman, Muhammad Matloob**
NEURALGIA (therapy)
- Uras, P.A.**
TUBERCULOSIS, MULTIDRUG-RESISTANT (diagnosis)
- Urn, Wei S.**
ORTHOMYXOVIRIDAE
- Uyeki, Timothy M.**
RESPIRATORY TRACT INFECTIONS
- Vaezi, Gholamhassan**
ORGANOPHOSPHATE POISONING
- Valhov, D.**
DRUG USERS
- Valiani, M.**
MULTIPLE SCLEROSIS (therapy)
- Valibeigi, Behnaz**
LEUKEMIA, LYMPHOCYTIC, CHRONIC, B-CELL (genetics)
- Varsani, Harsha**
ORTHOMYXOVIRIDAE
- Vellamchetla, Kiran**
PHOTOCHEMOTHERAPY
- Velpula, Nagalaxmi**
PHOTOCHEMOTHERAPY
- Vinayak, Prasad**
TOBACCO
- Voisine, Jimmy**
MENINGOCOCCAL INFECTIONS (epidemiology)
- Vojoudi, E.**
GLYCOCONJUGATES
- Voukeng, Igor K.**
EUPHORBIACEAE
- Vyas, RK**
MALONDIALDEHYDE (blood)
- Vyas, Shalini**
MALONDIALDEHYDE (blood)
- Wagih, Wael**
TOXOPLASMOSIS, OCULAR (therapy)
- Waheed, Akbar**
COLISTIN (administration and dosage)
- Waheed, Anam Akbar**
ABORTION, SPONTANEOUS (therapy)
- Waheed, Raiha**
DRUG PRESCRIPTIONS
- Wahyuninerum, Yunita**
RESPIRATORY TRACT INFECTIONS

- Warraich, Riaz Ahmed**
MANDIBULAR FRACTURES (diagnosis)
- Warren, Travis**
HEMORRHAGIC FEVER, EBOLA (therapy)
- Wiemers, Marcy**
PROFESSIONALISM
- Wise, Helen**
ORTHOMYXOVIRIDAE
- Wright, Claire**
MENINGOCOCCAL INFECTIONS (epidemiology)
- Yaghmaei, P.**
HEPATOLENTICULAR DEGENERATION
- Yaghoobi, Mohammad**
URINARY BLADDER CALCULI (therapy)
- Yamini, Nazila**
VITRIFICATION
- Yaqub, Mehboob**
TOURETTE SYNDROME (etiology)
- Yasmin, Sumaira**
PREMATURE BIRTH (prevention and control)
- Yazdani, Khalid**
GLUCOSEPHOSPHATE DEHYDROGENASE DEFICIENCY
- Yazdanp, Shahram**
EDUCATION, MEDICAL
- Yazdkhasti, Fariba**
INFERTILITY, FEMALE
- Yelda, Fitra**
RESPIRATORY TRACT INFECTIONS
- Yeretzian, J.S.**
NATIONAL HEALTH PROGRAMS
- Yilmaz, Ibrahim**
STAPHYLOCOCCUS AUREUS
- Younes, Hamzah A. Bani**
RUBBER DAMS
- Yousefi, H.**
DISASTERS
- Zafar, Muhammad Rafiq**
NEPHROSTOMY, PERCUTANEOUS
- Zahid, Maham**
MALNUTRITION (epidemiology)
- Zahid, Salman**
SCHIZOPHRENIA (drug therapy)
- Zahir, Madiha**
DENGUE (psychology)
- Zahiruddin, Quazi Syed**
FACULTY
- Zahoor, Farnaz**
PREMATURE BIRTH (prevention and control)
- Zahra, Tatima Tu**
TOOTH ABNORMALITIES (epidemiology)
- Zaidan, Hind**
ESOPHAGEAL ATRESIA (diagnosis)
- Zain, Mohd Ali Mat**
CLEFT LIP (surgery)
- Zaki, Arqam Bakhtyar**
AZADIRACHTA
- Zaman, Hira**
TOOTH INJURIES
PULPITIS (therapy)
- Zamani, S.**
LACTOBACILLUS ACIDOPHILUS
- Zambon, Maria**
CORONAVIRUS INFECTIONS (therapy)
- Zamiri, M.J.**
DIAZINON (pharmacology)
- Zand, Farid**
NUTRITION ASSESSMENT
- Zandi, Afsaneh**
SURROGATE MOTHERS
- Zarep, Zahra**
STUDENTS, DENTAL
- Zedini, C.**
SMOKING (epidemiology)
- Zeeshan, N.**
HEPATITIS C, CHRONIC (therapy)
- Zegeye, Bidir**
SHIGELLA
- Ziaei, Jamal Eivazi**
LEUKEMIA, MYELOID, ACUTE
- Znait, A. Taleb**
INTENSIVE CARE UNITS, NEONATAL
- Zodpey, Sanjay**
FACULTY
- Zuberi, Bader Faiyaz**
HEPATITIS C, CHRONIC (therapy)
- Zulfiqar, Tehzeeb**
MALNUTRITION (epidemiology)

Appendix II

**List of EMR Journals Indexed in
IMEMR**

(by country)

Journal	ISSN
Afghanistan (2)	
Afghan Medical Journal	N/A
AFJPH-Afghanistan Journal of Public Health	2308-2895
Bahrain (3)	
Arab Journal for Food and Nutrition	1608-8352
Bahrain Medical Bulletin	1012-8298
JBMS-Journal of the Bahrain Medical Society	1015-6321
Egypt (141)	
AAMJ-Al-Azhar Assiut Medical Journal	1687-1693
African Journal of Urology	1110-5704
Afro-Arab Liver Journal	1687-224X
Ain-Shams Journal of Forensic Medicine and Clinical Toxicology	1687-1030
Ain-Shams Medical Journal	0002-2144
AJAIC-Alexandria Journal of Anaesthesia and Intensive Care	N/A
AJM-Alexandria Journal of Medicine	2090-5068
Al-Azhar Journal of Dental Science	1110-6751
Al-Azhar Medical Journal	1110-0400
Alexandria Dental Journal	1110-015X
Alexandria Journal of Food Science and Technology	1687-3920
Alexandria Journal of Hepatogastroenterology	2090-1879
Alexandria Journal of Pediatrics	1687-9945
Alexandria Journal of Pharmaceutical Sciences	1110-1792
Alexandria Journal of Veterinary Science [AJVS]	1110-2407
Alexandria Medical Journal [The]	0516-5849
Annals of Pediatric Surgery	1687-4137
Applied Endocrinology in Egypt	1110-1776
Arab Family Health and Population	N/A
Arab Journal of Biotechnology	1110-6875
Arab Journal of Gastroenterology	1687-1979
Arab Journal of Laboratory Medicine [The]	1110-1822
ASJOG-Ain-Shams Journal of Obstetrics and Gynecology	1697-2193
ASNJ-Alexandria Scientific Nursing Journal	1687-3858
Assiut Medical Journal	1110-0494
Assiut University Bulletin for Environmental Researches	1110-6107
Assiut Veterinary Medical Journal	N/A

Journal	ISSN
Benha Medical Journal	1110-208X
Bulletin of Alexandria Thoracic Association	1687-997X
Bulletin of Faculty of Pharmacy-Cairo University	1110-0931
Bulletin of Faculty of Physical Therapy-Cairo University	1110-6611
Bulletin of Pharmaceutical Sciences-Assiut University	1110-0052
Bulletin of the Faculty of Science-University of Alexandria	0568-9619
Bulletin of the National Nutrition Institute of the Arab Republic of Egypt	N/A
Bulletin of the National Research Centre	1110-0591
Bulletin of the Ophthalmological Society of Egypt	0078-5342
Childhood and Development Quarterly	1110-8681
Clinical Diabetes	0891-8929
EDJ-Egyptian Dental Journal	0070-9484
Egyptian Heart Journal [The]	1110-2608
Egyptian Journal of Anatomy [The]	1110-2144
Egyptian Journal of Biomedical Engineering	1012-5558
Egyptian Journal of Biophysics and Biomedical Engineering	1110-8525
Egyptian Journal of Breastfeeding	N/A
Egyptian Journal of Bronchology [The]	1687-8426
Egyptian Journal of Cardiothoracic Anesthesia	1687-9090
Egyptian Journal of Cataract and Refractive Surgery [The]	N/A
Egyptian Journal of Chemistry	0449-2285
Egyptian Journal of Chest Diseases and Tuberculosis [The]	0422-7638
Egyptian Journal of Community Medicine [The]	1110-1865
Egyptian Journal of Dermatology and Andrology	1110-7650
Egyptian Journal of Diabetes [The]	N/A
Egyptian Journal of Food Science	1110-0192
Egyptian Journal of Genetics and Cytology	0046-161X
Egyptian Journal of Histology [The]	1110-0559
Egyptian Journal of Hospital Medicine [The]	1687-2002
Egyptian Journal of Immunology [The]	1110-4902
Egyptian Journal of Medical Human Genetics [The]	1110-8630
Egyptian Journal of Medical Laboratory Sciences	1110-5593
Egyptian Journal of Microbiology	0022-2704
Egyptian Journal of Neonatology [The]	1110-8991
Egyptian Journal of Neurology, Psychiatry and Neurosurgery [The]	1110-1083

Journal	ISSN
Egyptian Journal of Nutrition	1687-1235
Egyptian Journal of Nutrition and Health	1687-7950
Egyptian Journal of Occupational Medicine	1110-1881
Egyptian Journal of Otolaryngology [The]	1012-5574
Egyptian Journal of Paediatrics [The]	1687-1677
Egyptian Journal of Pediatric Allergy and Immunology [The]	1687-1642
Egyptian Journal of Pharmaceutical Sciences	0301-5068
Egyptian Journal of Physiological Sciences	0301-8660
Egyptian Journal of Psychiatry [The]	1110-1105
Egyptian Journal of Schistosomiasis and Infectious and Endemic Diseases	1110-7278
Egyptian Journal of Surgery [The]	1110-1121
Egyptian Journal of Urology	1110-5712
Egyptian Journal of Veterinary Science	1110-0222
Egyptian Liver Journal	2090-6218
Egyptian Medical Journal of the National Research Center	1687-1278
Egyptian Orthodontic Journal	1110-435x
Egyptian Orthopaedic Journal [The]	1110-1148
Egyptian Pharmaceutical Journal [National Research Center]	1687-4315
Egyptian Population and Family Planning Review [The]	1110-1156
Egyptian Rheumatologist [The]	1110-1164
Egyptian Rheumatology and Rehabilitation	1110-161X
Egyptian Science Magazine [The]	1687-3815
EJB-Egyptian Journal of Biochemistry and Molecular Biology [The]	1687-1502
EJENTAS-Egyptian Journal of ENT and Allied Sciences	2090-0740
EJMM-Egyptian Journal of Medical Microbiology [The]	1110-2179
EMHJ-Eastern Mediterranean Health Journal	1020-3397
Gazette of the Egyptian Paediatric Association [The]	1110-6638
Health Services Journal of the Eastern Mediterranean Region	1014-9899
JESN-Journal of Egyptian Society of Nephrology [The]	N/A
Journal of Advanced Research	2090-1232
Journal of Childhood Studies	2090-0619
Journal of Drug Research of Egypt	0085-2406
Journal of Hepatology, Gastroenterology and Infectious Diseases	1110-0796
Journal of High Institute of Public Health [The]	2357-0601
Journal of Legal Medicine and Forensic Sciences [The]	1110-6468

