# Table of Contents

**IMEMR Current Contents** ........................................................................................................................................... vii

**Subject Index** .................................................................................................................................................................. ix

Abnormalities, Multiple .................................................................................................................................................. 1
Accidents, Traffic ........................................................................................................................................................... 1
Acetaminophen ........................................................................................................................................................... 1
Achilles Tendon .......................................................................................................................................................... 2
Acquired Immunodeficiency Syndrome ........................................................................................................................ 2
Acute Coronary Syndrome ........................................................................................................................................... 3
Adiponectin ................................................................................................................................................................. 4
Air Pollution ............................................................................................................................................................... 4
Amiodarone ................................................................................................................................................................. 4
Amyloidosis ............................................................................................................................................................... 5
Anemia, Iron-Deficiency ............................................................................................................................................ 5
Angiotensin-Converting Enzyme Inhibitors ............................................................................................................... 5
Aorta ........................................................................................................................................................................... 6
Aortic Coarctation ...................................................................................................................................................... 6
Appendicitis ............................................................................................................................................................... 6
Arabidopsis ............................................................................................................................................................... 7
Arsenic ......................................................................................................................................................................... 7
Arteriovenous Malformations .................................................................................................................................... 7
Ascorbic Acid ............................................................................................................................................................ 8
Asthma ......................................................................................................................................................................... 8
Bacterial Proteins ...................................................................................................................................................... 9
Bacteriuria .................................................................................................................................................................. 9
Balloon Dilation .......................................................................................................................................................... 9
Battered Women ....................................................................................................................................................... 10
Bees ........................................................................................................................................................................... 10
Benzimidazoles ......................................................................................................................................................... 11
beta-Lactamases ......................................................................................................................................................... 11
beta-Thalassemia ........................................................................................................................................................ 11
Biofuels ..................................................................................................................................................................... 12
Blindness ................................................................................................................................................................... 12
Blood Donors ............................................................................................................................................................ 12
Bone Diseases, Metabolic ....................................................................................................................................... 13
Bone Marrow Transplantation ................................................................................................................................ 13
Bone Neoplasms .................................................................................................................................................... 14
Breast Feeding .......................................................................................................................................................... 14
Breast Neoplasms .................................................................................................................................................... 14
Brucellosis .................................................................................................................................................................. 15
Butterflies ................................................................................................................................................................. 16
Candida ..................................................................................................................................................................... 16
Carcinoma, Hepatocellular ..................................................................................................................................... 16
Cartilage .................................................................................................................................................................... 17
Caseins ...................................................................................................................................................................... 17
Cefotaxime ................................................................................................................................................................. 18
Cerebral Palsy ........................................................................................................................................................... 18
Cervix Uteri ............................................................................................................................................................... 18
Cesarean Section ....................................................................................................................................................... 19
Cheese ....................................................................................................................................................................... 19
Chickens .................................................................................................................................................................... 20
Chromium ................................................................................................................................................................. 21
Cisplatin ..................................................................................................................................................................... 21
Cleft Lip ..................................................................................................................................................................... 21
Clinical Trials as Topic .......................................................................................................................................... 22
<table>
<thead>
<tr>
<th>Topic</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health Manpower</td>
<td>48</td>
</tr>
<tr>
<td>Health Status</td>
<td>48</td>
</tr>
<tr>
<td>Health Systems Plans</td>
<td>49</td>
</tr>
<tr>
<td>Hearing Loss</td>
<td>49</td>
</tr>
<tr>
<td>Heat Stroke</td>
<td>49</td>
</tr>
<tr>
<td>Helicobacter pylori</td>
<td>50</td>
</tr>
<tr>
<td>Hematoma, Epidural, Spinal</td>
<td>50</td>
</tr>
<tr>
<td>Hemorrhagic Fever, Crimean</td>
<td>50</td>
</tr>
<tr>
<td>Hepatitis B</td>
<td>51</td>
</tr>
<tr>
<td>Hepatitis C</td>
<td>52</td>
</tr>
<tr>
<td>HIV Infections</td>
<td>53</td>
</tr>
<tr>
<td>HIV-1</td>
<td>53</td>
</tr>
<tr>
<td>Houseflies</td>
<td>54</td>
</tr>
<tr>
<td>Hydrocarbons</td>
<td>54</td>
</tr>
<tr>
<td>Hyperprolactinemia</td>
<td>54</td>
</tr>
<tr>
<td>Hypertension, Pulmonary</td>
<td>55</td>
</tr>
<tr>
<td>Hysteroscopy</td>
<td>55</td>
</tr>
<tr>
<td>Immunoglobulin Light Chains</td>
<td>55</td>
</tr>
<tr>
<td>Immunohistochemistry</td>
<td>56</td>
</tr>
<tr>
<td>Inflammatory Bowel Diseases</td>
<td>56</td>
</tr>
<tr>
<td>Influenza A Virus, H1N1 Subtype</td>
<td>56</td>
</tr>
<tr>
<td>Influenza in Birds</td>
<td>56</td>
</tr>
<tr>
<td>Influenza, Human</td>
<td>57</td>
</tr>
<tr>
<td>Insulin Resistance</td>
<td>58</td>
</tr>
<tr>
<td>Interferon-alpha</td>
<td>58</td>
</tr>
<tr>
<td>Intestine, Small</td>
<td>59</td>
</tr>
<tr>
<td>Iron</td>
<td>59</td>
</tr>
<tr>
<td>Isoniazid</td>
<td>59</td>
</tr>
<tr>
<td>Isosorbide Dinitrate</td>
<td>60</td>
</tr>
<tr>
<td>Learning</td>
<td>60</td>
</tr>
<tr>
<td>Leishmania infantum</td>
<td>60</td>
</tr>
<tr>
<td>Leishmaniasis, Cutaneous</td>
<td>61</td>
</tr>
<tr>
<td>Lens, Crystalline</td>
<td>61</td>
</tr>
<tr>
<td>Leptin</td>
<td>62</td>
</tr>
<tr>
<td>Lice Infestations</td>
<td>62</td>
</tr>
<tr>
<td>Liver Diseases</td>
<td>63</td>
</tr>
<tr>
<td>Lupus Erythematous, Systemic</td>
<td>63</td>
</tr>
<tr>
<td>Lymphadenitis</td>
<td>64</td>
</tr>
<tr>
<td>Lymphoma, Extranodal NK-T-Cell</td>
<td>64</td>
</tr>
<tr>
<td>Magnetics</td>
<td>65</td>
</tr>
<tr>
<td>Maternal Mortality</td>
<td>65</td>
</tr>
<tr>
<td>Matrix Metalloproteinase 3</td>
<td>66</td>
</tr>
<tr>
<td>Menstruation Disturbances</td>
<td>66</td>
</tr>
<tr>
<td>Mental Disorders</td>
<td>67</td>
</tr>
<tr>
<td>Mesenchymal Stem Cells</td>
<td>67</td>
</tr>
<tr>
<td>Mesenteric Lymphadenitis</td>
<td>68</td>
</tr>
<tr>
<td>Metabolic Syndrome X</td>
<td>68</td>
</tr>
<tr>
<td>Metals</td>
<td>68</td>
</tr>
<tr>
<td>Metals, Heavy</td>
<td>69</td>
</tr>
<tr>
<td>Methicillin-Resistant Staphylococcus aureus</td>
<td>70</td>
</tr>
<tr>
<td>Methyl Ethers</td>
<td>70</td>
</tr>
<tr>
<td>Microcystis</td>
<td>71</td>
</tr>
<tr>
<td>Motor Vehicles</td>
<td>71</td>
</tr>
<tr>
<td>Muscle, Skeletal</td>
<td>71</td>
</tr>
<tr>
<td>Mycobacterium avium Complex</td>
<td>72</td>
</tr>
<tr>
<td>Mycobacterium tuberculosis</td>
<td>72</td>
</tr>
<tr>
<td>Mycotoxins</td>
<td>73</td>
</tr>
<tr>
<td>Myocardial Infarction</td>
<td>73</td>
</tr>
<tr>
<td>Myocardial Ischemia</td>
<td>73</td>
</tr>
<tr>
<td>Nanotechnology</td>
<td>74</td>
</tr>
<tr>
<td>Topic</td>
<td>Page</td>
</tr>
<tr>
<td>-------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>Neuroschistosomiasis</td>
<td>74</td>
</tr>
<tr>
<td>Nigella sativa</td>
<td>75</td>
</tr>
<tr>
<td>Nose</td>
<td>75</td>
</tr>
<tr>
<td>Obesity, Abdominal</td>
<td>75</td>
</tr>
<tr>
<td>Oceanography</td>
<td>76</td>
</tr>
<tr>
<td>Ocimum basilicum</td>
<td>76</td>
</tr>
<tr>
<td>Ofloxacin</td>
<td>77</td>
</tr>
<tr>
<td>Oral Health</td>
<td>77</td>
</tr>
<tr>
<td>Orchietectomy</td>
<td>77</td>
</tr>
<tr>
<td>Orthodontic Wires</td>
<td>78</td>
</tr>
<tr>
<td>Oryza sativa</td>
<td>78</td>
</tr>
<tr>
<td>Osteoarthritis, Knee</td>
<td>79</td>
</tr>
<tr>
<td>Osteoporosis</td>
<td>79</td>
</tr>
<tr>
<td>Ovariectomy</td>
<td>80</td>
</tr>
<tr>
<td>Pancreatic Neoplasms</td>
<td>80</td>
</tr>
<tr>
<td>Pancreatitis, Acute Necrotizing</td>
<td>81</td>
</tr>
<tr>
<td>Pancytopenia</td>
<td>81</td>
</tr>
<tr>
<td>Parasites</td>
<td>82</td>
</tr>
<tr>
<td>Parturition</td>
<td>82</td>
</tr>
<tr>
<td>Patient Readmission</td>
<td>82</td>
</tr>
<tr>
<td>Patient Safety</td>
<td>83</td>
</tr>
<tr>
<td>Peritoneal Fibrosis</td>
<td>83</td>
</tr>
<tr>
<td>Pesticide Residues</td>
<td>83</td>
</tr>
<tr>
<td>Pharmacoepidemiology</td>
<td>84</td>
</tr>
<tr>
<td>Phenol</td>
<td>84</td>
</tr>
<tr>
<td>Phenols</td>
<td>85</td>
</tr>
<tr>
<td>Phosphorus</td>
<td>85</td>
</tr>
<tr>
<td>Phytoplankton</td>
<td>85</td>
</tr>
<tr>
<td>Plantago</td>
<td>86</td>
</tr>
<tr>
<td>Platelet Aggregation Inhibitors</td>
<td>87</td>
</tr>
<tr>
<td>Polycyclic Hydrocarbons, Aromatic</td>
<td>87</td>
</tr>
<tr>
<td>Postmenopause</td>
<td>87</td>
</tr>
<tr>
<td>Pre-Eclampsia</td>
<td>88</td>
</tr>
<tr>
<td>Primary Health Care</td>
<td>88</td>
</tr>
<tr>
<td>Probiotics</td>
<td>88</td>
</tr>
<tr>
<td>Prostatic Neoplasms</td>
<td>89</td>
</tr>
<tr>
<td>Psychomotor Agitation</td>
<td>89</td>
</tr>
<tr>
<td>Pulmonary Fibrosis</td>
<td>90</td>
</tr>
<tr>
<td>Pyrazoles</td>
<td>90</td>
</tr>
<tr>
<td>Quality of Health Care</td>
<td>91</td>
</tr>
<tr>
<td>Rabbits</td>
<td>91</td>
</tr>
<tr>
<td>Reagent Kits, Diagnostic</td>
<td>91</td>
</tr>
<tr>
<td>Referral and Consultation</td>
<td>92</td>
</tr>
<tr>
<td>Rehabilitation</td>
<td>92</td>
</tr>
<tr>
<td>Reperfusion Injury</td>
<td>92</td>
</tr>
<tr>
<td>Reproduction</td>
<td>93</td>
</tr>
<tr>
<td>Reproductive Behavior</td>
<td>93</td>
</tr>
<tr>
<td>Research Support as Topic</td>
<td>93</td>
</tr>
<tr>
<td>Restless Legs Syndrome</td>
<td>94</td>
</tr>
<tr>
<td>RNA-Binding Proteins</td>
<td>94</td>
</tr>
<tr>
<td>Salmonella Infections</td>
<td>94</td>
</tr>
<tr>
<td>Salmonella typhimurium</td>
<td>95</td>
</tr>
<tr>
<td>Scenedesmus</td>
<td>95</td>
</tr>
<tr>
<td>Selenoproteins</td>
<td>96</td>
</tr>
<tr>
<td>Serotonin Uptake Inhibitors</td>
<td>96</td>
</tr>
<tr>
<td>Sewage</td>
<td>96</td>
</tr>
<tr>
<td>Shiga-Toxigenic Escherichia coli</td>
<td>97</td>
</tr>
<tr>
<td>Sirolimus</td>
<td>98</td>
</tr>
<tr>
<td>Skin Diseases</td>
<td>98</td>
</tr>
<tr>
<td>Skin Transplantation</td>
<td>99</td>
</tr>
<tr>
<td>Smoking</td>
<td>99</td>
</tr>
</tbody>
</table>
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) Database.