Journal	ISSN
Journal of the Arab Society for Medical Research	1687-4293
Journal of the Egyptian Medical Association [The]	0013-2411
Journal of the Egyptian National Cancer Institute	1110-0362
Journal of the Egyptian Public Health Association [The]	0013-2446
Journal of the Egyptian Society of Endocrinology, Metabolism and Diabetes [The]	1110-1245
Journal of the Egyptian Society of Obstetrics and Gynecology [The]	0258-3216
Journal of the Egyptian Society of Parasitology	1110-0583
Journal of the Egyptian Society of Pharmacology and Experimental Therapeutics [The]	N/A
Journal of the Egyptian Society of Toxicology	1110-127X
Journal of the Medical Research Institute-Alexandria University	1110-0133
JPC-Journal of Pediatric Club [The]	N/A
Kasr El Aini Journal of Surgery	0022-9237
Kasr El-Aini Medical Journal	N/A
Kidney Forum	1369-3050
Mansoura Journal of Pharmaceutical Sciences	1110-1318
Mansoura Medical Bulletin	1012-5590
Mansoura Medical Journal	1110-211X
MDV-Molecular Diagnosis and Vaccine	1687-2010
Medical Journal of Ahmed Maher Teaching Hospital [The]	N/A
Medical Journal of Cairo University [The]	0045-3803
Medical Journal of Teaching Hospitals and Institutes [The]	1110-2039
Minoufia Medical Journal	1110-2098
MJFCT-Mansoura Journal of Forensic Medicine and Clinical Toxicology	1110-5437
Neonatology	1687-0492
New Egyptian Journal of Medicine [The]	1110-1946
Pan Arab Journal of Orthopaedic and Trauma [The]	1607-4912
Population Researches and Studies	0255-898X
Population Sciences	N/A
Population Studies	1110-1342
PUJ-Parasitologists United Journal	1687-7942
Scientific Journal of Al-Azhar Medical Faculty [Girls] [The]	1110-2381
Scientific Journal of El-Minia Faculty of Medicine [The]	1110-2446
Scientific Medical Journal	1110-5607
Sohag Medical Journal	1110-7529
South Valley Medical Journal	1110-7529

Journal	ISSN
Suez Canal University Medical Journal	1110-6999
Tanta Medical Journal	1110-1415
Tanta Medical Sciences Journal	1687-5788
Veterinary Medical Journal	1110-1423
Weekly Epidemiology Monitor	2224-4220
Zagazig Journal of Forensic Medicine and Toxicology	1687-160X
Zagazig Journal of Pharmaceutical Sciences	1110-5089
Zagazig Medical Association Journal	1110-2322
Zagazig University Medical Journal	1110-1431
Iraq (32)	
Al-Kindy College Medical Journal	1810-9543
Almustansiriya Journal of Pharmaceutical Sciences	1815-0993
Annals of the College of Medicine-Mosul	0028-1446
Basrah Journal of Surgery	1683-3589
Bulletin of Endemic Disease-Baghdad	0007-4845
DMJ-Dohuk Medical Journal	2071-7326
IMJ-Iraqi Medical Journal	0304-4564
IOJ-Iraqi Orthodontic Journal	1816-0581
IPMJ-Iraqi Postgraduate Medical Journal	1608-8360
Iraqi Army Medical Journal	N/A
Iraqi Journal of Agriculture	1818-6645
Iraqi Journal of Biotechnology	N/A
Iraqi Journal of Community Medicine	1684-5382
Iraqi Journal of Medical Sciences	1681-6579
Iraqi Journal of Microbiology	N/A
Iraqi Journal of Pharmaceutical Sciences	1683-3597
Iraqi Journal of Tropical Disease Researches	1814-0823
Iraqi New Medical Journal	2409-5931
Journal of Baghdad College of Dentistry	1680-0057
Journal of Basic Medical Sciences	N/A
Journal of Community Medicine	N/A
Journal of Contemporary Medical Sciences	2415-1629
Journal of Dohuk University	1812-7568
Journal of Karbala University	1813-0410
Journal of the Faculty of Medicine-Baghdad	0041-9419

Journal	ISSN
Kufa Medical Journal	N/A
Medical Journal of Basrah University [The]	0253-0759
Medical Journal of Tikrit University [The]	N/A
New Iraqi Journal of Medicine [The]	1817-5562
Risafa Medical Journal	N/A
Scientific Nursing Journal	1812-2388
Zanco Journal of Medical Sciences	1995-5588
Islamic Republic of Iran (262)	
ABJS-Archives of Bone and Joint Surgery [The]	2345-4644
Acta Medica Iranica	0044-6025
Advances in Cognitive Science	1561-4174
AJMB-Avicenna Journal of Medical Biotechnology	2008-2835
Anatomical Sciences Journal [ASJ]	N/A
Anesthesiology and Pain Medicine	2228-7523
Annals of Military and Health Sciences Research	2383-1960
Applied Food Biotechnology	2345-5357
Archive of Breast Cancer	2383-0425
Archives of Clinical Infectious Diseases	2641-2345
Archives of Iranian Medicine	1029-2977
Archives of Medical Laboratory Sciences New	2423-6241
Archives of Trauma Research	2251-953X
Armaghane-danesh	1728-6506
ARYA Atherosclerosis Journal	1735-3955
Asia Oceania Journal of Nuclear Medicine and Biology	2322-5718
Asian Journal of Sports Medicine	2008-000X
Audiology	1735-1936
Avicenna Journal of Phytomedicine [AJP]	2228-7930
Basic and Clinical Neuroscience	2008-126X
BCCR-Basic and Clinical Cancer Research	2228-6527
BEAT-Bulletin of Emergency and Trauma	2322-2522
Bina Journal of Ophthalmology	1026-6399
Caspian Journal of Neurological Sciences	2383-4307
Cell Journal [Yakhteh]	2228-5806
Community Health	2386-3033
DARU-Journal of Pharmaceutical Sciences	1560-8115

Journal	ISSN
DENA-Quarterly Journal of Yasuj Faculty of Nursing and Midwifery	1735-8450
Dermatology and Cosmetic Quarterly	2008-7470
DRJ-Dental Research Journal	1735-3327
EBNESINA-Medical Journal of Military Medicine [The]	1735-9503
Emergency	2345-4563
Endovascular Journal	2008-1812
Environmental Health Engineering and Management Journal	2423-3765
Feyz-Journal of Kashan University of Medical Sciences	1029-7855
Frontiers in Biomedical Technologies	2345-5829
Gastroenterology and Hepatology from Bed to Bench	2010-2258
Genetics in the 3rd Millennium	2423-7159
Govaresh	1560-7186
HAKIM Research Journal	1561-252X
HAYAT-Journal of Faculty of Nursing and Midwifery [The]	1735-2215
Health in Emergencies and Disasters Quarterly [HDQ]	N/A
Health Information Management	1735-7853
Hepatitis Monthly	1735-143X
Holistic Nursing and Midwifery Journal	New 2251-8460
Homa-ye-Salamat	2008-2002
Hormozgan Medical Journal	1735-2223
Hospital-Journal of Iranian Scientific Hospital Association	2008-1928
IBJ-Iranian Biomedical Journal	1028-852X
IEJ-Iranian Endodontic Journal	1735-7497
IHJ-Iranian Heart Journal	1735-7306
IJBC-Iranian Journal of Blood and Cancer	2008-4595
IJB-Iranian Journal of Biotechnology	1728-3043
IJCBNM-International Journal of Community Based Nursing and Midwifery	2322-2476
IJCN-Iranian Journal of Child Neurology	1735-4668
IJDO-Iranian Journal of Diabetes and Obesity	2008-6792
IJEM-Iranian Journal of Endocrinology and Metabolism	1683-4844
IJFS-International Journal of Fertility and Sterility	2008-076X
IJHOSCR-International Journal of Hematology-Oncology and Stem Cell Research	2008-2207
IJHPM-International Journal of Health Policy and Management	N/A
IJHS-Iranian Journal of Health Sciences	2322-553X
IJI-Iranian Journal of Immunology	1735-1383

Journal	ISSN
IJKD-Iranian Journal of Kidney Diseases	1735-8582
IJMCM-International Journal of Molecular and Cellular Medicine	2251-9637
IJME-Iranian Journal of Medical Education	1608-9359
IJM-Iranian Journal of Microbiology	2008-3289
IJML-International Journal of Medical Laboratory New	2423-3706
IJMS-Iranian Journal of Medical Sciences	0253-0716
IJN-Iranian Journal of Neonatology	2251-7510
IJOH-International Journal of Occupational Hygiene	2008-5109
IJO-Iranian Journal of Orthodontics	1735-5087
IJP-International Journal of Pediatrics	2345-5047
IJPM-International Journal of Preventive Medicine	2008-7802
IJPR-Iranian Journal of Pharmaceutical Research	1735-0328
IJRM-International Journal of Reproductive Biomedicine	2476-4108
IJVM-Iranian Journal of Veterinary Medicine	2251-8894
International Cardiovascular Research Journal	2251-9130
International Journal of Endocrinology and Metabolism	1726-913X
International Journal of Environmental Research	1735-6865
International Journal of Environmental Science and Technology	1735-1472
International Journal of High Risk Behaviors and Addiction	2251-8711
International Journal of Mycobacteriology	2212-5531
International Journal of Occupational and Environmental Medicine	2008-6520
International Journal of Organ Transplantation Medicine	2008-6490
International Journal of Radiation Research	2322-3243
International Journal of Women's Health and Reproduction Sciences	N/A
Iran Journal of Nursing	2008-5923
Iran Occupational Health	1735-5133
Iranian Journal of Allergy, Asthma and Immunology	1735-1502
Iranian Journal of Arthropod-Borne Diseases	1735-7179
Iranian Journal of Basic Medical Sciences	2008-3866
Iranian Journal of Cancer Prevention	2008-2398
Iranian Journal of Dermatology	0021-082X
Iranian Journal of Diabetes and Lipid Disorders	1726-7544
Iranian Journal of Emergency Medicine	N/A
Iranian Journal of Environmental Health Science and Engineering	1735-1979
Iranian Journal of Epidemiology	1735-7489

Journal	ISSN
Iranian Journal of Health and Environment	2008-2029
Iranian Journal of Medical Microbiology	1735-8612
Iranian Journal of Medical Physics	1735-160X
Iranian Journal of Nuclear Medicine	1681-2824
Iranian Journal of Nursing and Midwifery Research [IJNMR]	1735-9066
Iranian Journal of Nursing Research	1735-7012
Iranian Journal of Nutrition Sciences and Food Technology	1735-7756
Iranian Journal of Obstetric, Gynecology and Infertility [The]	1680-2993
Iranian Journal of Ophthalmology	1735-4153
Iranian Journal of Otorhinolaryngology	1560-1293
Iranian Journal of Parasitology	1735-7020
Iranian Journal of Pediatrics	2008-2142
Iranian Journal of Psychiatric Nursing	2345-2501
Iranian Journal of Psychiatry	1735-4587
Iranian Journal of Psychiatry and Behavioral Sciences	1735-8639
Iranian Journal of Psychiatry and Clinical Psychology [ANDEESHEH VA RAFTAR]	1735-4315
Iranian Journal of Public Health	0304-4556
Iranian Journal of Radiology	1735-1065
Iranian Journal of Veterinary Research	1728-1997
Iranian Rehabilitation Journal	1735-3602
IRJNS - Iranian Journal of Neurosurgery	New 2423-6497
JBUMS-Journal of Babol University of Medical Sciences	1561-4107
JCR-Journal of Craniomaxillofacial Research	5489-2345
JCVTR-Journal of Cardiovascular and Thoracic Research	2008-5117
JDB-Journal of Dental Biomaterials	2383-3971
JDT-Journal of Dentistry Tehran University of Medical Sciences	1735-2150
JEHSD-Journal of Environmental Health and Sustainable Development	New 2426-6267
JFH-Journal of Fasting and Health	N/A
JMB-Journal of Medical Bacteriology	2251-8649
JMRH-Journal of Midwifery and Reproductive Health	N/A
JMR-Journal of Medical Research	1728-1962
JNE-Journal of Nursing Education	3812-2322
JNMS-Journal of Nursing and Midwifery Sciences	2345-5756
JNP-Journal of Nephropathology	2251-8363
Journal of Advances in Medical Education and Professionalism	2322-2220

Journal	ISSN
Journal of Anesthesiology and Pain	2228-6659
Journal of Arak University of Medical Sciences-Rahavard Danesh	1735-5338
Journal of Birjand University of Medical Sciences	N/A
Journal of Cardio-Thoracic Medicine	2345-2447
Journal of Client-Centered Nursing Care	N/A
Journal of Clinical Excellence	2322-391X
Journal of Dental Materials and Techniques	2322-4150
Journal of Dental Medicine-Tehran University of Medical Sciences	1024-641X
Journal of Dental Research, Dental Clinics, Dental Prospects	2008-210X
Journal of Dental School-Shahid Beheshti University of Medical Sciences	1735-7683
Journal of Dentistry-Shiraz University of Medical Sciences	1728-3426
Journal of Environmental Studies	1025-8620
Journal of Family and Reproductive Health	1735-8949
Journal of Fundamentals of Mental Health [The]	1028-6918
Journal of Gorgan University of Medical Sciences	1562-4765
Journal of Guilan University of Medical Sciences	2008-4048
Journal of Health Administration	2008-1200
Journal of Health and Safety at Work	2251-807X
Journal of Health Management and Informatics [JHMI]	2322-1097
Journal of Health Promotion Management [JHPM]	2251-8614
Journal of Health Sciences and Surveillance System	2345-2218
Journal of Health Scope	2251-8959
Journal of Health-Based Research New	2423-7639
Journal of Hearing Sciences and Otolaryngology	N/A
Journal of Hygiene and Health	1735-2363
Journal of Injury and Violence Research	2008-2053
Journal of Isfahan Dental School	1735-255X
Journal of Isfahan Medical School	1027-7595
Journal of Islamic Dental Association of Iran [The]-JIDA	1024-6428
Journal of Jahrom University of Medical Sciences	2008-7993
Journal of Kerman University of Medical Sciences	1023-9510
Journal of Kermanshah University of Medical Sciences [KUMS]	2251-9068
Journal of Lasers in Medical Sciences	2008-9783
Journal of Mashhad Dental School	1560-9286
Journal of Mazandaran University of Medical Sciences	1735-9260

Journal	ISSN
Journal of Medical Council of Islamic Republic of Iran	1562-1073
Journal of Medical Education	1735-3998
Journal of Medicinal Plants	1684-0240
Journal of Minimally Invasive Surgical Sciences	2251-7022
Journal of Modern Medical Information Science	N/A
Journal of Modern Rehabilitation	2008-2576
Journal of Neyshabur University of Medical Sciences	2383-3203
Journal of Nursing and Midwifery Quarterly-Shaheed Beheshti University of Medical Sciences and Health Services	1605-8941
Journal of Ophthalmic and Vision Research	2008-2010
Journal of Paramedical Sciences New	2008-496X
Journal of Paramedical Sciences and Rehabilitation	2322-5238
Journal of Patient Safety and Quality Improvement	2345-4482
Journal of Periodontology and Implant Dentistry	2008-7748
Journal of Practice in Clinical Psychology	2423-5822
Journal of Preventive Medicine	N/A
Journal of Qazvin University of Medical Sciences [The]	1561-3666
Journal of Rafsanjan University of Medical Sciences	1735-3165
Journal of Rehabilitation	1607-2960
Journal of Rehabilitation Sciences and Research [JRSR]	2345-6167
Journal of Reproduction and Infertility	2228-5482
Journal of Research in Behavioural Sciences	1735-2029
Journal of Research in Dental Sciences	2008-4676
Journal of Research in Health Sciences [JRHS]	2228-7795
Journal of Research in Medical Sciences	1735-5311
Journal of Research on History of Medicine [The]	N/A
Journal of Sabzevar University of Medical Sciences	1606-7487
Journal of Safety Promotion and Injury Prevention	2345-2455
Journal of School of Public Health and Institute of Public Health Research	1735-7586
Journal of Screening and Geographical Medicine	1735-7594
Journal of Shaheed Sadoughi University of Medical Sciences and Health Services	1562-272X
Journal of Shahrekord University of Medical Sciences	1735-1448
Journal of Student Research Committee [BEYHAGH]	2008-0328
Journal of Tehran University Heart Center [The]	1735-8620
Journal of Veterinary Research	2008-2525
Journal of Zahedan University of Medical Sciences and Health Services	1735-076X

Journal	ISSN
Journal of Zanjan University of Medical Sciences and Health Services	1606-9366
JPC-Journal of Pharmaceutical Care	2322-4630
JPN-Journal of Pediatric Nephrology	N/A
JRH-Journal of Research and Health	2251-6395
JRMS-Journal of Research in Medical Sciences	1735-1995
JRRS-Journal of Research in Rehabilitation Sciences	1735-7519
Jundishapur Journal of Microbiology [JJM]	2008-3645
Jundishapur Journal of Natural Pharmaceutical Products	1735-7780
Jundishapur Scientific Medical Journal	2252-052x
KOOMESH-Journal of Semnan University of Medical Sciences	1608-7046
Medical Journal of Mashad University of Medical Sciences	1735-4013
Medical Journal of Tabriz University of Medical Sciences and Health Services	1608-5671
Medical Journal of the Islamic Republic of Iran	1016-1430
Medical Laboratory Journal	1735-9007
Medical Sciences Journal of Islamic Azad University	1023-5922
Medical-Surgical Nursing Journal	2322-178X
MEJC-Middle East Journal of Cancer	2008-6709
Middle East Journal of Digestive Diseases	2008-5230
Modares Journal of Medical Sciences, Pathobiology	1562-9554
Nanomedicine Journal	2322-3049
Nephro-Urology Monthly	2251-7006
Novelty in Biomedicine	2345-3346
Nursing and Midwifery Research	1753-5001
Nursing Practice Today	2383-1154
Nutrition and Food Sciences Research	2383-0441
Ofogh-E-Danesh	1735-1855
Payavard-Salamat	1735-8132
Payesh-Health Monitor	1680-7626
Pejouhandeh: Bimonthly Research Journal	1735-1022
Physical Treatments: Specific Physical Therapy Journal	2423-5830
Qom University of Medical Sciences Journal	1735-7799
Quarterly Journal of Medical Ethics	2008-4374
Quarterly Journal of Medical Law	N/A
Quarterly Scientific Journal of Relief and Rescue	2008-4544
Razi Journal of Medical Sciences	2228-7043

Journal	ISSN
Reports of Radiotherapy and Oncology	2345-3192
Research in Cardiovascular Medicine	2251-9572
Reviews in Clinical Medicine [RCM]	2345-6256
RMM-Research in Molecular Medicine	2322-1348
Sadra Medical Sciences Journal	N/A
Salmand-Iranian Journal of Aging	1735-806X
Scientific and Research Journal of Army University of Medical Sciences-JAUMS	1727-1789
Scientific Journal of Forensic Medicine	1027-1457
Scientific Journal of Iranian Blood Transfusion Organization [The]	1027-9520
Scientific Journal of Kurdistan University of Medical Sciences	1560-652X
Shenakht Journal of Psychology and Psychiatry	N/A
Social Determinants of Health	2423-3560
Social Welfare Quarterly	1735-8191
Strides in Development of Medical Education	1735-4242
Tanaffos	1735-0344
Teb Va Tazkie	1608-2397
Tehran University Medical Journal [TUMJ]	1683-1764
Thrita Student Journal of Medical Sciences	2251-8312
TIPS-Trends in Pharmaceutical Sciences	2423-3722
Toloo-e-Behdasht	1728-5127
Trauma Monthly	2251-7464
Urology Journal	1735-1308
WJPS-World Journal of Plastic Surgery	2228-7914
Yafteh Journal	1563-0773
Zahedan Journal of Research in Medical Sciences	N/A
Jordan (9)	
Arab Journal of Psychiatry [The]	1016-8923
Dirasat	1026-3764
Jordan Journal of Pharmaceutical Sciences	1995-7157
Jordan Medical Journal	0446-9283
Journal of the Royal Medical Services	2078-8703
Medical Journal of Islamic World Academy of Sciences	1016-3360
Pan Arab Medical Journal	N/A
Population Bulletin of ESCWA	0258-1914
Smile Dental Journal	2072-473X