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](http://www.emro.who.int/information-resources/imemr/imemr.html)

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**Antibodies, Antinuclear**

**Main Subject Heading**

immunology

**Subheading**

Evaluation of anti-DS DNA antibodies in anti-nuclear antibody positive Omani patients.

**Author(s)**

Alnaqdy, Adel; Al Busaidy, Juma; Hassan, Batool

**First author’s e-mail address**

E-mail: aalwan@squ.edu.om

**First author’s affiliation**

Sultan Qaboos University - College of Medicine and Health Sciences - Department of Microbiology and Immunology

**Journal Title**

Pakistan Journal of Medical Sciences

**Year**

2007

**Volume**

23 (2)

**Pages**

211-215

**No. of References**

22 ref.

**Descriptors**

Arthritis, Rheumatoid-diagnosis; Lupus Erythematosus, Systemic-diagnosis; Enzyme-Linked Immunosorbent Assay; Crithidia; Fluorescent Antibody Technique

**Abstract**

To study the correlation between enzyme linked Immunosorbent assay [ELISA] and immunofluorescent [IF] anti-dsDNA antibody measurement in different diseases. One hundred and forty sera from patients with systemic lupus erythematosus [SLE, n=40], rheumatoid arthritis [RA, n=30], disease control [n=40] and from healthy control subjects [n=30] were included. Using the ELISA, serum anti-dsDNA was detected in 24/40 [60%] SLE, 5/30 [16.6%] RA, 9/40 [22.5%] disease controls and 1/30 [3.3%] of normal healthy controls. When IF assay was employed, anti-ds DNA antibodies were detected in 16/40 [40%] SLE, 3/30 [10%] RA, 5/40 [12.5%] disease controls but none in the normal subjects. These results suggest that both ELISA and IF techniques can be used for the measurement of anti-ds DNA antibodies in clinical laboratories and, these antibodies are not unique to SLE.

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**Figure (1): Sample of IMEMR citation**

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viii
Subject Index
Abnormalities, Multiple

diagnosis

Sanjad Sakati syndrome: a case series from Jordan.
E-mail:jumanabaramki@hotmail.com
Jordan University Hospital - Department of Pediatrics
Keywords: Abnormalities, Multiple-genetics; Growth Disorders-diagnosis; Hypoparathyroidism-diagnosis; Intellectual Disability-diagnosis; Seizures-diagnosis; Syndrome; Arabs; Consanguinity
Abstract: Sanjad Sakati syndrome is a rare autosomal recessive disorder that has been described in Arabs. We report 8 patients from 7 Jordanian families, 6 of whom underwent genetic testing and were found to have a 12 bp [155-166 del] deletion within the tubulin-specific chaperone E [T BCE gene] in exon 3 at lq42-43. All patients had severe growth retardation, distinct phenotypic features and hypoparathyroidism. Parental consanguinity was recorded in all families. This is the first genetically proven case series of Sanjad Sakati syndrome in Jordan.

Accidents, Traffic

Road rage and road traffic accidents among commercial vehicle drivers in Lahore, Pakistan.
Shaikh, M.A.; Shaikh, A.; Siddiqui, Z.
E-mail:masoodali1@yahoo.com
Independent Consultancy
Keywords: Automobiles; Rage; Cross-Sectional Studies; Questionnaires
Abstract: Road rage and road traffic accidents increase the burden of morbidity and mortality in a population. A cross-sectional survey with convenience sampling was conducted among commercial vehicle drivers in Lahore, Pakistan [N= 901] to record their behaviours/experiences regarding road rage and road traffic accidents. Respondents were asked about incidents of shouting/cursing/rude gestures or threats to physically hurt the person/vehicle, by others or themselves, in the previous 24 hours or 3 months, and their involvement in road traffic accidents in the previous 12 months. Auto-rickshaw drivers were significantly more likely to report various road rage experiences/behaviours and involvement in accidents compared with bus and wagon drivers. A total of 112 respondents [12.4%] reported being involved in a road traffic accident in the previous 12 months but traffic police did not record the accident in 52.7% of cases. The results of this study underline the need to improve road safety in Pakistan.

Acetaminophen

toxicity

Protective effects of Nigella sativa against acetaminophen [paracetamol] toxicity on the liver, lung, and the kidney of male albino rat.
Abdel Latif, Nassar Ayoub
Sohag University - Faculty of Medicine - Department of Anatomy
Assiut Medical Journal 2012; 36 (1): 229-237 (39 ref.)
Keywords: Liver-pathology; Kidney-pathology; Lungs-pathology; Protective Agents; Nigella sativa; Plant Oils-therapeutic use; Treatment Outcome; Rats; Male
Abstract: Acetaminophen causes injury in experimental animals and human. Increasing evidence demonstrates that oxidative stress plays an important role in acetaminophen toxicity. Thymoquinone [TQ] is the main constituent of the volatile oil obtained from Nigella sativa seeds was reported to possess strong antioxidant properties. Liver, lung and the kidney of male albino rats treated intragastrically with daily therapeutic doses of paracetamol [100 mg/kg body weight] for 30 days. By light microscopic examination, marked histological alternations in the form of cytoplasmic vacuolation in the liver cells examination, marked histological alternations in the form of cytoplasmic vacuolation in the liver cells were observed. Also obvious histological changes were observed by the light microscope in the lung and the kidney. In the third group, concomitant administration of Nigella sativa oil 1ml/kg and paracetamol [100 mg/kg body weight], marked decrease in the histological changes in the liver, and the lung were observed, but the protective effects of Nigella was not marked on the kidney. To evaluate the protective effects of Nigella sativa against acetaminophen toxicity on the liver, lung and kidney of male albino rats.
Achilles Tendon

injuries

Effect of reversed polarity microcurrent electrical stimulation on an experimentally induced Achilles tendon injury in male albino rats: a histological and immunohistochemical study.

Hussin, Ahmed; Fawzy, Amal; Hussin, Amira; El Deeb, Dalia Fathy
Cairo University - Faculty of Medicine - Department of Histology

Keywords: Electric Stimulation; Achilles Tendon-pathology; Histology; Immunohistochemistry; Rats; Male

Abstract: The application of electrical stimulation can lead to a greater and faster increase in the rate of wound healing, especially when applying the cathedral [negative] stimulation for the first week, followed by the anodal [positive] polarity for the rest of the treatment period. The present work aimed to study the effect of polarity reversal of microelectrical current stimulation [MES] on the healing process in an experimentally induced Achilles tendon injury in rats. Forty three male albino rats were used in this study; they were classified into group I [control group] and group II [experimentally injured group], which was further classified into subgroups, I, II, III and IV. Subgroup I represents the injured tendon without MES treatment, whereas subgroups II, III and IV represent the MES-treated ones. The obtained tendon sections were subjected to H and E staining. Masson's trichrome stain, and immunohistochemical staining for alpha smooth muscle actin [alpha SMA], followed by morphometric study and statistical analysis. Subgroup I showed signs of inflammation, a few thin irregularly arranged collagen, active fibroblasts that start to align in rows on the regenerating collagen bundles, and alpha SMA immunoreactivity. In anodal-treated tendons, signs of inflammation had started to disappear, collagen fibers appeared thin and irregularly arranged, active fibroblasts were obviously observed and minimal alpha SMA immunoreactivity were recorded only in subgroup II. Cathodal-treated tendons showed rapid disappearance of cellular infiltration; most collagen fibers appeared regularly arranged with mature fibrocytes in between and multiple avoid alpha SMA immunoreactive myofibroblasts were maximally observed in subgroup II. alpha SMA was suggested to play a role in wound healing due to its high immunoreactivity in myofibroblasts during wound healing. Moreover, the application of electrical stimulation by applying cathodal [negative] stimulation for the first week, followed by anodal [positive] polarity for the rest of the treatment period may lead to better repaired tissue due to myofibroblast directional attraction to the cathode, especially when applied for 4-week duration.

Acquired Immunodeficiency Syndrome

Knowledge, attitude and beliefs towards HIV/AIDS among students of health institutes in Sana'a city.

Al Rabeei, N.A.; Dallak, A.M.; Al Awadi, F.G.
E-mail:nabilalrabeei@hotmail.com
University of Sana'a and Al-Sabeen Hospital - Faculty of Medicine and Health Science
EMHJ - Eastern Mediterranean Health Journal 2012; 18 (3): 221-226 (37 ref.)

Keywords: Health Knowledge, Attitudes, Practice; HIV Infections; Students; Cross-Sectional Studies; Questionnaires

Abstract: Students of health-related subjects have an important role in national strategies on HIV/AIDS prevention. This study assessed the knowledge, attitudes and beliefs towards HIV/AIDS among students at health institutes in Sana'a city, Yemen. A descriptive cross-sectional questionnaire survey was conducted on 600 students selected by cluster sampling. Students had a moderate level of HIV/AIDS knowledge [an average of 67.6% were correct on all items]. Nevertheless, 82.3% knew that HIV could be transmitted by sexual intercourse without a condom, 87.5% from syringes, 71.8% from infected blood and 80.7% from mother to child. Misconceptions about how HIV is transmitted [e.g. hugging and kissing or sharing food, swimming pools and classrooms] were found among 41.5% of the students. Attitudes towards people living with HIV/AIDS showed that 59.8% of students were accepting and positive. There was a common opinion among respondents that HIV-infected persons needed to be punished [65.5%] and isolated [41.0%]; however, 86.8% were willing to care for an HIV-infected person.