Journal	ISSN
Kuwait (6)	
Bulletin of Nutrition and Food	N/A
Bulletin of the Kuwait Institute for Medical Specialization	N/A
GJO-Gulf Journal of Oncology [The]	2078-2101
KMJ-Kuwait Medical Journal	0023-5776
Medical Arabization	N/A
Medical Principles and Practice	1011-7571
Lebanon (11)	
ACES-Actualites Cliniques et Scientifiques	1683-8068
AJU-Arab Journal of Urology	2090-598X
Arab Dental Journal	N/A
IAJD-International Arab Journal of Dentistry	2218-0885
JLDA-Journal of the Lebanese Dental Association	1810-9632
Journal of the Arab Neonatology Forum	1812-1756
Lebanese Science Journal	1561-3410
LMJ-Lebanese Medical Journal	0023-9852
Middle East Journal of Anesthesiology	0544-0440
Middle East Journal of Family Medicine	N/A
MJEM- Mediterranean Journal of Emergency Medicine	2222-9442
Libya (6)	
DMJ-Derna Medical Journal	N/A
Garyounis Medical Journal	0254-7198
JMJ-Jamahiriya Medical Journal	2079-1216
Libyan Journal of Infectious Diseases [The]	N/A
LJM-Libyan Journal of Medicine	1993-2820
Tabib Attifil Alarabi	N/A
Morocco (7)	
Bulletin Epidemiologique	0851-8238
ISESCO Journal of Science and Technology	2028-8077
Journal du Practicien	1113-5667
Maroc Medical	0253-4053
Revue Marocaine de Chirurgie Orthopedique et Traumatologique	N/A
Revue Marocaine de Medecine et Sante	0251-0758
Revue Marocaine des Maladies de L'Enfant	N/A

Journal	ISSN
Oman (3)	
Oman Journal of Ophthalmology	0974-620X
Oman Medical Journal	1999-768X
SQUMJ-Sultan Qaboos University Medical Journal	2075-051X
Pakistan (92)	
Al-Shifa Journal of Ophthalmology	1990-3863
Anaesthesia, Pain and Intensive Care	1607-8322
Annals Abbassi Shaheed Hospital and Karachi Medical and Dental College	1563-3241
Annals of Jinnah Postgraduate Medical Centre - Karachi	N/A
Annals of King Edward Medical College	1684-6680
APMC-Annals of Punjab Medical College	2077-9143
Bahria Journal of Professional Psychology	1816-0840
Baqai Journal of Health Sciences	2313-4423
Biomedica	1992-4852
Challenge-Quarterly [The]	0528-7944
Community Medicine	0301-7265
Diabetes Digest	1369-7501
Esculapio	2309-3080
FWU Journal of Social Sciences	1995-1272
GJMS-Gomal Journal of Medical Sciences	1819-7973
Hamdard Medicus	0250-7188
Health [The]	2218-3299
IJEHSR-International Journal of Endorsing Health Science Research	2307-3748
Infectious Diseases Journal of Pakistan	1027-0299
International Journal of Pathology	1810-0155
International Journal of Women Empowerment	2413-4252
Isra Medical Journal	2073-8285
JAMC-Journal of Ayub Medical College-Abbottabad-Pakistan	1025-9589
JCPSP-Journal of the College of Physicians and Surgeons Pakistan	1022-386X
JDUHS-Journal of the Dow University of Health Sciences	1995-2198
JIIMC-Journal of Islamic International Medical College [The]	1815-4018
JIMDC-Journal of Islamabad Medical and Dental College	2227-3875
JKCD-Journal of Khyber College of Dentistry	2220-2633
JLUMHS-Journal of the Liaquat University of Medical Health Sciences	1729-0341
JOPDAK-Journal of the Pakistan Dental Association Karachi	1680-2292

Journal	ISSN
Journal of Basic and Applied Sciences	1814-8085
Journal of Medical Sciences	1682-4474
Journal of Medical Sciences	1997-3438
Journal of Medical Students	N/A
Journal of Nephrology Urology and Transplantation	1606-9331
Journal of Sheikh Zayed Medical College [JSZMC]	2078-8274
Journal of Surgery [The]	1681-4517
Journal of the Pakistan Prosthodontics Association [JPPA]	2308-8613
JPAD-Journal of Pakistan Association of Dermatologists	1560-9014
JPDA-Journal of the Pakistan Dental Association	1680-2292
JPIMS-Journal of Pakistan Institute of Medical Sciences	1683-6928
JPMA-Journal of Pakistan Medical Association	0030-9982
JPMI-Journal of Postgraduate Medical Institute	1013-5472
JPPS-Journal of Pakistan Psychiatric Society	1726-8710
JSOGP-Journal of the Society of Obstetricians and Gynaecologists of Paksitan	N/A
JSP-Journal of Surgery Pakistan International	1817-0242
KMUJ-Khyber Medical University Journal	2072-7763
Lahore Journal of Public Health	N/A
Medical Channel	1681-5491
Medical Forum Monthly	1029-385X
Medical Spectrum [The]	0254-8534
Medicine Today	1813-9876
Mother and Child	0379-2617
NUST Journal of Natural Sciences-NJNS	2072-4659
PAFMJ-Pakistan Armed Forces Medical Journal	0030-9648
Pakistan Heart Journal	0048-2706
Pakistan Journal of Biochemistry	0300-8185
Pakistan Journal of Chest Medicine	N/A
Pakistan Journal of Clinical Psychology	1019-438X
Pakistan Journal of Community Medicine [The]	N/A
Pakistan Journal of Health	0030-9834
Pakistan Journal of Medical and Health Sciences	1996-7195
Pakistan Journal of Medical Ethics	N/A
Pakistan Journal of Medical Sciences	1682-024X
Pakistan Journal of Medicine and Dentistry	2308-2593

Journal	ISSN
Pakistan Journal of Neurological Sciences	1990-6269
Pakistan Journal of Neurology	1990-6269
Pakistan Journal of Obstetrics and Gynaecology	N/A
Pakistan Journal of Orthodontics, Pediatric and Community Dentistry	1608-134X
Pakistan Journal of Otolaryngology-Head and Neck Surgery	0257-4985
Pakistan Journal of Pathology	1024-6193
Pakistan Journal of Pharmaceutical Sciences	1011-601X
Pakistan Journal of Pharmacology	0255-7088
Pakistan Journal of Physiology	1819-270X
Pakistan Journal of Psychology	0030-9869
Pakistan Journal of Scientific and Industrial Research	0030-9885
Pakistan Journal of Scientific and Industrial Research Series A: Physical Sciences	2221-6413
Pakistan Journal of Scientific and Industrial Research Series B: Biological Sciences	2221-6421
Pakistan Medical Journal	0031-000X
Pakistan Ophthalmology	0259-3661
Pakistan Oral and Dental Journal	1012-8700
Pakistan Pediatric Journal	0304-4904
PJC-Pakistan Journal of Cardiology	1016-1244
PJMR-Pakistan Journal of Medical Research	0030-9842
PJO-Pakistan Journal of Ophthalmology	0886-3067
PJPH-Pakistan Journal of Public Health	2225-0891
PJR-Pakistan Journal of Radiology	1607-2006
PJS-Pakistan Journal of Surgery	0258-8552
POJ-Pakistan Orthodontic Journal	2074-0069
Proceedings-Shaikh Zayed Postgraduate Medical Institute	N/A
Professional Medical Journal-Quarterly [The]	1024-8919
RMJ-Rawal Medical Journal	0303-5212
Palestine (3)	
Al-Quds Medical Journal	N/A
Annals of Alquds Medicine	1815-2635
PMJ-Palestinian Medical Journal	N/A
Qatar (4)	
Gulf Journal of Dermatology and Venereology [The]	N/A
Heart Views	1995-705X
JEMTAC-Journal of Emergency Medicine, Trauma and Acute Care	1999-7086

Journal	ISSN
Qatar Medical Journal	0253-8253
Saudi Arabia (31)	
Annals of Saudi Medicine	0256-4947
Annals of Thoracic Medicine	1817-1737
Hematology, Oncology and Stem Cell Therapy	1658-3876
International Journal of Diabetes Mellitus	1877-5934
International Journal of Health Sciences	1658-3639
Journal of Epidemiology and Global Health	2210-6006
Journal of Family and Community Medicine	2230-8229
Journal of Health Specialties [JHS]	1658-600X
Journal of Infection and Public Health	1876-0341
Journal of King Abdulaziz University-Medical Sciences	1319-1004
Journal of Taibah University Medical Sciences	1658-3612
Journal of the Saudi Heart Association	1016-7315
MEAJO-Middle East African Journal of Ophthalmology	0974-9233
Neurosciences	1319-6138
Pan Arab Journal of Neurosurgery	1319-6995
Rehabilitation International	N/A
Research Centre Bulletin	1019-5335
Saudi Epidemiology Bulletin	1319-3965
Saudi Heart Journal	1018-077X
Saudi Journal of Disability and Rehabilitation	1319-6499
Saudi Journal of Gastroenterology [The]	1319-3767
Saudi Journal of Medicine and Medical Sciences [SJMMs]	1658-631X
Saudi Journal of Oto-Rhino-Laryngology Head and Neck Surgery [The]	1319-8491
Saudi Journal of Sports Medicine [The]	1319-6308
Saudi Medical Journal	0379-5284
SDJ-Saudi Dental Journal [The]	1013-9052
SGH Medical Journal	1658-2489
SJA-Saudi Journal of Anaesthesia	1658-354X
SJO-Saudi Journal of Ophthalmology	1319-4534
SPJ-Saudi Pharmaceutical Journal	1319-0164
Urology Annals	0974-7796
Sudan (11)	
AJNT-Arab Journal of Nephrology and Transplantation	1858-554X