Alkhasawneh, E.; Ismayilova, L.; Olimat, H.; El Bassel, N.
E-mail: emanursing@yahoo.com
Hashemite University

Keywords: HIV Infections; Research; Knowledge; Attitude; Cross-Sectional Studies

Abstract: This systematic review evaluated the extent of HIV/AIDS research conducted in Jordan related to behavioural and/or social outcomes. MEDLINE, CINAHL, PsychINFO and Cochrane [1980-2009] were searched as well as the International AIDS Society abstract archives [2000-2009]. Existing reviews and primary studies were cross-referenced for further citations, and unpublished literature and ongoing trials were searched by contacting experts and active researchers in the field. Google Scholar was used to search in peer-reviewed local or regional journals not included in the above-mentioned databases. Searches were also conducted of Arabic literature. Only 8 relevant studies were identified; all were descriptive cross-sectional studies, either quantitative or qualitative.
Acute Coronary Syndrome

Diagnostic importance of platelet parameters in patients with acute coronary syndrome admitted to a tertiary care hospital in southwest region, Saudi Arabia.
Abdullah, S. Assiri; Jamil, Abdul moneim; Mahfouz, Ahmed A.; Mahmoud, Zizi S.; Ghallab, Mohamed
E-mail:aassiri@yahoo.com
King Khalid University - College of Medicine
Journal of the Saudi Heart Association 2012; 24 (1): 9-16 (21 ref.)
Keywords: Blood Platelets; Platelet Count; Retrospective Studies; Cohort Studies; Chest Pain; Angina, Unstable; Myocardial Infarction
Abstract: Identifying risk factors for acute coronary syndrome [ACS] is important for both diagnostic and prognostic purposes. Abnormal platelet parameters, mainly platelet count [PC], mean platelet volume [MPV] and platelet distribution width [PDW] are thought to be among these risk factors. In this study, the associations between PC, MPV and PDW and ACS were investigated in patients admitted to the tertiary care hospital in the south west region of Saudi Arabia. A retrospective cohort of 212 patients with the diagnosis of ACS admitted to Aseer Central Hospital during the period extending from February 1, 2008 to October 31, 2008 were included. The control group consisted of 49 matched subjects who were admitted for chest pain investigation and subsequently found to be non-cardiac chest pain after performing relevant investigations. Blood samples were taken at the time of admission for platelet parameters. Statistical analysis was made using SPSS software and P-values were considered significant if <0.05. A total of 212 patients with acute coronary syndrome [80 patients with MI and 132 patients with UA] and 49 matched controls were studied. The PC was not statistically different among the three groups [283.3 +/- 94.8 x 10[^9] L^-1] for MI cases, 262 +/- 60.8 x 10[^9] L^-1] for UA cases and 275.8 +/- 58.9 x 10[^9] L^-1] for controls]. The MPV was significantly larger in MI cases compared to controls [8.99 +/- 1.5 fl vs. 8.38 +/- 0.51 fl, respectively, P < 0.009], similarly, the MPV was significantly larger in UA cases compared to controls [9.23 +/- 1.19 fl vs. 8.38 +/- 0.51 fl, respectively, P < 0.001]. The PDW was significantly higher in MI cases compared to controls [18.1 +/- 1.8 fl vs. 11.96 +/- 1.8 fl, respectively, P < 0.001], similarly, the PDW as also significantly larger in UA cases compared to controls [18.1 +/- 1.8 fl vs. 11.96 +/- 1.8 fl, respectively, P < 0.019]. Platelet parameters mainly MPV and PDW are readily available and relatively simple and inexpensive laboratory tests which we detected to be significantly raised in patients who have suffered an acute coronary syndrome compared with controls.

mortality

Al Saif, Shukri M.; Al Habib, Khalid F.; Ullah, Anhar; Hersi, Ahmed; Al Faleh, Husam; Alnemer, Khalid; Tarabin, Amir; Abouosa, Ahmed; Kashour, Tarek; Al Murayeh, Mushabab
E-mail:shukrialsaif@yahoo.com
Saud AlBabtain Cardiac Center
Journal of the Saudi Heart Association 2012; 24 (1): 9-16 (21 ref.)
Keywords: Age Factors; Prospective Studies; Outcome Assessment (Health Care); Diabetes Mellitus; Smoking; Myocardial Ischemia; Myocardial Infarction; Coronary Angiography; Coronary Artery Bypass
Abstract: To characterize risk profile of acute coronary syndrome [ACS] patients in different age groups and compare management provided to in-hospital outcome. Prospective multi-hospital registry. Seventeen secondary and tertiary care hospitals in Saudi Arabia. Five thousand and fifty-five patients with ACS. They were divided into four groups: <40 years, 41-55 years, 56-70 years and >=70 years. Main outcome measures: prevalence, utilization and mortality. Ninety-four percent of patients <40 years compared to 68% of patients >70 years were men. Diabetes was present in 70% of patients aged 56-70 years. Smoking was present in 66% of those <40 years compared to 7% of patients >70 years. Fifty-three percent of the patients >70 years and 25% of those <40 years had history of ischemic heart disease. Sixty percent of patients <40 years presented with ST elevation myocardial infarction [STEMI] while non-ST elevation myocardial infarction was the presentation in 49% of patients >70 years. Thirty-four percent of patients >70 years compared to 10% of patients <40 years presented >12 h from symptom onset with STEMI. Fifty-four percent of patients >70 compared to 64-71% of those <70 years had coronary angiography. Twenty-four percent of patients >70 compared to 34-40% of those <70 years had percutaneous coronary intervention. Reperfusion shortfall for STEMI was 16-18% in patients >56 years compared to 11% in patients <40 years. Mortality was 7% in patients >70 years compared to 1.6-3% in patients <70 years. For all comparisons [p < 0.001]. Young and old ACS patients have unique risk factors and present differently. Older patients have higher in-hospital mortality as they are treated less aggressively. There is an urgent need for a national prevention.
Adiponectin

Is adiponectin related to orofacial clefts?
Khazaei, S.; Kazemi, Sh.; Khazaei, M.
Isfahan University of Medical Sciences - School of Dentistry - Student Research Committee
IRCMJ - Iranian Red Crescent Medical Journal 2012; 14 (1): 51-52 (11 ref.)
Keywords: Cleft Lip; Cleft Palate; Diabetes Mellitus

Air Pollution

Nejadkoorki, F.; Baroutian, S.
E-mail: f.nejadkoorki@yazduni.ac.ir
Yazd University - Department of Environmental Engineering
Keywords: Air Pollutants; Urban Population; Neural Networks (Computer); Particulate Matter; Meteorology
Abstract: Life style and life expectancy of inhabitants have been affected by the increase of particulate matter 10 micrometers or less in diameter [PM] in cities and this is why maximum PM[10] concentrations have received extensive attention. An early notice system for PM[10] concentrations necessitates an accurate forecasting of the pollutant. In the current study an Artificial Neural Network was used to estimate maximum PM[10] concentrations 24-h ahead in Tehran. Meteorological and gaseous pollutants from different air quality monitoring stations and meteorological sites were input into the model. Feed-forward back propagation neural network was applied with the hyperbolic tangent sigmoid activation function and the Levenberg-Marquardt optimization method. Results revealed that forecasting PM[10] in all sites appeared to be promising with an index of agreement of up to 0.83. It was also demonstrated that Artificial Neural Networks can prioritize and rank the performance of individual monitoring sites in the air quality monitoring network.

Amiodarone

toxicity

Effects of stem cell therapy on amiodarone-induced liver injury in albino rats.
Abdel Aziz, Dalia Hussein; Metwally, Hala Gabr
E-mail: dhhelmy@yahoo.com
Beni-Suef University - Faculty of Medicine - Department of Histology
Keywords: Liver-pathology; Histology; Immunohistochemistry; Mesenchymal Stem Cells-therapeutic use; Treatment Outcome; Rate; Male
Abstract: Sustained liver injury causes the development of fibrosis. For patients with end-stage fibrosis [cirrhosis] with subsequent portal hypertension, liver failure, and hepatocellular cancer, liver transplantation is the only effective method of treatment. However, it is associated with several complications and side effects. The present study aimed to determine the possible effect of human cord blood mesenchymal stem cell therapy on liver injury using amiodarone as a model of induced liver damage in albino rats. Twenty-three adult male albino rats were divided into three groups: group I [control] included six rats that were given 0.5ml Tween 80 orally for 2 weeks, group II included 10 rats that were given 5.4mg of amiodarone orally for 2 weeks, and group III included seven rats that were injected with stem cells in the tail vein following confirmation of liver damage and held for 4 weeks before sacrifice. Liver specimens were processed. Sections were subjected to the following stains: H and E, Masson's trichrome, and Prussian blue. Immunohistochemical studies were carried out for CD44 and human APF. Digital image analysis was used to determine the area% of collagen fibers and the optical density of alpha-fetoprotein-positive cells. The results were compared statistically. In group II, congested dilated blood sinusoids were observed. Some hepatocytes showed dark nuclei. Some hepatocytes appeared with dark nuclei and a strong acidophilic cytoplasm; others were ballooned. Mallory bodies were observed. Some portal areas showed intense mononuclear cellular infiltration. Extensive collagen fibers existed around some central veins and portal tracts and increased area % of collagen fibers was observed. Most histological findings were improved in group III. In addition, multiple-positive alpha-fetoprotein immunostained cells were detected and proved morphometrically by their increased mean optical density in comparison with group II. It can be concluded that cord blood mesenchymal stem cell therapy induces amelioration in morphological changes associated with amiodarone-induced liver injury, provided therapy is initiated early in the development of the injury.
Amyloidosis
diagnosis

Raccoon eyes after UGI endoscopy: a case report.
Sotoudehmanesh, R.
E-mail: r.sotoudehmanesh@ams.ac.ir
Tehran University of Medical Sciences - Associate Professor, Digestive Disease Research Institute
Govaresh 2012; 16 (4): 275-276 (5 ref.)
Keywords: Raccoons; Endoscopy, Gastrointestinal; Eye Diseases; Ecchymosis
Abstract: A 78-year-old woman presented with epigastric pain following the use of non-steroidal anti-inflammatory drugs [NSAIDs] for joint pain relief. She underwent UGI endoscopy. During UGI endoscopy she suffered from severe retching despite the use of sedatives. At 6 hours after the procedure, she developed raccoon eyes with chemosis. Biopsy from the gastrointestinal [GI] mucosa revealed amyloidosis.

Anemia, Iron-Deficiency
complications

Effect of an iron-deficient diet on rat tongue with special reference to the efficacy of iron supplementation: light and scanning electron microscopic study.
Ibrahim, Suzi H.; Hafez, Manal Shaaban
Ain Shams University - Faculty of Medicine - Department of Histology
Keywords: Tongue-pathology; Histology; Tongue-ultrastructure; Microscopy, Electron, Scanning; Iron Dietary-therapeutic use; Treatment Outcome; Rats
Abstract: Iron deficiency is the most frequent nutritional deficiency worldwide. The oral cavity is one of the first sites where iron deficiency can be clinically noted. To demonstrate the histological changes in rat tongue induced by an iron-deficient diet and to study the role of a balanced diet, containing the daily iron requirements, either alone or with daily oral iron supplementation. Young rats [4 weeks old] were divided into two groups. Group I [the control group] was further subdivided into IA and IB, which the rats were fed a balanced diet for 6 and 8 weeks, respectively. Group II was further subdivided into IIA, which included rats that were fed an iron-deficient diet for 6 weeks, and IIB, which included rats that were fed an iron-deficient diet for 6 weeks, followed by a balanced diet for 2 weeks. IIC included rats that were fed an iron-deficient diet for 6 weeks, followed by a balanced diet and daily oral iron supplementation for 2 weeks. Blood samples were collected to measure the levels of hemoglobin and serum iron. At the end of the experiment, specimens from the anterior two-thirds of the tongue were taken and prepared for light and scanning electron microscopic study. In subgroup IIA, the tongue papillae appeared deformed in shape, irregularly arranged, and widely separated. Vascular congestion and mononuclear cellular infiltration were observed in the connective tissue under the epithelium. In subgroup IIB, most of these histological changes were still observed. However, a marked improvement was observed in subgroup IIC. It was concluded that an iron-deficient diet induced structural changes in rat tongue. However, with 2 weeks of oral iron supplementation in addition to the use of the balanced diet, there was complete restoration of the tongue structure.

Angiotensin-Converting Enzyme Inhibitors
therapeutic use

Angiotensin converting enzyme inhibitor as an additive treatment after successful balloon dilation of a critical pulmonary valve stenosis.
Galal, M.O.; Alzahrani, A.M.; Elhoury, M.E.
E-mail: ogalal@yahoo.com
King Fahad Medical City - Prince Salman Heart Center
Journal of the Saudi Heart Association 2012; 24 (1): 47-50 (6 ref.)
Keywords: Balloon Dilation; Pulmonary Valve Stenosis-therapy; Adrenergic alpha-Antagonists; Oxygen; Electrocardiography; Heart Catheterization
Abstract: A 2 days old, 2.7 kg heavy baby boy with critical pulmonary stenosis, underwent successful balloon dilation. After the uneventful procedure, he remained oxygen dependent. The baby was given oral angiotensin converting enzyme inhibitor [ACE inhibitor] instead of an infusion of alpha blocker. Within few hours, in the afternoon of the same day after administration of ACE Inhibitor, the baby could be weaned off oxygen, maintaining on room air,
oxygen saturation between 87% and 92%. At follow-up, two months later, his saturation was 99% on room air. We believe that some neonates with critical pulmonary valve stenosis who remain oxygen dependent despite successful balloon dilation, could benefit from such management.