Journal	ISSN
BIJO-Albasar International Journal of Ophthalmology New	1858-6538
Gezira Journal of Health Sciences	1810-5386
JMJ-Juba Medical Journal	N/A
Khartoum Pharmacy Journal	1816-5168
Omdurman Journal of Pharmaceutical Sciences	N/A
SJPH-Sudanese Journal of Public Health	1990-7567
Sudan Journal of Medical Sciences	1858-5051
Sudan Medical Journal	0491-4481
Sudan Medical Monitor	1858-5000
Sudanese Journal of Dermatology	1815-3941
Syrian Arab Republic (10)	
Arab Journal of Pharmaceutical Sciences	1683-0369
Arabic Journal of Forensic Medicine and Criminal Science	N/A
Arabic Medical Journal	N/A
Damascus University Journal for Health Sciences	2072-2265
JABHS-Journal of the Arab Board of Health Specializations	1561-0217
JISHIM-Journal of the International Society for the History of Islamic Medicine	1303-667X
Journal of Clinical Laboratory [The]	1814-411X
Journal of the Arab Board of Medical Specializations	1561-0217
Journal of the Arab Dentist	N/A
Research Journal of Aleppo University-Medical Sciences Series	N/A
Tunisia (9)	
Archives de l'Institut Pasteur de Tunis	0020-2509
Cahiers Medicaux de Tunisie	0300-5291
IDEES-Revue de Perfectionnement Medical et Paramedical	N/A
Maghreb Medical	0330-258X
Revue Maghrebine de Pediatrie [La]	0330-7611
Revue Maghrebine d'Endocrinologie-Diabete et de Reproduction [La]	N/A
Revue Tunisienne d'Infectiologie	1737-8958
SST-Sante et Securite au Travail	N/A
Tunisie Medicale [La]	0041-4131
United Arab Emirates (5)	
EMJ-Emirates Medical Journal	0250-6882
Gulf Medical University: Proceedings	2306-6865
HMJ-Hamdan Medical Journal	2227-2437

Journal	ISSN
International Journal of Diabetes and Metabolism	1606-7754
IRCMJ-Iranian Red Crescent Medical Journal	1561-4395
Yemen (8)	
HJMS-Hadramout Journal of Medical Sciences	2224-1806
Journal of Tropical Nephro-Urology	N/A
Sana'a University Journal of Medical Sciences	1993-3584
University of Aden Journal of Natural and Applied Sciences	1606-8947
Yemeni Journal for Medical Sciences [The]	N/A
YHMRJ-Yemeni Health and Medical Research Journal	N/A
YJMHR-Yemeni Journal of Medical and Health Research	N/A
YMJ-Yemen Medical Journal	N/A

Last update September 2017

Appendix III

**List of EMR Journals Indexed in
IMEMR**

(by title)

S/N	Journal	ISSN
1	AAMJ-Al-Azhar Assiut Medical Journal	1687-1693
2	ABJS-Archives of Bone and Joint Surgery [The]	2345-4644
3	ACES-Actualites Cliniques et Scientifiques	1683-8068
4	Acta Medica Iranica	0044-6025
5	Advances in Cognitive Science	1561-4174
6	Afghan Medical Journal	N/A
7	AFJPH-Afghanistan Journal of Public Health	2308-2895
8	African Journal of Urology	1110-5704
9	Afro-Arab Liver Journal	1687-224X
10	Ain-Shams Journal of Forensic Medicine and Clinical Toxicology	1687-1030
11	Ain-Shams Medical Journal	0002-2144
12	AJAIC-Alexandria Journal of Anaesthesia and Intensive Care	N/A
13	AJM-Alexandria Journal of Medicine	2090-5068
14	AJMB-Avicenna Journal of Medical Biotechnology	2008-2835
15	AJNT-Arab Journal of Nephrology and Transplantation	1858-554X
16	AJU-Arab Journal of Urology	2090-598X
17	Al-Azhar Journal of Dental Science	1110-6751
18	Al-Azhar Medical Journal	1110-0400
19	Alexandria Dental Journal	1110-015X
20	Alexandria Journal of Food Science and Technology	1687-3920
21	Alexandria Journal of Hepatogastroenterology	2090-1879
22	Alexandria Journal of Pediatrics	1687-9945
23	Alexandria Journal of Pharmaceutical Sciences	1110-1792
24	Alexandria Journal of Veterinary Science [AJVS]	1110-2407
25	Alexandria Medical Journal [The]	0516-5849
26	Al-Kindy College Medical Journal	1810-9543
27	Almustansiriya Journal of Pharmaceutical Sciences	1815-0993
28	Al-Quds Medical Journal	N/A
29	Al-Shifa Journal of Ophthalmology	1990-3863
30	Anaesthesia, Pain and Intensive Care	1607-8322
31	Anatomical Sciences Journal [ASJ]	N/A
32	Anesthesiology and Pain Medicine	2228-7523
33	Annals Abbassi Shaheed Hospital and Karachi Medical and Dental College	1563-3241
34	Annals of Alquds Medicine	1815-2635
35	Annals of Jinnah Postgraduate Medical Centre - Karachi	N/A

S/N	Journal	ISSN
36	Annals of King Edward Medical College	1684-6680
37	Annals of Military and Health Sciences Research	2383-1960
38	Annals of Pediatric Surgery	1687-4137
39	Annals of Saudi Medicine	0256-4947
40	Annals of the College of Medicine-Mosul	0028-1446
41	Annals of Thoracic Medicine	1817-1737
42	APMC-Annals of Punjab Medical College	2077-9143
43	Applied Endocrinology in Egypt	1110-1776
44	Applied Food Biotechnology	2345-5357
45	Arab Dental Journal	N/A
46	Arab Family Health and Population	N/A
47	Arab Journal for Food and Nutrition	1608-8352
48	Arab Journal of Biotechnology	1110-6875
49	Arab Journal of Gastroenterology	1687-1979
50	Arab Journal of Laboratory Medicine [The]	1110-1822
51	Arab Journal of Pharmaceutical Sciences	1683-0369
52	Arab Journal of Psychiatry [The]	1016-8923
53	Arabic Journal of Forensic Medicine and Criminal Science	N/A
54	Arabic Medical Journal	N/A
55	Archive of Breast Cancer	2383-0425
56	Archives de l'Institut Pasteur de Tunis	0020-2509
57	Archives of Clinical Infectious Diseases	2641-2345
58	Archives of Iranian Medicine	1029-2977
59	Archives of Medical Laboratory Sciences New	2423-6241
60	Archives of Trauma Research	2251-953X
61	Armaghane-danesh	1728-6506
62	ARYA Atherosclerosis Journal	1735-3955
63	Asia Oceania Journal of Nuclear Medicine and Biology	2322-5718
64	Asian Journal of Sports Medicine	2008-000X
65	ASJOG-Ain-Shams Journal of Obstetrics and Gynecology	1697-2193
66	ASNJ-Alexandria Scientific Nursing Journal	1687-3858
67	Assiut Medical Journal	1110-0494
68	Assiut University Bulletin for Environmental Researches	1110-6107
69	Assiut Veterinary Medical Journal	N/A
70	Audiology	1735-1936

S/N	Journal	ISSN
71	Avicenna Journal of Phytomedicine [AJP]	2228-7930
72	Bahrain Medical Bulletin	1012-8298
73	Bahria Journal of Professional Psychology	1816-0840
74	Baqai Journal of Health Sciences	2313-4423
75	Basic and Clinical Neuroscience	2008-126X
76	Basrah Journal of Surgery	1683-3589
77	BCCR-Basic and Clinical Cancer Research	2228-6527
78	BEAT-Bulletin of Emergency and Trauma	2322-2522
79	Benha Medical Journal	1110-208X
80	BIJO-Albasar International Journal of Ophthalmology New	1858-6538
81	Bina Journal of Ophthalmology	1026-6399
82	Biomedica	1992-4852
83	Bulletin Epidemiologique	0851-8238
84	Bulletin of Alexandria Thoracic Association	1687-997X
85	Bulletin of Endemic Disease-Baghdad	0007-4845
86	Bulletin of Faculty of Pharmacy-Cairo University	1110-0931
87	Bulletin of Faculty of Physical Therapy-Cairo University	1110-6611
88	Bulletin of Nutrition and Food	N/A
89	Bulletin of Pharmaceutical Sciences-Assiut University	1110-0052
90	Bulletin of the Faculty of Science-University of Alexandria	0568-9619
91	Bulletin of the Kuwait Institute for Medical Specialization	N/A
92	Bulletin of the National Nutrition Institute of the Arab Republic of Egypt	N/A
93	Bulletin of the National Research Centre	1110-0591
94	Bulletin of the Ophthalmological Society of Egypt	0078-5342
95	Cahiers Medicaux de Tunisie	0300-5291
96	Caspian Journal of Neurological Sciences	2383-4307
97	Cell Journal [Yakhteh]	2228-5806
98	Challenge-Quarterly [The]	0528-7944
99	Childhood and Development Quarterly	1110-8681
100	Clinical Diabetes	0891-8929
101	Community Health	2386-3033
102	Community Medicine	0301-7265
103	Damascus University Journal for Health Sciences	2072-2265
104	DARU-Journal of Pharmaceutical Sciences	1560-8115
105	DENA-Quarterly Journal of Yasuj Faculty of Nursing and Midwifery	1735-8450

S/N	Journal	ISSN
106	Dermatology and Cosmetic Quarterly	2008-7470
107	Diabetes Digest	1369-7501
108	Dirasat	1026-3764
109	DMJ-Derna Medical Journal	N/A
110	DMJ-Dohuk Medical Journal	2071-7326
111	DRJ-Dental Research Journal	1735-3327
112	EBNESINA-Medical Journal of Military Medicine [The]	1735-9503
113	EDJ-Egyptian Dental Journal	0070-9484
114	Egyptian Heart Journal [The]	1110-2608
115	Egyptian Journal of Anatomy [The]	1110-2144
116	Egyptian Journal of Biomedical Engineering	1012-5558
117	Egyptian Journal of Biophysics and Biomedical Engineering	1110-8525
118	Egyptian Journal of Breastfeeding	N/A
119	Egyptian Journal of Bronchology [The]	1687-8426
120	Egyptian Journal of Cardiothoracic Anesthesia	1687-9090
121	Egyptian Journal of Cataract and Refractive Surgery [The]	N/A
122	Egyptian Journal of Chemistry	0449-2285
123	Egyptian Journal of Chest Diseases and Tuberculosis [The]	0422-7638
124	Egyptian Journal of Community Medicine [The]	1110-1865
125	Egyptian Journal of Dermatology and Andrology	1110-7650
126	Egyptian Journal of Diabetes [The]	N/A
127	Egyptian Journal of Food Science	1110-0192
128	Egyptian Journal of Genetics and Cytology	0046-161X
129	Egyptian Journal of Histology [The]	1110-0559
130	Egyptian Journal of Hospital Medicine [The]	1687-2002
131	Egyptian Journal of Immunology [The]	1110-4902
132	Egyptian Journal of Medical Human Genetics [The]	1110-8630
133	Egyptian Journal of Medical Laboratory Sciences	1110-5593
134	Egyptian Journal of Microbiology	0022-2704
135	Egyptian Journal of Neonatology [The]	1110-8991
136	Egyptian Journal of Neurology, Psychiatry and Neurosurgery [The]	1110-1083
137	Egyptian Journal of Nutrition	1687-1235
138	Egyptian Journal of Nutrition and Health	1687-7950
139	Egyptian Journal of Occupational Medicine	1110-1881
140	Egyptian Journal of Otolaryngology [The]	1012-5574