Aorta

pathology

Photoclinic. what is your diagnosis?
Huang, Chun Chieh; Tsai, Ching Wei; Kuo, Chin Chi
Far Eastern Memorial Hospital - Department of Medical Imaging
Archives of Iranian Medicine 2012; 15 (1): 63-64 (3 ref.)
Keywords: Aortic Diseases-diagnosis; Coral Reefs; Tomography, X-Ray Computed; Vascular Calcification; Calcinosis

Aortic Coarctation

diagnosis

The unusual hypertensive patient.
Al Bugami, Saad; Al Motairi, Mansour; Al Zahrani, Ahmed; Al Zahrani, Atif
E-mail:sbugami@gmail.com
King Saud Bin Abdulaziz University - King Abdulaziz Medical City - king Khalid National Guard Hospital, Jeddah 21423, Saudi Arabia
Journal of the Saudi Heart Association 2012; 24 (1): 41-45 (26 ref.)
Keywords: Hypertension; Aortic Valve; Ductus Arteriosus, Patent; Adrenal Glands-pathology; Angiography; Tomography, X-Ray Computed; Pheochromocytoma
Abstract: Many young patients with systemic hypertension have secondary causes which if identified early could lessen the cardiovascular complications associated with long standing hypertension. Coarctation of the aorta is one of those rare causes. We describe a 40 year old male with hypertension, coarctation of the aorta, bicuspid aortic valve, PDA and an adrenal mass.

Appendicitis

ultrasonography

Sensitivity and specificity of ultrasound in the diagnosis of acute appendicitis.
Al Ajerami, Y.
E-mail:Yasser_ajr@hotmail.com
Al Azhar University - Faculty of Applied Medical Sciences - Medical Radiography Department
Keywords: Appendicitis-diagnosis; Sensitivity and Specificity; Relative Value of Tests
Abstract: The aim of this study was to evaluate the sensitivity and specificity of ultrasound in the diagnosis of acute appendicitis at Al-Shefa hospital, Gaza Strip, Palestine. Patients who had appendicitis diagnosed by ultrasound over the study period [n = 180] underwent surgical excision of the appendix. The negative appendectomy rate was low, with only 4.4% [8/180] false positives. A significantly higher false diagnosis rate [False negatives + false positives] was obtained in female patients than in males: 38.5% versus 6.2%. A high proportion of falsely diagnosed cases had abnormal weight [overweight or obese] [82.1%]. The overall sensitivity and specificity of ultrasound, using surgical outcome as the gold standard, were 84.8% and 83.3% respectively, and the positive and negative predictive values were 93.3% and 66.7% respectively. Sensitivity and specificity were higher in males [95.7% and 88.2% respectively] than females [84.6% and 71.4% respectively].
Arabidopsis

Functional analysis of glycin-rich RNA binding protein, a suppressor of trehalose-6-phosphate mediating growth arrest in Arabidopsis thaliana.
Aghdasi, Mahnaz; Schluepmann, Henriette
E-mail:Aghdasi46@yahoo.com
Golestan University - Faculty of Science - Department of Biology
IJB - Iranian Journal of Biotechnology 2012; 10 (1): 22-31 (40 ref.)
Keywords: RNA-Binding Proteins; Arabidopsis Proteins; Sugar Phosphates; Trehalose-analogs and derivatives; Growth; Phylogeny; Blotting, Western; Chromatography, Gel; Sepharose
Abstract: Metabolism of the alpha-1,1 glucose disaccharide, trehalose, is indispensable in plants. In the Murashige and Skoog [MS] medium, trehalose inhibits plant growth and allocation of carbon to roots. A suppressor of trehalose-6-phosphate [T6P] mediated growth arrest, GR-RBP2, is characterized in more detail. Phylogenetic analysis revealed that GR-RBP2 is a protein of likely prokaryotic origin. A knockout mutant of GR-RBP2 was identified in the T-DNA insertion line SALK-059714, yet plants of this line were not altered with regard to growth on different carbon sources and on trehalose compared to WT. GUS expression analysis showed that GR-RBP2 was detected in adult leaves, flowers and siliques. Expression was particularly high in root tips. GR-RBP2 expression also is insensitive to 100 mM trehalose. TAP-tagged versions of this protein showed that GR-RBP2 is part of a protein complex in planta.

Arsenic

toxicity

Harmful effects of arsenic on the cerebral cortex of adult male albino rats: light and electron microscopic studies.
Selim, Sally Ahmed; Selim, Assmaa O.; Askar, Eman M.
E-mail:sa_selim73@yahoo.co
Zagazig University - Faculty of Medicine - Department of Histology and Cell Biology
Keywords: Cerebral Cortex-pathology; Cerebral Cortex-ultrastructure; Microscopy, Electron; Rats; Male; Oxidative Stress
Abstract: Arsenic is a common environmental contaminant that is available worldwide. It has been reported that human arsenic exposure causes nervous system disturbances such as polyneuropathy and neurobehavioral deficits. The purpose of this work was to describe the histological changes induced by arsenic in the cerebral cortex of adult male albino rats and discuss its possible mechanisms of action. Twenty adult male albino rats were equally classified into control [I] and experimental [II] groups of 10 animals each. Rats of group II were intraperitoneally injected with 2mg/kg/day of sodium arsenite for 20 days. Samples from the temporal lobes of the cerebrum were taken and processed for light and electron microscopic examination. Features of neurodegeneration such as shrunken, irregular, and darkly stained nuclear and degenerating organelles were observed in arsenic-treated rats. Good evidence of gliosis and disrupted blood-brain barrier were also detected. The adult brain is particularly susceptible to arsenic-induced oxidative stress and contributes to the neurodegenerative lesions.

Arteriovenous Malformations

surgery

Reconstruction of cavopulmonary pathway for the patient with persistent arteriovenous malformations due to offset flow from hepatic vein.
Hibino, Narutoshi; Sinha, Pranava; Donofrio, Mary; Jonas, Richard A.
E-mail:nhibino@cnmc.org
Children's National Medical Center - Cardiovascular Surgery
Journal of the Saudi Heart Association 2012; 24 (1): 51-54 (9 ref.)
Keywords: Heart Bypass, Right; Hepatic Veins; Azygos Vein; Vena Cava, Inferior; Pulmonary Artery; Angiography; Magnetic Resonance Imaging
Abstract: The hypoxemia caused by arteriovenous malformations after cavopulmonary shunt in patients with heterotaxy, an interrupted inferior vena cava and single ventricle physiology have been treated by incorporation of hepatic vein flow into the pulmonary circulation. However, some patients have persistent arteriovenous malformations because of offset hepatic venous flow to one pulmonary artery. Various approaches have been used to change offset flow to achieve balanced hepatic flow to the lungs in this patient population. This case report highlights the challenges that may be associated with anastomosis of the azygos vein to the inferior vena cava at the level of the diaphragm and
illustrates an alternative technique to direct hepatic venous blood into an affected lung with arteriovenous malformations. The redirection of hepatic venous flow to the affected pulmonary artery resulted in resolution of symptoms within months of surgery.

Ascorbic Acid

The effect of oral ascorbic acid pretreatment on feeding changes following injection in nucleus accumbens shell in adult male rats.
Salari, Sahar; Abbasnejad, Mehdi; Badreh, Firuzeh; Mahani, Saeed Esmaeili
E-mail: mabbaas@mail.uk.ac.ir
Shahid Bahonar University - Faculty of Science - Department of Biology
Tehran University Medical Journal [TUMJ] 2012; 69 (11): 703-709 (34 ref.)
Keywords: Nucleus Accumbens; Eating; Rats
Abstract: Ascorbic acid [AA] is not synthesized in the brain but it is actively transported through blood-brain barrier by SVCT2 cotransporter and it is stored in high concentrations with heterogeneous distribution in areas such as nucleus accumbens shell [AcbSh] in the mammalian brain. Previous studies have shown that Ascorbic acid injection into AcbSh decreases feeding; therefore, in the present study we evaluated the effects of oral Ascorbic acid pretreatment on changes in feeding upon its injection in AcbSh in adult male rats. Sixty-three adult male rats [220-280 g] were divided into five treatment and five pretreatment groups. The treatment groups included the control [intact] group, sham-operated Ascorbic acid group that received normal saline as vehicle, and three other groups that received different doses of ascorbic acid [10, 50 and 250 microg/rat] by injection into AcbSh for four days. The pretreatment groups received Ascorbic acid [100 mg/kg] for 15 days via gastric gavage before receiving the aforementioned doses in treatment groups into intra nucleus AcbSh. Feeding measurement was repeated every 12 hours by automatic metabolic cage. The results indicated that all injected doses of Ascorbic acid [10, 50 and 250 microg/rat] into nucleus accumbens shell decrease food intake [P<0.05] in rats and oral Ascorbic acid pretreatment had no effects in this regard. Our findings show that ascorbic acid is an effective factor in feeding regulation. Oral pretreatment seems to have no influence on the central effects of ascorbic acid in the nucleus accumbens shell.

Asthma

Feasibility of a peer-led, school-based asthma education programme for adolescents in Jordan.
Al Sheyab, N.A.; Gallagher, R.; Roydhousc, J.K.; Crisp, J.; Shah, S.
E-mail: jood1965@yahoo.com
Jordan University of Science and Technology - Faculty of Nursing, Midwifery, and Health
Keywords: Health Education-methods; National Health Programs; Friends; Knowledge; Health Promotion; Questionnaires; Awareness; Students; Program Evaluation; Schools
Abstract: The Adolescent Asthma Action programme [Triple A] has been used successfully to promote asthma knowledge, awareness and quality of life in adolescents with asthma in Australia. We describe the feasibility and acceptability of an adaptation of this English-language, peer-led, asthma education programme in a girls' high school in Northern Jordan. The pilot was conducted by bilingual health workers. Feasibility, acceptability and adaptability were measured through participation rates, open-ended questionnaires completed by peer leaders, a focus group for junior students and reflective journal notes. The programme was well-received by staff and students, with high levels of participation. The peer-led approach was viewed positively. Students reported that they enjoyed the interactive learning activities and the opportunity to practise English. The students reported increased asthma knowledge and awareness, with students with asthma reporting receiving more support from peers. A peer-led asthma education programme is feasible and acceptable in the Jordanian school context.

chemically induced

Altered secretory activity in rat adrenal chromaffin cells after experimentally induced bronchial asthma and dexamethasone treatment: ultrastructural and biochemical study.
Mohamed, Shehab Hafez; Hussein, Abdel Aziz
E-mail: shhababooia@hotmail.com
Mansoura University - Faculty of Medicine - Department of Histology
Keywords: Asthma-complications; Chromaffin Cells-secretions; Chromaffin Cells-ultrastructure; Microscopy, Electron; Epinephrine-lood; Norepinephrine-blood; Dexamethasone-therapeutic use; Rats
Abstract: It is generally accepted that chromaffin cells release their contents by both exocytosis and piecemeal degranulation [PMD]. Bronchial asthma and dexamethasone treatment might alter this secretory activity. This study was designed to shed light on secretory activity in the normal adult rate chromaffin cells, in rats subjected to bronchial asthma and after treatment with dexamethasone. Rats were divided into three equal groups at random:group
[control], group B [asthmatic rats], and group C [dexamethasone-treated asthmatic rats]. In rats of group B, the chronic asthma model was established by an intraperitoneal injection and challenge with ovalbumin. In group C, the rats were pretreated with dexamethasone before each challenge. Serum epinephrine and norepinephrine levels were measured by enzyme-linked immunosorbent assay. Bronchoalveolar lavage fluid was examined for the total leukocytic count and paraffin sections from the lung were stained with H and E. Specimens of the adrenal medulla were examined by transmission electron microscope and were morphometrically analyzed. Significant decreases in serum epinephrine and norepinephrine levels were recorded in asthmatic rats and corrected after dexamethasone treatment. The total numbers of adrenaline and noradrenaline granules were significantly lower in asthmatic rats. Features of PMD manifested as tail-like projections, altered granules with eroded contents, partially empty granules, large completely empty containers, and small cytoplasmic vesicles were observed in control rats and were augmented in rats subjected to chronic asthma. Augmented features of PMD and biochemical changes in the conditions of chronic asthma could be corrected by dexamethasone treatment.

Bacterial Proteins

In silico genome-wide screening for TnrA-regulated genes of Bacillus clausii.
Farazmand, Abbas; Yakhchali, Bagher; Shariati, Parvin; Minuchehr, Zarrin; Ofoghi, Hamideh
National Institute of Genetic Engineering and Biotechnology [NIGEB] - Department of Industrial and Environmental Biotechnology

IJB - Iranian Journal of Biotechnology 2012; 10 (1): 61-65 (14 ref.)
Keywords: Bacteriocins; Repressor Proteins; Nitrogen; Transcription Factors; Genome-Wide Association Study; Genome; Consensus Sequence; Glutamate-Ammonia Ligase; Operon; ATP-Binding Cassette Transporters; Regulatory Elements, Transcriptional

Abstract: Bacillus clausii TnrA transcription factor is required for global nitrogen regulation. In order to obtain an overview of gene regulation by TnrA in B. clausii KSM-K16, the entire genome of B. clausii was screened for the consensus sequence, 5’-TGTNAN7TNACA-3’ known as the TnrA box, and 13 transcription units were found containing a putative TnrA box. The TnrA targets identified in this study were tnrA, glnA, nrgA, nasFDEB, puc genes, licT, the two operons of the oligopeptide ABC transporter, lytR, transcriptional regulator of the Lrp/AsnC family, sodium-dependent transporter of SNF family, hyu genes and a biochemically uncharacterized protein.

Bacteriuria

epidemiology

Asymptomatic bacteriuria in antenatal patients in Ilorin, Nigeria.
Ajayi, Akinola B.; Nwabuisi, Charles; Aboyeji, Abiodun P.; Ajayi, Nanji S.; Fowotade, Adeola; Fakeye, Olurotimi O.
E-mail:callakin2002@yahoo.com
General Hospital Mushin - Department of Obstetrics and Gynecology

Oman Medical Journal 2012; 27 (1): 31-35 (38 ref.)
Keywords: Prospective Studies; Pregnancy; Prevalence; Staphylococcus aureus; Proteus; Nitrofurantoin; Gentamicins; Prenatal Care

Abstract: To determine the prevalence of asymptomatic bacteriuria, bacteriology and sensitivity pattern in Ilorin using the gold standard of urine culture. A prospective study was carried out from 1st July to 31st October 2007, at the University of Ilorin Teaching Hospital [UITH] on 125 consenting asymptomatic pregnant women. A structured proforma was used to collect information from the women and a midstream urine specimen collected for bacteriological culture. Of the 125 pregnant women, 50 had bacteriuria on urine culture giving a prevalence of 40%. The mean age of the women was 28.5 years with a standard deviation of 4.95. The age ranged between 14 and 40 years. Staphylococcus aureus was the commonest pathogen isolated [72%), followed by Proteus spp [14%]. Most of the organisms showed good sensitivity to Nitrofurantoin and gentamicin. The prevalence of asymptomatic bacteriuria in Ilorin is high and routine urine culture is advocated for all pregnant women at booking.

Balloon Dilation

Initial experience of using intracardiac echocardiography [ICE] for guiding balloon mitral valvuloplasty [BMV].
Al Ahmari, Saeed; Amro, Ahmed; Al Otabi, Mohammed; Al Abdullah, Moheeb; Al Kasab, Saad; Al Amri, Husien
E-mail:naman45@hotmail.com
Prince Sultan Cardiac Center - Adult Cardiology Department

Keywords: Mitral Valve Stenosis-therapy; Echocardiography
Abstract: BMV is an established treatment for rheumatic mitral valve stenosis. The procedure is historically guided by fluoroscopy, and the role of intracardiac echocardiogram [ICE] guidance is not well defined. We report our initial experience of using ICE to guide BMV procedures. During BMV procedure, ICE catheter was inserted into the right atrium from the right femoral vein, and the septal puncture was monitored by ICE, as well as positioning of the balloon in the mitral valve. Comparisons were made between ICE, transthoracic echocardiography [TTE], and catheterization derived hemodynamic measurements [cath]. Seventeen patients with mitral stenosis underwent the procedure. The mean age was 44.4 +/- 21 years. The mean MV area increased from 0.9 +/- 0.1 cm² to 1.7 +/- 0.2 cm², P < 0.0001 and the mean gradient decreased from 12.6 +/- 5.8 mmHg to 4.9 +/- 1.8 mmHg, P < 0.001. Atrial septum puncture and guidance of the balloon into the MV apparatus were obtained in all patients under ICE guidance. Severe MR developed in one patient and was readily detected by ICE. ICE derived gradient measurements were comparable to those obtained by TTE, and cath. ICE guidance of BMV is feasible, and useful in monitoring safe septal puncture, optimizing balloon positioning, and in detecting complications. The hemodynamic measurements obtained were comparable to those obtained by TTE, and cath.

Battered Women

psychology

Evaluating the psychosocial and mental health consequences of abuse among Jordanian women.
Mansour, A.M. Hamdan; Constantino, R.E.; Shishani, K.R.; Safadi, R.; Banimustafa, R.
University of Jordan - Faculty of Nursing - Department of Community Health Nursing
Keywords: Mental Health; Cross-Sectional Studies; Depression; Self Efficacy; Spouse Abuse-psychology
Abstract: This cross-sectional, descriptive, correlational study evaluated the mental health consequences of abuse among Jordanian women. Standard tools were used to collect data from 93 abused women seeking help at a welfare centre in relation to forms of abuse, depression, coping, suicidal ideation, substance use, social support and self-efficacy. The most commonly reported form of abuse was psychological abuse. Applying the Beck Depression Inventory showed that 38.7% of the abused women had moderate to severe levels of depression. Although half the women had a low level of perceived social support, abused Jordanian women reported moderate to very high levels of self-efficacy and used coping more frequently than avoidance coping strategies. Using the Modified Scale for Suicide Ideation, 15.7% of the women reported that the desire for death was stronger than the desire for life. Abused women in mental health and psychosocial risks that could compromise their quality of life.

Bees

microbiology

Antagonistic effects of symbiotic bacteria isolated from midgut of honey bee workers against Ascosphaera apis, the causal pathogen of chalkbrood disease.
Moustafa, Adham M.; Omar, Mohamed O.M.; Morsi, Mohamed A.A.; Fahmy, Bassam F.G.
Plant Protection Research Institute
Assiut University Bulletin For Environmental Researches 2012; 15 (1): 77-91 (41 ref.)
Keywords: Honey; Larva-microbiology; Dermatomycoses
Abstract: Six biotypes of fungal isolates belonging to Ascosphaera apis were isolated by three media from infested honey bee larvae. Two isolates [A[7] and A[15]] were able to form sporocysts. However, the other four [A[3], A[4], A[8],A[9]] did not form sporocysts on cultivated Murashieg and Skoog medium [mMS]. Six isolates from symbiotic bacteria associated with midgut of honey bee workers have been isolated from healthy workers. Four isolates from endospore-forming bacteria belonged to Bacillus subtilis [B[2], B[4], B[10] and B[100]] and two isolates from non endospore-forming bacteria to Pseudomonas fluorescence [P[1]and P[5]] were isolated. Morphological features and physiological reactions of isolated bacteria were determined. Antagonistic effectiveness of both Bacillus subtilis and Pseudomonas fluorescence was tested against isolates of Ascosphaera apis, the causal pathogen of chalkbrood disease, in vitro. Data showed that Bacillus subtilis isolate [B2], gave the highest antagonistic effect as inhibition zone and mycelial growth followed by Pseudomonas fluorescence [P[1]]. Highly significant differences among Bacillus subtilis [B[2]], Pseudomonas fluorescence [P[1]] and other bacterial strains were recorded... Scanning electron microscope was used to examined the fungal hyphae and mature sporocysts of Ascosphaera apis which isolated from infested larvae and grown on [mMs]. Numerous distinguish differences were recorded. The examination showed that numerous bacterial cells of Pseudomonas fluorescence invaded fungal hyphae of Ascosphaera apis and caused disintegration the cell walls. Whereas Bacillus subtilis hyphae showed shrinking appearance. It could be conducted that such symbiotic bacteria can considered as a bioformula for controlling such disease in honey bee colonies.
Benzimidazoles

therapeutic use

Dabigatran etexilate, a novel oral direct thrombin inhibitor, for preventing thromboembolic events after knee replacement arthroplasty.
Moghaddaei, Mehdi; Shahhoseini, Gholamreza; Farahini, Hosein; Yegane, Ali; Rajabpour, Saeed
Tehran University of Medical Sciences - Department of Orthopedic Surgery
Tehran University Medical Journal [TUMJ] 2012; 69 (11): 725-729 (15 ref.)
Keywords: Pyridines-therapeutic use; Antithrombins; Venous Thromboembolism-prevention and control; Arthroplasty, Replacement, Knee
Abstract: Dabigatran etexilate is one of the few direct thrombin inhibitors with anti-coagulant activities and the following distinctive features: taken orally, no need to closely monitor for complications, and no need for regular dose adjustments. Relying on the above mentioned valuable advantages, dabigatran etexilate can be considered as a premier choice for the prevention of venous thromboembolism after knee replacement arthroplasty. Forty five patients undergoing 50 knee replacement surgeries were included in this case-series study undertaken in Hazrat Rasool Akram and Khatham-alanbia Hospitals during 2010. Dabigatran, etexilate was administered for the prevention of venous thromboembolism after knee arthroplasty in doses of 110 mg in the first 1-4 h after surgery followed by daily doses of 220 mg for 10 days. Patients were examined 3 times and a color Doppler sonography was performed on the 11th day to check for venous thrombosis. Finally, the patients were re-examined at the end of the 1st and the 3rd months postoperatively. Only one out of 45 patients was diagnosed to have venous thrombosis on sonography done on the 11th day but the patient did not have any symptoms and repeat sonographies at the end of the 1st and the 3rd months postoperatively showed no venous thrombosis either. No complications were witnessed in the patients in the 3-month follow-up period. Dabigatran etexilate [220 mg/d for 10 days] can be an effective drug against venous thrombosis after total knee replacement surgeries.

beta-Lactamases

CTX-M-15 extended-spectrum beta-lactamases in Enterobacteriaceae in the intensive care unit of Tlemcen hospital, Algeria.
Ahmed, Z. Baba; Ayad, A.; Mesli, E.; Messai, Y.; Bakour, R.; Drissi, M.
University of Abou Bekr Belkaid - Laboratory, Antibiotics-Antifungals
Keywords: Enterobacteriaceae-enzymology; Intensive Care Units; Microbial Sensitivity Tests
Abstract: The aim of this study was to detect extended-spectrum beta-lactamases [ESBL] in Enterobacteriaceae isolates in the intensive care unit [ICU] of Tlemcen hospital in north-western Algeria. Antimicrobial susceptibility testing, molecular typing, characterization of ESBL-encoding genes and the genetic environment, conjugation experiments and plasmid analysis were carried out. In all, 28 Enterobacteriaceae isolates were isolated from specimens recovered from patients in the ICU and 2 from surfaces of the unit. Of these, 11 isolates [4 Escherichia coli, 5 Klebsiellapneumoniae and 2 Enterobacter cloacae] produced ESBL of the CT-X-M-15 type. Molecular typing of the isolates showed the clonal nature of 4 K. pneumonlae isolates. The bla[CTX-M-15] gene was genetically linked to insertion sequence IS6c18 and was transferable by conjugation from 3 isolates. Regular monitoring of resistance mechanisms, the establishment of a prevention strategy, and more rational and appropriate use of antibiotics are needed.

beta-Thalassemia

psychology

Quality of life of Iranian beta-thalassaemia major patients living on the southern coast of the Caspian Sea.
Khani, H.; Majdi, M.R.; Marzabadi, E. Azad; Montazeri, A.; Ghorbani, A.; Ramezani, M.
E-mail:dr.h.khani@gmail.com
North Khorasan University of Medical Sciences - Iranian Applied Research Center for Public Health and Sustainable Development [IRCPHD]
EMHJ - Eastern Mediterranean Health Journal 2012; 18 (5): 539-545 (34 ref.)
Keywords: Quality of Life; Questionnaires; Cross-Sectional Studies; Severity of Illness Index; Personal Satisfaction; Mental Health
Abstract: In the present study, the aim was to explore the quality of life of thalassaemia major [TM] patients according to age, sex, school performance, severity and complications of the disease. A cross-sectional descriptive study was conducted. Quality of life was evaluated by 4 questionnaires; demographic characteristics, the short form 36
health survey [SF-36], Persian version of symptoms checklist-90-revised [SCL-90-R] and life satisfaction index [LSI]. 687 [41.08%] of the eligible patients with TM completed the questionnaires. With the SF-36 questionnaire, 329 [47.9%] participants had an excellent level of physical functioning. With the SCL-90-R questionnaire, 446 [64.9%] participants had a global severity index of > 0.7, considered psychiatric patients, 141 [20.5%] patients had GSI between 0.4 and 0.7, considered suspected psychiatric patients and 100 [14.6%] participants had GSI of < 0.4, considered non-psychiatric patients. The mean score of LSI questionnaire was 20.50 [SD 5.95], range 2-37. Beta-TM patients are at risk of psychiatric symptoms and need appropriate psychiatric counseling.