S/N	Journal	ISSN
141	Egyptian Journal of Paediatrics [The]	1687-1677
142	Egyptian Journal of Pediatric Allergy and Immunology [The]	1687-1642
143	Egyptian Journal of Pharmaceutical Sciences	0301-5068
144	Egyptian Journal of Physiological Sciences	0301-8660
145	Egyptian Journal of Psychiatry [The]	1110-1105
146	Egyptian Journal of Schistosomiasis and Infectious and Endemic Diseases	1110-7278
147	Egyptian Journal of Surgery [The]	1110-1121
148	Egyptian Journal of Urology	1110-5712
149	Egyptian Journal of Veterinary Science	1110-0222
150	Egyptian Liver Journal	2090-6218
151	Egyptian Medical Journal of the National Research Center	1687-1278
152	Egyptian Orthodontic Journal	1110-435x
153	Egyptian Orthopaedic Journal [The]	1110-1148
154	Egyptian Pharmaceutical Journal [National Research Center]	1687-4315
155	Egyptian Population and Family Planning Review [The]	1110-1156
156	Egyptian Rheumatologist [The]	1110-1164
157	Egyptian Rheumatology and Rehabilitation	1110-161X
158	Egyptian Science Magazine [The]	1687-3815
159	EJB-Egyptian Journal of Biochemistry and Molecular Biology [The]	1687-1502
160	EJENTAS-Egyptian Journal of ENT and Allied Sciences	2090-0740
161	EJMM-Egyptian Journal of Medical Microbiology [The]	1110-2179
162	Emergency	2345-4563
163	EMHJ-Eastern Mediterranean Health Journal	1020-3397
164	EMJ-Emirates Medical Journal	0250-6882
165	Endovascular Journal	2008-1812
166	Environmental Health Engineering and Management Journal	2423-3765
167	Esculapio	2309-3080
168	Feyz-Journal of Kashan University of Medical Sciences	1029-7855
169	Frontiers in Biomedical Technologies	2345-5829
170	FWU Journal of Social Sciences	1995-1272
171	Garyounis Medical Journal	0254-7198
172	Gastroenterology and Hepatology from Bed to Bench	2010-2258
173	Gazette of the Egyptian Paediatric Association [The]	1110-6638
174	Genetics in the 3rd Millennium	2423-7159
175	Gezira Journal of Health Sciences	1810-5386

S/N	Journal	ISSN
176	GJMS-Gomal Journal of Medical Sciences	1819-7973
177	GJO-Gulf Journal of Oncology [The]	2078-2101
178	Govaresh	1560-7186
179	Gulf Journal of Dermatology and Venereology [The]	N/A
180	Gulf Medical University: Proceedings	2306-6865
181	HAKIM Research Journal	1561-252X
182	Hamdard Medicus	0250-7188
183	HAYAT-Journal of Faculty of Nursing and Midwifery [The]	1735-2215
184	Health [The]	2218-3299
185	Health in Emergencies and Disasters Quarterly [HDQ]	N/A
186	Health Information Management	1735-7853
187	Health Services Journal of the Eastern Mediterranean Region	1014-9899
188	Heart Views	1995-705X
189	Hematology, Oncology and Stem Cell Therapy	1658-3876
190	Hepatitis Monthly	1735-143X
191	HJMS-Hadramout Journal of Medical Sciences	2224-1806
192	HMJ-Hamdan Medical Journal	2227-2437
193	Holistic Nursing and Midwifery Journal	New 2251-8460
194	Homa-ye-Salamat	2008-2002
195	Hormozgan Medical Journal	1735-2223
196	Hospital-Journal of Iranian Scientific Hospital Association	2008-1928
197	IAJD-International Arab Journal of Dentistry	2218-0885
198	IBJ-Iranian Biomedical Journal	1028-852X
199	IDEES-Revue de Perfectionnement Medical et Paramedical	N/A
200	IEJ-Iranian Endodontic Journal	1735-7497
201	IHJ-Iranian Heart Journal	1735-7306
202	IJBC-Iranian Journal of Blood and Cancer	2008-4595
203	IJB-Iranian Journal of Biotechnology	1728-3043
204	IJCBNM-International Journal of Community Based Nursing and Midwifery	2322-2476
205	IJCN-Iranian Journal of Child Neurology	1735-4668
206	IJDO-Iranian Journal of Diabetes and Obesity	2008-6792
207	IJEHSR-International Journal of Endorsing Health Science Research	2307-3748
208	IJEM-Iranian Journal of Endocrinology and Metabolism	1683-4844
209	IJFS-International Journal of Fertility and Sterility	2008-076X
210	IJHOSCR-International Journal of Hematology-Oncology and Stem Cell Research	2008-2207

S/N	Journal	ISSN
211	IJHPM-International Journal of Health Policy and Management	N/A
212	IJHS-Iranian Journal of Health Sciences	2322-553X
213	IJI-Iranian Journal of Immunology	1735-1383
214	IJKD-Iranian Journal of Kidney Diseases	1735-8582
215	IJMCM-International Journal of Molecular and Cellular Medicine	2251-9637
216	IJME-Iranian Journal of Medical Education	1608-9359
217	IJM-Iranian Journal of Microbiology	2008-3289
218	IJML-International Journal of Medical Laboratory New	2423-3706
219	IJMS-Iranian Journal of Medical Sciences	0253-0716
220	IJN-Iranian Journal of Neonatology	2251-7510
221	IJOH-International Journal of Occupational Hygiene	2008-5109
222	IJO-Iranian Journal of Orthodontics	1735-5087
223	IJP-International Journal of Pediatrics	2345-5047
224	IJPM-International Journal of Preventive Medicine	2008-7802
225	IJPR-Iranian Journal of Pharmaceutical Research	1735-0328
226	IJRM-International Journal of Reproductive Biomedicine	2476-4108
227	IJVM-Iranian Journal of Veterinary Medicine	2251-8894
228	IMJ-Iraqi Medical Journal	0304-4564
229	Infectious Diseases Journal of Pakistan	1027-0299
230	International Cardiovascular Research Journal	2251-9130
231	International Journal of Diabetes and Metabolism	1606-7754
232	International Journal of Diabetes Mellitus	1877-5934
233	International Journal of Endocrinology and Metabolism	1726-913X
234	International Journal of Environmental Research	1735-6865
235	International Journal of Environmental Science and Technology	1735-1472
236	International Journal of Health Sciences	1658-3639
237	International Journal of High Risk Behaviors and Addiction	2251-8711
238	International Journal of Mycobacteriology	2212-5531
239	International Journal of Occupational and Environmental Medicine	2008-6520
240	International Journal of Organ Transplantation Medicine	2008-6490
241	International Journal of Pathology	1810-0155
242	International Journal of Radiation Research	2322-3243
243	International Journal of Women Empowerment	2413-4252
244	International Journal of Women's Health and Reproduction Sciences	N/A
245	IOJ-Iraqi Orthodontic Journal	1816-0581

S/N	Journal	ISSN
246	IPMJ-Iraqi Postgraduate Medical Journal	1608-8360
247	Iran Journal of Nursing	2008-5923
248	Iran Occupational Health	1735-5133
249	Iranian Journal of Allergy, Asthma and Immunology	1735-1502
250	Iranian Journal of Arthropod-Borne Diseases	1735-7179
251	Iranian Journal of Basic Medical Sciences	2008-3866
252	Iranian Journal of Cancer Prevention	2008-2398
253	Iranian Journal of Dermatology	0021-082X
254	Iranian Journal of Diabetes and Lipid Disorders	1726-7544
255	Iranian Journal of Emergency Medicine	N/A
256	Iranian Journal of Environmental Health Science and Engineering	1735-1979
257	Iranian Journal of Epidemiology	1735-7489
258	Iranian Journal of Health and Environment	2008-2029
259	Iranian Journal of Medical Microbiology	1735-8612
260	Iranian Journal of Medical Physics	1735-160X
261	Iranian Journal of Nuclear Medicine	1681-2824
262	Iranian Journal of Nursing and Midwifery Research [IJNMR]	1735-9066
263	Iranian Journal of Nursing Research	1735-7012
264	Iranian Journal of Nutrition Sciences and Food Technology	1735-7756
265	Iranian Journal of Obstetric, Gynecology and Infertility [The]	1680-2993
266	Iranian Journal of Ophthalmology	1735-4153
267	Iranian Journal of Otorhinolaryngology	1560-1293
268	Iranian Journal of Parasitology	1735-7020
269	Iranian Journal of Pediatrics	2008-2142
270	Iranian Journal of Psychiatric Nursing	2345-2501
271	Iranian Journal of Psychiatry	1735-4587
272	Iranian Journal of Psychiatry and Behavioral Sciences	1735-8639
273	Iranian Journal of Psychiatry and Clinical Psychology [ANDEESHEH VA RAFTAR]	1735-4315
274	Iranian Journal of Public Health	0304-4556
275	Iranian Journal of Radiology	1735-1065
276	Iranian Journal of Veterinary Research	1728-1997
277	Iranian Rehabilitation Journal	1735-3602
278	Iraqi Army Medical Journal	N/A
279	Iraqi Journal of Agriculture	1818-6645
280	Iraqi Journal of Biotechnology	N/A