Biofuels

Examining a hybrid plug-flow pilot reactor for anaerobic digestion of farm-based biodegradable solids.
Adl, M.; Sheng, K.C.; Xia, Y.H.; Gharibi, A.; Chen, X.
Zhejiang University - College of Biosystems Engineering and Food Science - Bioenergy and Biomaterials Research Group
International Journal of Environmental Research 2012; 6 (1): 335-344 (28 ref.)
Keywords: Agriculture; Swine; Feces; Gossypium; Methane
Abstract: Plug-flow digesters with periodic loading mechanism are more enthusiastic than fully mechanized digestion plants for the majority of small or medium scale farms according to the costs and operational complexities. A dual-compartment plug-flow reactor equipped with a passive heating system was designed and experimentally operated by purpose of demonstrating a simple and low cost technology for handling the biodegradable agricultural wastes. The reactor was successfully started up with pig feces as feedstock under a quasi-continuous loading and semi-dry condition with an average total solids content of 12.8% inside the digester and an average organic loading rate of 2.06kg-VS/[m3.d]. The start-up phase was followed by co-digestion of pig feces and pre-treated cotton stalk. Even though the digester actually worked at a temperature range 12 to 30% below the optimal mesophilic level, acceptable rates of methane generation and VS destruction were observed. The biogas and methane yield were measured for single digestion stage as 0.332 and 0.202 m3 [kg-added VS] and for co-digestion stage as 0.482 and 0.325 m3 [kg-added VS] respectively. The cumulative biogas production data demonstrated a reasonable correlation [R2] over 0.99 with a simplified consecutive kinetic model.

Blindness

congenital

A distinct autosomal recessive ocular anomaly in Chaharborj, Islamic Republic of Iran.
Khakshoor, H.; Daneshvar, R.; Banoe, T.; Yazdi, S.A. Tabatabaee; Nazarabadi M. Hasanzadeh; Moosavi, M.; Tavassoli, F.; Mahdavi, R.
E-mail: radaneshvar@gmail.com
Eye Research Center of Mashhad University of Med
Keywords: Blindness-etiology; Eye Abnormalities; Eye Diseases, Hereditary
Abstract: In Chaharborj, a village in north-eastern of the Islamic Republic of Iran, a high prevalence of congenital blindness [1.1%] has been reported. The clinical findings have not been fully described. We therefore assessed the clinical aspects of this condition in a case series of 20 congenially blind patients and 24 of their parents. All patients had been blind since birth. There was anterior segment dysgenesis and retinal non-attachment in all patients. There were no systemic anomalies. Histopathologically, there was iridocorneal adhesion, normal angle structure and retinal dysplasia. No significant difference was found in the frequency of different HLA class I alleles compared with the general population. The anomaly causing congenital blindness in these patients has components of both anterior and posterior segment dysgenesis. It appears to be a distinct entity with an autosomal recessive pattern of inheritance.

Blood Donors

The causes for lack of interest to blood donation in eligible individuals, Mashhad, northeastern Iran.
Shakeri, M.T.; Vafaee, A.; Esmaeily, H.; Shafiei, N.; Bazargani, R.; Khayamy, M.E.
E-mail: shakerimt@mums.ac.ir
Mashhad University of Medical Sciences - School of Health
Keywords: Knowledge; Attitude
Bone Diseases, Metabolic

epidemiology

[Prevalence of osteopenia and osteoporosis in patients with celiac disease in northeastern Iran].

Ganji, A.; Esmaeilzadeh, A.; Hatef, M.R.
E-mail: Azita_ganjii@yahoo.com
Mashhad University of Medical Sciences - Imam Reza Hospital - Department of Gastroenterology and Hepatology
Govaresh 2012; 16 (4): 223-227 (14 ref.)

Keywords: Osteoporosis-epidemiology; Celiac Disease; Prevalence; Absorptiometry, Photon; Body Mass Index

Abstract: Celiac disease is an autoimmune disorder which causes malabsorption in genetically susceptible patients who consume gluten. Celiac disease is not limited to the gastrointestinal system, and exhibits different signs and symptoms in other organs. Malabsorption of calcium and vitamin D can cause osteomalacia and secondary hyperparathyroidism. Celiac disease is no longer a rare disease and is more frequent in the Middle East. It is expected that 1% of the in general population has celiac disease. This study aims to determine the prevalence of osteopenia and osteoporosis in Iranian patients with celiac disease. Individuals with intestinal and extra-intestinal problems who had positive serologic tests for anti-tissue transglutaminase or antiendomysial antibody were offered endoscopic duodenal biopsy to confirm their diagnoses of celiac disease. Biopsy-proven celiac disease patients between the ages of 20 to 60 years were enrolled. Exclusion criteria were as follows: 1) the use of drugs such as corticosteroids, anticonvulsants, heparin, cyclosporine, statins, and beta-blockers, 2) the presence of any neoplasm, and 3) any metabolic disorder such as diabetes, hyperthyroidism, Cushing's, and immobility. After obtaining informed consents, we evaluated 76 patients diagnosed with celiac disease. All enrolled patients underwent BMD measurement of the hip, femoral neck, and spine using dual-energy X-ray absorptiometry [bone densitometry with DEXA scan]. A total of 76 patients with celiac disease of ages 20 to 60 years old [mean: 33 years old] underwent bone densitometry. Of these, 66% were female and 33% were male. There were 44 patients [57%] who had normal bone density in the spine, 17 [22.4%] who had osteopenia, and 15 patients [20%] had osteoporosis. In the femoral neck, 38 patients [50%] had normal bone densitometry, 25 [32.9%] had osteopenia, and 12 [15.8%] had osteoporosis. Low bone mineral density [osteoporosis or osteopenia] was seen in 48% of our patients in the femoral neck and 43% in the spine. The prevalence of osteoporosis among celiac disease is much higher than the general population. Of the study patients, 55% had osteopenia in the femoral neck or spine and 36% had osteoporosis in the femoral neck or spine. The prevalence of osteoporosis is elevated enough to justify a recommendation for osteoporosis screening of all patients with celiac disease.

Bone Marrow Transplantation

Five-year follow-up of the local autologous transplantation of CD133+ enriched bone marrow cells in patients with myocardial infarction.

Ahmadi, Hossein; Farahani, Maryam Moshkani; Kouhkan, Azam; Moazzami, Kasra; Fazeli, Roghayeh; Sadeghian, Hakimeh; Namiri, Mehrnaz; Madani Civi, Manouchehr; Baharvand, Hossein; Aghdami, Nasser
Tehran University of Medical Sciences - Tehran Heart Center
Archives of Iranian Medicine 2012; 15 (1): 32-35 (22 ref.)

Keywords: Transplantation, Autologous; Antigens, CD; Peptides; Glycoproteins; Myocardial Infarction; Follow-Up Studies; Coronary Artery Bypass; Echocardiography; Cohort Studies

Abstract: The implantation of a CD133+ bone marrow cell population into an ischemic myocardium has emerged as a promising therapeutic modality for myocardial regeneration and restoration of ventricular contractility. While previous studies have documented the short-term safety and efficacy of CD133+ cell transplantation in patients with acute myocardial infarction, there are few reports of long-term follow-up results. Here, we present the results of long-term follow-up of our acute myocardial infarction patients who were treated with intra-myocardial injection of CD133+ cells after coronary bypass graft. After five years, 13 patients in the cell transplantation group and 5 patients in the control group underwent safety and efficacy investigations by New York Heart Association classification and two-dimensional echocardiography [2D echo]. During the five-year study period, no major cardiac adverse events were reported among patients who received CD133+ stem cells. Regarding efficiency, we observed no statistically significant treatment effects for the echocardiographic parameters [left ventricular end-diastolic and end-systolic volumes, and resting ejection fraction] measured during the follow-up period. However, detailed analysis of regional wall motion revealed an
improvement in the Wall Motion Score Index from baseline to the six month follow-up, which was maintained during the follow-up period. Taken together, the long-term results of the present study indicate that transplantation of CD133+ is a safe and feasible procedure; however, we could not show any major benefits in our patients. Thus, this issue needs to be addressed by conducting other studies with more patients.

**Bone Neoplasms**

diagnosis

**Role of TC99M MIBI in evaluation of skeletal malignancy.**
Mekkawy, Mohamed A.; Mostafa, Mostafa S.; Saleh, Hussien R.; Abdel Aziz, Lamia M.
Nuclear Medicine Assiut University - Department of Clinical Oncology
**Assiut Medical Journal** 2012; 36 (1): 107-122 (18 ref.)
**Keywords:** Bone Neoplasms-radionuclide imaging; Prospective Studies

**Abstract:** The aim of our study is to assess the value of 99mTc-hexakis-2-methoxyisobutylisonitrile [MIBI] scintigraphy to detect viable boney tumor in patients with clinical and radiological features of primary or metastatic skeletal tumors. This is a prospective study included thirty six patients with different bone malignancies [17 cases with primary lesions and 19 cases with metastatic bone lesions]. All patients were subjected to Tc99m MDP bone scan [BS] and Tc99m MIBI scans. Planar whole body scintigraphy was performed 2 hours after intravenous injection of 20-30 mCi of Tc99m MDP, and after 1 to 2 weeks a Tc-99m MIBI scan was performed using 15-20 mCi and planar imaging was done 15 min post injection. Thirty of 36 patients represented by bone lesions in BS showed increased MIBI uptake, with sensitivity 83.3%. In cases of primary bone tumors 3 patients out of 17 showed no tracer uptake in MIBI scan and also 3 patients of metastatic bone lesions out of 19 showed no tracer uptake in MIBI scan. The MIBI scan can detect more 41 sites of tracer uptake in these patients not seen in Bs. Tc-99m MDP bone and Tc-99m MIBI scans are complementary to each other. The sensitivity of detection of malignant bone tumor is more for combined BS and MIBI than each one alone.

**Breast Neoplasms**

**Factors associated with timely initiation of breastfeeding in Al-Hassa province, Saudi Arabia.**
El Gilany, A.H.; Sarraf, B.; Al Wehady, A.
E-mail:ahgilany@gmail.com
University of Mansoura - College of Medicine - Department of Public Health
**Keywords:** Time; Mothers; Cross-Sectional Studies

**Abstract:** The World Health Organization recommends early initiation of breastfeeding [within 1 hour of giving birth]. This study assessed the prevalence of timely initiation of breastfeeding by mothers of neonates in Al-Hassa province, Saudi Arabia. Mothers attending for birth registration at primary health care centres were interviewed and various sociodemographic, obstetric and health service related variables as well as breast problems were assessed for any influence on timely breastfeeding rates. While 91.9% of the 906 neonates studied were breastfed [8.1% were never breastfed], only 11.4% were given timely breastfeeding [within 1 hour after birth]. Logistic regression revealed that the independent predictors of timely breastfeeding were: not giving prelacteal feed [OR 13.7], rural/hagar residence [OR 4.2], absence of breast problems [OR3.4], parity 2 or 3 [OR2.9] and parity 4+ [OR 2.4]. Mothers at risk of delayed breastfeeding initiation should be the target of breastfeeding promotion during prenatal care.

**Breast Neoplasms**

**Does the missing data imputation method affect the composition and performance of prognostic models?**
Baneshi, M.R.; Talei, A.R.
E-mail:rbaneshi@yahoo.com
Kerman University of Medical Sciences - Research Center for Modelling in Health - Department of Biostatistics
**IRCMJ - Iranian Red Crescent Medical Journal** 2012; 14 (1): 31-36 (29 ref.)
**Keywords:** Logistic Models

**Abstract:** We already showed the superiority of imputation of missing data [via Multivariable Imputation via Chained Equations [MICE] method] over exclusion of them; however, the methodology of MICE is complicated. Furthermore, easier imputation methods are available. The aim of this study was to compare them in terms of model composition and performance. Three hundreds and ten breast cancer patients were recruited. Four approaches were applied to impute missing data. First we adopted an ad hoc method in which missing data for each variable was replaced by the median of observed values. Then 3 likelihood-based approaches were used. In the regression imputation, a regression
model compared the variable with missing data to the rest of the variables. The regression equation was used to fill the missing data. The Expectation Maximum [E-M] algorithm was implemented in which missing data and regression parameters were estimated iteratively until convergence of regression parameters. Finally, the MICE method was applied. Models developed were compared in terms of variables significantly contributed to the multifactorial analysis, sensitivity and specificity. All candidate variables significantly contributed to the MICE model. However, grade of disease lost its effect in other three models. The MICE model showed the best performance followed by E-M model.

Among imputation methods, final models were not the same, in terms of composition and performance. Therefore, modern imputation methods are recommended to recover the information.

**Immunohistochemical expression of hypoxia inducible factor in breast cancer.**

Abo El Hagag, Noha A.; Danial, Moheb F.; Badary, Fatma A.M.; Mady, Housam Eleden H.

Assiut University - Faculty of Medicine - Department of Pathology

*Assiut Medical Journal* 2012; 36 (1): 75-84 (30 ref.)

**Keywords:** Anoxia; Immunohistochemistry; Hypoxia-Inducible Factor I, Alpha Subunit-blood

**Abstract:** The aim of this study is to evaluate the expression of hypoxia inducible factor of I alpha [HIF - I alpha] in breast carcinoma and its relation to various pathological prognostic indicators of breast carcinoma. We examined, by immunohistochemical analysis, the expression of HIF-I alpha in 66 cases of invasive breast carcinoma and 10 cases of non-carcinomatous breast lesions as a control group [5 fibroadenomas and 5 cases of fibrocystic disease]. In invasive breast carcinoma, we correlate the expression of HIF-I alpha with tumor size, histological grade of carcinoma, angiolymphatic embolization, lymph node status and the level of hormonal receptors expression. HIF-I alpha was detected in tumor cell nuclei of 50/66 [75%] of our cases while the control group was negative. Positive correlation was present between HIF-I alpha expression and higher histological grade, larger tumor size, positive angiolymphatic embolization, lymph node positivity and hormonal receptor negativity. These findings suggest that HIF-I alpha may be closely linked to an aggressive phenotype in breast cancer.

**Knowledge, attitude and practice regarding breast cancer and breast self-examination among a sample of the educated population in Iraq.**

Alwan, N.A.S.; Al Attar, W.M.; Eliessa, R.A.; Madfaic, Z.A.; Tawfeeq, F.N.

E-mail: nadalwan@yahoo.com

Baghdad Medical College - Breast Cancer Research Unit


**Keywords:** Breast Self-Examination; Health Knowledge, Attitudes, Practice; Questionnaires; Cross-Sectional Studies; Educational Status

**Abstract:** This cross-sectional, questionnaire-based study evaluated the knowledge, attitude and practice towards breast cancer and breast self-examination [BSE] among 387 [302 females and 85 males] educated Iraqis affiliated to 2 Iraqi universities. The participants were categorized into 3 occupations: student [71.3%], teaching staff [10.3%] and administrative staff [18.3%]. About half of the participants had a low knowledge score [< 50%]; only 14.3% were graded as [Good] and above. Almost 75% of the participants believed that the best way to control breast cancer was through early detection and other possible preventive measures. Most participants [90.9%] had heard of BSE, the main source of information being television. However, only 48.3% practised BSE; the most common reason for not doing so was lack of knowledge of how to perform the technique correctly. Almost 84% of the female participants were willing to instruct others in the technique of BSE.

**Brucellosis**

**Seroprevalence study on brucellosis in native and imported camels.**

El Berbawy, S.M; Mansy, Marium F.; Sayed, S.M.; Abdel Kadder, H.A.

Animal Health Research Institute [AHRI]

*Assiut University Bulletin For Environmental Researches* 2012; 15 (1): 93-103 (54 ref.)

**Keywords:** Seroepidemiologic Studies; Camels; Antibodies; Rose Bengal; Polymerase Chain Reaction-methods

**Abstract:** Seroprevalence study was carried out on 470 camels [123 native camels in contact with other farm animals in Assiut and El-Wadi El Gadid Governorates and 347 imported camels from Sudan, through Daraw, Aswan Governorate] these camels with different age and sex were examined for detection of brucella antibodies. A high incidence of seroreactive cases was observed among native camels [2.43%, 12.19%, 4.87% and 2.43%] while it was [0.57%; 0.86%; 0.29% and 0.29%] among imported camels using Rose Bengal plate Test, Buffered Acidified plate Antigen Test, Tube Agglutination Test and Rivanol test, respectively. Quantitatively, four serum samples were true seropositive - without any clinical signs - with a titer ranged from 1/25 to 1/400 using Rivanol test, while 3 serum samples were seroreactors with a titer of 1/40, 1/80 and 1/320 using TAT. Three [1.07%] of positive camels were adult over 4 years old and the remaining 1[0.52%] was young under 4 years old. It can be concluded that brucella seroprevalence in native camels was significantly different [P<0.05] than in imported ones, however no significant differences could be recorded based on the sex of the age. The study proved that Rose Bengal plate Test followed by Tube Agglutination. Test agreed with Rivanol test in the rapid diagnosis of brucellosis in camels.
**Butterflies**

Perception of visitors' environmental impacts of ecotourism: a case study in the valley of butterflies protected area, Rhodes Island, Greece.  
Spanou, S.; Tsegenidi, K.; Georgiadis, T.H.  
E-mail:saspanou@upatras.gr  
University of Patras - Division of Plant Biology - Department of Biology  
*International Journal of Environmental Research* 2012; 6 (1): 245-258 (56 ref.)  
**Keywords:** Perception; Environment; Ecology  
**Abstract:** Visitor management is considered important for the sustainable development of protected areas as the presence of visitors may cause negative impacts on wildlife and vegetation. Within this framework, visitor impacts and perceptions are considered critical for decision-making and planning of future management regimes. This paper resumes opinions of visitors of the Valley of Butterflies in Rhodes Island, Greece, a very popular tourist destination in both national and international level, with more than 300,000 visitors per year. These opinions record perceptions on the environmental impacts of eco-tourism in the Valley and are necessary for the formulation and implementation of a visitor management strategy in the area. Descriptive statistics are estimated, as well as a probit model exploring factors affecting visitors' satisfaction. Results call for more information and education of the visitors about the Valley's conservation and ecological value, better facilities and services provided, site hardening and a better policy of prices.

**Candida**

**drug effects**

Comparison of the effect of non-antifungal and antifungal agents on Candida isolates from the gastrointestinal tract.  
Siavoshi, Farideh; Tavakolian, Atefeh; Foroumadi, Alireza; Hosseini, Negar Mohammad; Massarrat, Sadegh; Pedramnia, Shahrzad; Saniee, Parastoo  
E-mail:siavoshi@khayam.ut.ac.ir  
University of Tehran - Faculty of Sciences - Department of Microbiology  
*Archives of Iranian Medicine* 2012; 15 (1): 27-31 (31 ref.)  
**Keywords:** Antifungal Agents; Gastrointestinal Tract; Trifluoperazine; Propranolol; 2-Pyridinylmethylsulfinylbenzimidazoles; Ketoconazole; Amphotericin B; Candida albicans; Candida tropicalis  
**Abstract:** Non-antifungal drugs appear promising in treatment of opportunistic infections of Candida spp. that are often resistant to current antifungals. The broth macrodilution method [NCCLS M27-P document] was used to compare the antifungal activity of trifluoperazine, pro-pranolol, and lansoprazole with that of ketoconazole and amphotericin B, using 50 yeast isolates from the GI tract. The minimum fungicidal concentrations [MFCs], resistance rates and the time required for fungicidal activity of the drugs [2 - 48 hours] were determined. The most effective antifungal activity was exhibited by trifluoperazine. Its MFC was 32 microg/mL for Candida albicans [3.3% resistance] and Candida spp. [0% resistance] yeasts, and 64 ug/mL for Candida tropicalis with 10% resistance. The MFC for C. albicans and Candida spp. was comparable to that of ketoconazole. However, the time required for the inhibitory effect [6 hr] was shorter than that of ketoconazole [48 hr] or amphotericin B [24 hr]. The time required for the inhibitory activity on C. tropicalis was 24 hr, which was shorter than that of ketoconazole and amphotericin B [48 hr]. A considerable number [40%] of Candida spp. showed resistance to ketoconazole, and 20% of C. tropicalis showed resistance to amphotericin B. Trifluoperazine, an antipsychotic drug, exhibited effective antifungal activity with the MFC, comparable to ketoconazole [32 microg/mL]. Among the three yeast groups, C. tropicalis showed resistance to trifluoperazine and amphotericin B, and Candida spp. was considerably resistant to ketoconazole. Trifluoperazine could be considered as an alternative antifungal when encountering Candida spp. resistant to current antifungals.

**Carcinoma, Hepatocellular**

**chemically induced**

Evaluation of notch and hypoxia signaling pathways in chemically induced hepatocellular carcinoma in rats.  
Assaf, Raymond Hanna; Hafez, Tarek Ahmed; El Dosoky, Ibrahim; El Baz, Ayman; Hazem, Noha  
Mansoura University - Faculty of Medicine - Department of Medical Biochemistry  
**Keywords:** Receptor, Notch 1-genetics; Hypoxia Inducible Factor I, alpha Submit; Polymerase Chain Reaction-methods; Rats; Male
Abstract: Hepatocellular carcinoma [HCC] is a common worldwide malignancy. Notch signaling pathway contributes to the genesis of diverse cancers, however, its role in HCC is unclear. Hypoxia is a common feature of HCC. Signal integration between Notch and hypoxia may be involved in HCC. The aim of this study was to evaluate the expression of some Notch pathway genes, in addition to hypoxia inducible factor-1 alpha [HIF-1 alpha] during rat hepatocellular carcinogenesis. The study aimed also, to identify any crosstalk between Notch signaling and hypoxia throughout hepatocellular oncogenesis in rats. Hepatocellular carcinogenesis was chemically induced in rats. Tissue specimens were examined histopathologically and classified into early preneoplastic group, advanced preneoplastic group, and control group. The expression of Notch-l, Dll-4, and HIF-1 alpha was evaluated in tissue samples by total RNA extraction and RT-PCR. The expression of target genes were significantly increased in the diseased group. There was a significant correlation between the expression of Notch-l, Dll-4, and HIF-1 alpha. These results indicate that overexpression of Notch-l, Dll-4, and HIF-1 alpha may be associated with the malignant transformation of hepatocytes with a possible Notch-hypoxia cross talk during hepatocellular oncogenecity.