S/N	Journal	ISSN
281	Iraqi Journal of Community Medicine	1684-5382
282	Iraqi Journal of Medical Sciences	1681-6579
283	Iraqi Journal of Microbiology	N/A
284	Iraqi Journal of Pharmaceutical Sciences	1683-3597
285	Iraqi Journal of Tropical Disease Researches	1814-0823
286	Iraqi New Medical Journal	2409-5931
287	IRCMJ-Iranian Red Crescent Medical Journal	1561-4395
288	IRJNS - Iranian Journal of Neurosurgery New	2423-6497
289	ISESCO Journal of Science and Technology	2028-8077
290	Isra Medical Journal	2073-8285
291	JABHS-Journal of the Arab Board of Health Specializations	1561-0217
292	JAMC-Journal of Ayub Medical College-Abbotabad-Pakistan	1025-9589
293	JBMS-Journal of the Bahrain Medical Society	1015-6321
294	JBUMS-Journal of Babol University of Medical Sciences	1561-4107
295	JCPSP-Journal of the College of Physicians and Surgeons Pakistan	1022-386X
296	JCR-Journal of Craniomaxillofacial Research	5489-2345
297	JCVTR-Journal of Cardiovascular and Thoracic Research	2008-5117
298	JDB-Journal of Dental Biomaterials	2383-3971
299	JDT-Journal of Dentistry Tehran University of Medical Sciences	1735-2150
300	JDUHS-Journal of the Dow University of Health Sciences	1995-2198
301	JEHSD-Journal of Environmental Health and Sustainable Development New	2426-6267
302	JEMTAC-Journal of Emergency Medicine, Trauma and Acute Care	1999-7086
303	JESN-Journal of Egyptian Society of Nephrology [The]	N/A
304	JFH-Journal of Fasting and Health	N/A
305	JIIMC-Journal of Islamic International Medical College [The]	1815-4018
306	JIMDC-Journal of Islamabad Medical and Dental College	2227-3875
307	JISHIM-Journal of the International Society for the History of Islamic Medicine	1303-667X
308	JKCD-Journal of Khyber College of Dentistry	2220-2633
309	JLDA-Journal of the Lebanese Dental Association	1810-9632
310	JLUMHS-Journal of the Liaquat University of Medical Health Sciences	1729-0341
311	JMB-Journal of Medical Bacteriology	2251-8649
312	JMJ-Jamahiriya Medical Journal	2079-1216
313	JMJ-Juba Medical Journal	N/A
314	JMRH-Journal of Midwifery and Reproductive Health	N/A
315	JMR-Journal of Medical Research	1728-1962

S/N	Journal	ISSN
316	JNE-Journal of Nursing Education	3812-2322
317	JNMS-Journal of Nursing and Midwifery Sciences	2345-5756
318	JNP-Journal of Nephropathology	2251-8363
319	JOPDAK-Journal of the Pakistan Dental Association Karachi	1680-2292
320	Jordan Journal of Pharmaceutical Sciences	1995-7157
321	Jordan Medical Journal	0446-9283
322	Journal du Practicien	1113-5667
323	Journal of Advanced Research	2090-1232
324	Journal of Advances in Medical Education and Professionalism	2322-2220
325	Journal of Anesthesiology and Pain	2228-6659
326	Journal of Arak University of Medical Sciences-Rahavard Danesh	1735-5338
327	Journal of Baghdad College of Dentistry	1680-0057
328	Journal of Basic and Applied Sciences	1814-8085
329	Journal of Basic Medical Sciences	N/A
330	Journal of Birjand University of Medical Sciences	N/A
331	Journal of Cardio-Thoracic Medicine	2345-2447
332	Journal of Childhood Studies	2090-0619
333	Journal of Client-Centered Nursing Care	N/A
334	Journal of Clinical Excellence	2322-391X
335	Journal of Clinical Laboratory [The]	1814-411X
336	Journal of Community Medicine	N/A
337	Journal of Contemporary Medical Sciences	2415-1629
338	Journal of Dental Materials and Techniques	2322-4150
339	Journal of Dental Medicine-Tehran University of Medical Sciences	1024-641X
340	Journal of Dental Research, Dental Clinics, Dental Prospects	2008-210X
341	Journal of Dental School-Shahid Beheshti University of Medical Sciences	1735-7683
342	Journal of Dentistry-Shiraz University of Medical Sciences	1728-3426
343	Journal of Dohuk University	1812-7568
344	Journal of Drug Research of Egypt	0085-2406
345	Journal of Environmental Studies	1025-8620
346	Journal of Epidemiology and Global Health	2210-6006
347	Journal of Family and Community Medicine	2230-8229
348	Journal of Family and Reproductive Health	1735-8949
349	Journal of Fundamentals of Mental Health [The]	1028-6918
350	Journal of Gorgan University of Medical Sciences	1562-4765

S/N	Journal	ISSN
351	Journal of Guilan University of Medical Sciences	2008-4048
352	Journal of Health Administration	2008-1200
353	Journal of Health and Safety at Work	2251-807X
354	Journal of Health Management and Informatics [JHMI]	2322-1097
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357	Journal of Health Scope	2251-8959
358	Journal of Health Specialties [JHS]	1658-600X
359	Journal of Health-Based Research New	2423-7639
360	Journal of Hearing Sciences and Otolaryngology	N/A
361	Journal of Hepatology, Gastroenterology and Infectious Diseases	1110-0796
362	Journal of High Institute of Public Health [The]	2357-0601
363	Journal of Hygiene and Health	1735-2363
364	Journal of Infection and Public Health	1876-0341
365	Journal of Injury and Violence Research	2008-2053
366	Journal of Isfahan Dental School	1735-255X
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368	Journal of Islamic Dental Association of Iran [The]-JIDA	1024-6428
369	Journal of Jahrom University of Medical Sciences	2008-7993
370	Journal of Karbala University	1813-0410
371	Journal of Kerman University of Medical Sciences	1023-9510
372	Journal of Kermanshah University of Medical Sciences [KUMS]	2251-9068
373	Journal of King Abdulaziz University-Medical Sciences	1319-1004
374	Journal of Lasers in Medical Sciences	2008-9783
375	Journal of Legal Medicine and Forensic Sciences [The]	1110-6468
376	Journal of Mashhad Dental School	1560-9286
377	Journal of Mazandaran University of Medical Sciences	1735-9260
378	Journal of Medical Council of Islamic Republic of Iran	1562-1073
379	Journal of Medical Education	1735-3998
380	Journal of Medical Sciences	1997-3438
381	Journal of Medical Sciences	1682-4474
382	Journal of Medical Students	N/A
383	Journal of Medicinal Plants	1684-0240
384	Journal of Minimally Invasive Surgical Sciences	2251-7022
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S/N	Journal	ISSN
386	Journal of Modern Rehabilitation	2008-2576
387	Journal of Nephrology Urology and Transplantation	1606-9331
388	Journal of Neyshabur University of Medical Sciences	2383-3203
389	Journal of Nursing and Midwifery Quarterly-Shaheed Beheshti University of Medical Sciences and Health Services	1605-8941
390	Journal of Ophthalmic and Vision Research	2008-2010
391	Journal of Paramedical Sciences New	2008-496X
392	Journal of Paramedical Sciences and Rehabilitation	2322-5238
393	Journal of Patient Safety and Quality Improvement	2345-4482
394	Journal of Periodontology and Implant Dentistry	2008-7748
395	Journal of Practice in Clinical Psychology	2423-5822
396	Journal of Preventive Medicine	N/A
397	Journal of Qazvin University of Medical Sciences [The]	1561-3666
398	Journal of Rafsanjan University of Medical Sciences	1735-3165
399	Journal of Rehabilitation	1607-2960
400	Journal of Rehabilitation Sciences and Research [JRSR]	2345-6167
401	Journal of Reproduction and Infertility	2228-5482
402	Journal of Research in Behavioural Sciences	1735-2029
403	Journal of Research in Dental Sciences	2008-4676
404	Journal of Research in Health Sciences [JRHS]	2228-7795
405	Journal of Research in Medical Sciences	1735-5311
406	Journal of Research on History of Medicine [The]	N/A
407	Journal of Sabzevar University of Medical Sciences	1606-7487
408	Journal of Safety Promotion and Injury Prevention	2345-2455
409	Journal of School of Public Health and Institute of Public Health Research	1735-7586
410	Journal of Screening and Geographical Medicine	1735-7594
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412	Journal of Shahrekord University of Medical Sciences	1735-1448
413	Journal of Sheikh Zayed Medical College [JSZMC]	2078-8274
414	Journal of Student Research Committee [BEYHAGH]	2008-0328
415	Journal of Surgery [The]	1681-4517
416	Journal of Taibah University Medical Sciences	1658-3612
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418	Journal of the Arab Board of Medical Specializations	1561-0217
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S/N	Journal	ISSN
420	Journal of the Arab Neonatology Forum	1812-1756
421	Journal of the Arab Society for Medical Research	1687-4293
422	Journal of the Egyptian Medical Association [The]	0013-2411
423	Journal of the Egyptian National Cancer Institute	1110-0362
424	Journal of the Egyptian Public Health Association [The]	0013-2446
425	Journal of the Egyptian Society of Endocrinology, Metabolism and Diabetes [The]	1110-1245
426	Journal of the Egyptian Society of Obstetrics and Gynecology [The]	0258-3216
427	Journal of the Egyptian Society of Parasitology	1110-0583
428	Journal of the Egyptian Society of Pharmacology and Experimental Therapeutics [The]	N/A
429	Journal of the Egyptian Society of Toxicology	1110-127X
430	Journal of the Faculty of Medicine-Baghdad	0041-9419
431	Journal of the Medical Research Institute-Alexandria University	1110-0133
432	Journal of the Pakistan Prosthodontics Association [JPPA]	2308-8613
433	Journal of the Royal Medical Services	2078-8703
434	Journal of the Saudi Heart Association	1016-7315
435	Journal of Tropical Nephro-Urology	N/A
436	Journal of Veterinary Research	2008-2525
437	Journal of Zahedan University of Medical Sciences and Health Services	1735-076X
438	Journal of Zanjan University of Medical Sciences and Health Services	1606-9366
439	JPAD-Journal of Pakistan Association of Dermatologists	1560-9014
440	JPC-Journal of Pediatric Club [The]	N/A
441	JPC-Journal of Pharmaceutical Care	2322-4630
442	JPDA-Journal of the Pakistan Dental Association	1680-2292
443	JPIMS-Journal of Pakistan Institute of Medical Sciences	1683-6928
444	JPMA-Journal of Pakistan Medical Association	0030-9982
445	JPMI-Journal of Postgraduate Medical Institute	1013-5472
446	JPN-Journal of Pediatric Nephrology	N/A
447	JPPS-Journal of Pakistan Psychiatric Society	1726-8710
448	JRH-Journal of Research and Health	2251-6395
449	JRMS-Journal of Research in Medical Sciences	1735-1995
450	JRRS-Journal of Research in Rehabilitation Sciences	1735-7519
451	JSOGP-Journal of the Society of Obstetricians and Gynaecologists of Paksitan	N/A
452	JSP-Journal of Surgery Pakistan International	1817-0242
453	Jundishapur Journal of Microbiology [JJM]	2008-3645

S/N	Journal	ISSN
454	Jundishapur Journal of Natural Pharmaceutical Products	1735-7780
455	Jundishapur Scientific Medical Journal	2252-052x
456	Kasr El Aini Journal of Surgery	0022-9237
457	Kasr El-Aini Medical Journal	N/A
458	Khartoum Pharmacy Journal	1816-5168
459	Kidney Forum	1369-3050
460	KMJ-Kuwait Medical Journal	0023-5776
461	KMUJ-Khyber Medical University Journal	2072-7763
462	KOOMESH-Journal of Semnan University of Medical Sciences	1608-7046
463	Kufa Medical Journal	N/A
464	Lahore Journal of Public Health	N/A
465	Lebanese Science Journal	1561-3410
466	Libyan Journal of Infectious Diseases [The]	N/A
467	LJM-Libyan Journal of Medicine	1993-2820
468	LMJ-Lebanese Medical Journal	0023-9852
469	Maghreb Medical	0330-258X
470	Mansoura Journal of Pharmaceutical Sciences	1110-1318
471	Mansoura Medical Bulletin	1012-5590
472	Mansoura Medical Journal	1110-211X
473	Maroc Medical	0253-4053
474	MDV-Molecular Diagnosis and Vaccine	1687-2010
475	MEAJO-Middle East African Journal of Ophthalmology	0974-9233
476	Medical Arabization	N/A
477	Medical Channel	1681-5491
478	Medical Forum Monthly	1029-385X
479	Medical Journal of Ahmed Maher Teaching Hospital [The]	N/A
480	Medical Journal of Basrah University [The]	0253-0759
481	Medical Journal of Cairo University [The]	0045-3803
482	Medical Journal of Islamic World Academy of Sciences	1016-3360
483	Medical Journal of Mashad University of Medical Sciences	1735-4013
484	Medical Journal of Tabriz University of Medical Sciences and Health Services	1608-5671
485	Medical Journal of Teaching Hospitals and Institutes [The]	1110-2039
486	Medical Journal of the Islamic Republic of Iran	1016-1430
487	Medical Journal of Tikrit University [The]	N/A
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S/N	Journal	ISSN
489	Medical Principles and Practice	1011-7571
490	Medical Sciences Journal of Islamic Azad University	1023-5922
491	Medical Spectrum [The]	0254-8534
492	Medical-Surgical Nursing Journal	2322-178X
493	Medicine Today	1813-9876
494	MEJC-Middle East Journal of Cancer	2008-6709
495	Middle East Journal of Anesthesiology	0544-0440
496	Middle East Journal of Digestive Diseases	2008-5230
497	Middle East Journal of Family Medicine	N/A
498	Minoufia Medical Journal	1110-2098
499	MJEM- Mediterranean Journal of Emergency Medicine	2222-9442
500	MJFCT-Mansoura Journal of Forensic Medicine and Clinical Toxicology	1110-5437
501	Modares Journal of Medical Sciences, Pathobiology	1562-9554
502	Mother and Child	0379-2617
503	Nanomedicine Journal	2322-3049
504	Neonatology	1687-0492
505	Nephro-Urology Monthly	2251-7006
506	Neurosciences	1319-6138
507	New Egyptian Journal of Medicine [The]	1110-1946
508	New Iraqi Journal of Medicine [The]	1817-5562
509	Novelty in Biomedicine	2345-3346
510	Nursing and Midwifery Research	1753-5001
511	Nursing Practice Today	2383-1154
512	NUST Journal of Natural Sciences-NJNS	2072-4659
513	Nutrition and Food Sciences Research	2383-0441
514	Ofogh-E-Danesh	1735-1855
515	Oman Journal of Ophthalmology	0974-620X
516	Oman Medical Journal	1999-768X
517	Omdurman Journal of Pharmaceutical Sciences	N/A
518	PAFMJ-Pakistan Armed Forces Medical Journal	0030-9648
519	Pakistan Heart Journal	0048-2706
520	Pakistan Journal of Biochemistry	0300-8185
521	Pakistan Journal of Chest Medicine	N/A
522	Pakistan Journal of Clinical Psychology	1019-438X
523	Pakistan Journal of Community Medicine [The]	N/A

S/N	Journal	ISSN
524	Pakistan Journal of Health	0030-9834
525	Pakistan Journal of Medical and Health Sciences	1996-7195
526	Pakistan Journal of Medical Ethics	N/A
527	Pakistan Journal of Medical Sciences	1682-024X
528	Pakistan Journal of Medicine and Dentistry	2308-2593
529	Pakistan Journal of Neurological Sciences	1990-6269
530	Pakistan Journal of Neurology	1990-6269
531	Pakistan Journal of Obstetrics and Gynaecology	N/A
532	Pakistan Journal of Orthodontics, Pediatric and Community Dentistry	1608-134X
533	Pakistan Journal of Otolaryngology-Head and Neck Surgery	0257-4985
534	Pakistan Journal of Pathology	1024-6193
535	Pakistan Journal of Pharmaceutical Sciences	1011-601X
536	Pakistan Journal of Pharmacology	0255-7088
537	Pakistan Journal of Physiology	1819-270X
538	Pakistan Journal of Psychology	0030-9869
539	Pakistan Journal of Scientific and Industrial Research	0030-9885
540	Pakistan Journal of Scientific and Industrial Research Series A: Physical Sciences	2221-6413
541	Pakistan Journal of Scientific and Industrial Research Series B: Biological Sciences	2221-6421
542	Pakistan Medical Journal	0031-000X
543	Pakistan Ophthalmology	0259-3661
544	Pakistan Oral and Dental Journal	1012-8700
545	Pakistan Pediatric Journal	0304-4904
546	Pan Arab Journal of Neurosurgery	1319-6995
547	Pan Arab Journal of Orthopaedic and Trauma [The]	1607-4912
548	Pan Arab Medical Journal	N/A
549	Payavard-Salamat	1735-8132
550	Payesh-Health Monitor	1680-7626
551	Pejouhandeh: Bimonthly Research Journal	1735-1022
552	Physical Treatments: Specific Physical Therapy Journal	2423-5830
553	PJC-Pakistan Journal of Cardiology	1016-1244
554	PJMR-Pakistan Journal of Medical Research	0030-9842
555	PJO-Pakistan Journal of Ophthalmology	0886-3067
556	PJPH-Pakistan Journal of Public Health	2225-0891
557	PJR-Pakistan Journal of Radiology	1607-2006
558	PJS-Pakistan Journal of Surgery	0258-8552

S/N	Journal	ISSN
559	PMJ-Palestinian Medical Journal	N/A
560	POJ-Pakistan Orthodontic Journal	2074-0069
561	Population Bulletin of ESCWA	0258-1914
562	Population Researches and Studies	0255-898X
563	Population Sciences	N/A
564	Population Studies	1110-1342
565	Proceedings-Shaikh Zayed Postgraduate Medical Institute	N/A
566	Professional Medical Journal-Quarterly [The]	1024-8919
567	PUJ-Parasitologists United Journal	1687-7942
568	Qatar Medical Journal	0253-8253
569	Qom University of Medical Sciences Journal	1735-7799
570	Quarterly Journal of Medical Ethics	2008-4374
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573	Razi Journal of Medical Sciences	2228-7043
574	Rehabilitation International	N/A
575	Reports of Radiotherapy and Oncology	2345-3192
576	Research Centre Bulletin	1019-5335
577	Research in Cardiovascular Medicine	2251-9572
578	Research Journal of Aleppo University-Medical Sciences Series	N/A
579	Reviews in Clinical Medicine [RCM]	2345-6256
580	Revue Maghrebine de Pediatrie [La]	0330-7611
581	Revue Maghrebine d'Endocrinologie-Diabete et de Reproduction [La]	N/A
582	Revue Marocaine de Chirurgie Orthopedique et Traumatologique	N/A
583	Revue Marocaine de Medecine et Sante	0251-0758
584	Revue Marocaine des Maladies de L'Enfant	N/A
585	Revue Tunisienne d'Infectiologie	1737-8958
586	Risafa Medical Journal	N/A
587	RMJ-Rawal Medical Journal	0303-5212
588	RMM-Research in Molecular Medicine	2322-1348
589	Sadra Medical Sciences Journal	N/A
590	Salmand-Iranian Journal of Aging	1735-806X
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S/N	Journal	ISSN
594	Saudi Journal of Disability and Rehabilitation	1319-6499
595	Saudi Journal of Gastroenterology [The]	1319-3767
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605	Scientific Journal of Kurdistan University of Medical Sciences	1560-652X
606	Scientific Medical Journal	1110-5607
607	Scientific Nursing Journal	1812-2388
608	SDJ-Saudi Dental Journal [The]	1013-9052
609	SGH Medical Journal	1658-2489
610	Shenakht Journal of Psychology and Psychiatry	N/A
611	SJA-Saudi Journal of Anaesthesia	1658-354X
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613	SJPH-Sudanese Journal of Public Health	1990-7567
614	Smile Dental Journal	2072-473X
615	Social Determinants of Health	2423-3560
616	Social Welfare Quarterly	1735-8191
617	Sohag Medical Journal	1110-7529
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619	SPJ-Saudi Pharmaceutical Journal	1319-0164
620	SQUMJ-Sultan Qaboos University Medical Journal	2075-051X
621	SST-Sante et Securite au Travail	N/A
622	Strides in Development of Medical Education	1735-4242
623	Sudan Journal of Medical Sciences	1858-5051
624	Sudan Medical Journal	0491-4481
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S/N	Journal	ISSN
629	Tanaffos	1735-0344
630	Tanta Medical Journal	1110-1415
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635	TIPS-Trends in Pharmaceutical Sciences	2423-3722
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638	Tunisie Medicale [La]	0041-4131
639	University of Aden Journal of Natural and Applied Sciences	1606-8947
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641	Urology Journal	1735-1308
642	Veterinary Medical Journal	1110-1423
643	Weekly Epidemiology Monitor	2224-4220
644	WJPS-World Journal of Plastic Surgery	2228-7914
645	Yafteh Journal	1563-0773
646	Yemeni Journal for Medical Sciences [The]	N/A
647	YHMRJ-Yemeni Health and Medical Research Journal	N/A
648	YJMHR-Yemeni Journal of Medical and Health Research	N/A
649	YMJ-Yemen Medical Journal	N/A
650	Zagazig Journal of Forensic Medicine and Toxicology	1687-160X
651	Zagazig Journal of Pharmaceutical Sciences	1110-5089
652	Zagazig Medical Association Journal	1110-2322
653	Zagazig University Medical Journal	1110-1431
654	Zahedan Journal of Research in Medical Sciences	N/A
655	Zanco Journal of Medical Sciences	1995-5588

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