Cartilage abnormalities

Bone marrow stem cells as a potential treatment of experimentally induced cartilage defects in the knee joint of adult male albino rats.
Shalabi, Mona A.; Elshakaa, Nagwa Mohamed; Kalleny, Nagwa Kostandy; Soliman, Nevine Bahaa E.
Ain Shams University - Faculty of Medicine - Department of Histology
Egyptian Journal of Histology [The] 2012; 35 (1): 159-175 (49 ref.)
Keywords: Knee Joint; Mesenchymal Stem Cells; Injections, Intraarticular; Rats; Male; Fibrocartilage; Immunohistochemistry
Abstract: Spontaneous proper healing of articular cartilage trauma in adults is rare and osteoarthritis might develop as a result. Cultured bone marrow mesenchymal stem cells [BM-MSCs] could differentiate into chondrocytes, and might thus be a good choice for treating such trauma. To assess the efficacy of an intraarticular injection of BM-MSCs derived from young albino rats in the repair of an induced chondral defect in the knee joints of adult albino rats. Six young male albino rats were used as a source of BM-MSCs. In addition, 30 adult male albino rats were divided into four groups. Group I served as a control. Group II served as a model of a chondral defect. Group III was subdivided into subgroups IIIa and IIIb, in which a cartilage defect was induced and sacrificed after 4 and 8 weeks, respectively. Group IV was subdivided into subgroups IVa and IVb, in which a cartilage defect was induced and injected intraarticularly by BM-MSCs suspended in hyaluronic acid [HA] in the right knees and HA alone into their left knees and then sacrificed after 4 and 8 weeks, respectively. Histological, immunohistochemical, and statistical studies were performed. Group III showed healing of the defect by fibrous tissue. However, BM-MSCs- injected knees healed by hyaline-like cartilage, whereas the HA injection induced healing by fibrocartilage. Intraarticular injections of BM-MSCs suspended in HA promoted healing of an articular cartilage defect by hyaline cartilage. Thus, it is recommended to treat a traumatic articular cartilage injury by BM-MSCs.

Caseins

The effect of CPP-ACP paste on shear bond strength of glass ionomer to dentine.
Moezzyzadeh, M.; Motamedi, S.H.
Shahid Beheshti University of Medical Sciences - Dental School - Departement of Operative Dentistry
Journal of Dental School - Shahid Beheshti University of Medical Sciences 2012; 29 (4); 260-267 (33 ref.)
Keywords: Shear Strength; Dental Bonding; Acrylic Resins; Silicon Dioxide; Dentin; Molar, Third
Abstract: CPP-ACP is one of the numerous materials which is used in dental hypersensitivity and works through changing Cagradient in tooth surface, besides glass ionomer is a selective material in restoring non -carious cervical lesions because of chemical bonding. In this study we evaluate the effect of CPP-ACO on shear bond strength of glass ionomer to dentine. In this experimental study, 40 third molar teeth were sectioned to obtain dentine with tubule orientation perpendicular to the surface. The specimens were divided into 4 groups [A to D].Groups A and B were treated with CPP-ACP paste for 60 min x 5 days. Groups A and C were treated with polyacrylic acid 10% for 20 min before glass ionomer adhesion. All specimens were bonded with glass ionomer. After 24 +/- 1 hours water storage, the bonded specimens were sectioned with universal testing machine. There was no significant effect in shear bond strength to dentine in groups except groups B. There was no significant effect in failure pattern. Most of the failure patterns were adhesive mode. CPP-ACP application in dentine surface reduces the shear bond strength of glass ionomer except the preconditioning of dentine with polyacrylic acid 10%. Preconditioning in dentine surface nontreated with CPP-ACP paste, does not affect the shear bond strength of glass ionomer.
**Cefotaxime**

**adverse effects**

**Adverse effect of cefotaxime on male rats.**
El Homosany, Safaa R.; El Ashmawy, Ibrahim M.; Al Sawy, Abdel Salam F.  
Alexandria University - Faculty of Veterinary Medicine - Pharmacology Department  
**Keywords:** Anti-Bacterial Agents; Reproduction; Sperm Count; Sperm Motility; Testis-pathology; Liver-Pathology; Kidney-pathology; Histology; Rats; Male  
**Abstract:** The present work was a trial to study the effect of cefotaxime on the reproductive system in male Albino rats. Moreover, some biochemical parameters were also examined. Forty-five mature male albino rats weighing from 150-160 g each of approximately 120 day old were used in this study. The animals were divided into 3 equal groups, each of 15 rats. The first group was injected I/M for 5 consecutive days with cefotaxime at the dose level of 80 mg/kg B.wt. while the second group was injected with 160 mg/kg B.wt.. The third group was kept as control and injected I/M with 0.2 ml saline/rat for 5 consecutive days. The obtained results showed that administration of cefotaxime induced a variety of side effects on male reproduction as reduction of testes, epididymis and accessory sex organ weight, changes in sperm characters [decrease of sperm count and motility]. Moreover, the liver and kidney functions were significantly affected. Therefore, caution is required when using large doses of cefotaxime due to its toxicity to sperm characters as well as its adverse effect on liver and kidneys.

**Cerebral Palsy**

**etiology**

**Risk factors for cerebral palsy among children under five-years old in Assiut governorate, upper Egypt.**
Abdel Salam, Doaa M.; Qayed, Mohammad H.; Moustafa, Randa M.; Hamad, Emad M.; Abdel Khalek, Ekram M.  
Assiut University - Faculty of Medicine - Department of Public Health and Community Medicine  
*Assiut Medical Journal* 2012; 36 (1): 97-106 (47 ref.)  
**Keywords:** Child; Risk Factors; Infant, Low Birth Weight; Encephalitis; Bottle Feeding  
**Abstract:** Cerebral palsy [CP] is the most frequent cause of motor handicap among children. Many etiologies and risk factors for the non-progressive lesion in CP are considered to be antenatal, delivery or neonatal. The present case control study aims to investigate the risk factors of cerebral palsy among children under five years in Assiut Governorate. Three hundred children randomly selected; 150 children with CP matched in number, age and sex with normal children as controls. The mean age of cases and controls were 1.99 +/- 1.34 and 1.98 +/- 1.33, respectively. The results revealed that significantly higher percent of cases were left handed compared with controls. Artificial feeding was common among cases. Significant statistical differences were found between two study groups regarding, socioeconomic status, birth order, family history of CP, premature rupture of membranes, low birth weight, birth trauma, cyanosis at birth, and history of encephalitis. No statistically significant differences were found between the two groups in malpresentations, twin pregnancies, recurrent abortion, history of meningitis. In conclusion, birth trauma, low birth weight, artificial feeding and encephalitis are the most frequent risk factors in children with CP in Assiut Governorate. Therefore, antenatal, natal and postnatal health life styles reduce baby's chances of developing cerebral palsy.

**Cervix Uteri**

**The use of total cervical occlusion along with Mcdonald cerclage in patients with recurrent miscarriage or preterm deliveries.**
Zayyan, Marliyya; Suhyb, Sanusi R.; Laurel, Nwaorga O'C.  
E-mail: marzayyan@yahoo.com  
Ahmadu Bello University Teaching Hospital - Department of Obstetrics and Gynecology  
*Oman Medical Journal* 2012; 27 (1): 63-65 (20 ref.)  
**Keywords:** Cerclage, Cervical; Abortion, Habitual; Obstetric Labor, Premature; Pregnancy Trimester, Second; Pregnancy; Prospective Studies  
**Abstract:** To study the fetal outcome with the use of McDonald cerclage and total cervical occlusion in women with recurrent mid-trimester miscarriages or preterm deliveries; as well as complications of total cervical occlusion in the women. Prospective descriptive observational study on patients with two or more mid-trimester miscarriages, deliveries before 36 weeks, or patients who have experienced failure of transvaginal cerclage. Twenty-six women were studied. Of these, 92% delivered at term. Two women delivered at 33 and 35 weeks, respectively. There was one neonatal
death. Take home baby rate was 96.2%. There was no serious maternal morbidity among the patients. The addition of external cervical OS occlusion to McDonald cerclage could improve fetal outcome in women with recurrent mid-trimester miscarriages and preterm deliveries.

Cesarean Section

Appropriateness of cesarean sections using the RAND appropriateness method criteria.
Ostovar, Rahim; Pourreza, Abolghasem; Rashidian, Arash; Rashidi, Batool Hossein; Hantooshzadeh, Sedigheh; Haghollai, Fedyeh; Ardabili, Hasan Eftekhari; Mahmoudi, Mahmoud
Yasouj University of Medical Sciences - School of Health - Department of Public Health
Archives of Iranian Medicine 2012; 15 (1): 8-13 (33 ref.)
Keywords: Pregnancy; Program Evaluation
Abstract: The aim of this study was to identify the appropriateness of cesarean sections, performed in Tehran hospitals using standardized Rand Appropriateness Method [RAM] criteria. In this study we used the RAM criteria. In order to prepare the list of cesarean scenarios, clinical guidelines were selected, and the Appraisal of Guidelines for Research and Evaluation was used to choose the most appropriate. Two panels were held with the participation of related specialists. The scenarios derived through this method were compared with data existing in the medical records of 250 women who underwent cesarean sections in selected hospitals affiliated with Tehran University of Medical Sciences. The appropriateness rate of the cesarean sections was calculated. Out of 250 cases of cesarean sections performed, 91 [36.4%] were inappropriate, 41 [16.4%] were equivocal and 118 [47.2%] were considered to be appropriate. Appropriateness differed between public and private hospitals, which were statistically significant. This study shows that as with many other health services, cesarean section has many scenarios that there are different opinions about them and no decision about presenting these scenarios as yet. Moreover the result of study showed the rate of inappropriate cesarean sections in this study is one of the highest reported rates from different communities.

Growing rate of cesarean section in Iran: dimensions and concerns.
Sepanlou, Sadaf G.; Akbarian, Abdorrasoul
Tehran University of Medical Sciences - Digestive Diseases Research Institute
Archives of Iranian Medicine 2012; 15 (1): 2-3 (15 ref.)
Keywords: Pregnancy
Abstract: Growing rate of cesarean section rate over a 30-year period in a public hospital in Tehran, Iran.
Badakhsh, Mohammad Hossein; Seifoddin, Mahsan; Khodakarami, Nahid; Gholami, Roya; Moghimi, Sedigheh
E-mail:M_H_Badakhsh@yahoo.com
Tehran University of Medical Sciences - Firoozgar Hospital - Department of Gynecology and Obstetrics
Archives of Iranian Medicine 2012; 15 (1): 4-7 (39 ref.)
Keywords: Hospitals, Public; Pregnancy; Retrospective Studies; Midwifery; Delivery, Obstetric
Abstract: Numerous studies show a growing trend in cesarean section rates throughout the world, including Iran. However, existing evidence in our country is scant and previous reports are restricted to short time periods. The aim of the current study is to measure the trend in cesarean sections [CS] rates over the past 30 years in a referral hospital in Tehran. We routinely collected data on the demographic characteristics of all women who gave birth in the hospital during the study period. The mode of delivery and the personnel in charge of delivery has like wise been recorded for each birth during the study period. The data were extracted from medical records and entered into a structured checklist. The rate of CS out of all deliveries increased from 14.3% in 1979 to 22.7% in 1989, 52.5% in 1999, and 85.3% in 2009 [P< 0.001]. The most common reason for CS was a repeated section. The percentage of vaginal deliveries performed by midwives has not changed significantly and the number of both midwives and obstetricians per 1000 births has increased, from 2.8 to 15.4 midwives per 1000 births and from 5.5 to 23.0 obstetricians per 1000 births. Immediate strategies should be adopted to prevent the rising trend and increasing number of unnecessary CS in Iran.

Cheese

microbiology

Fungal contamination of locally produced processed cheese.
Nazem, A.; Amin, A.; Sanhory, H.
Alexandria Journal of Veterinary Science 2012; 35 (1): 55-64 (23 ref.)
Keywords: Microbial SensitivityTests; Mycological Typing Techniques
Abstract: One hundred and forty four random samples of locally produced processed cheese were collected from different supermarkets and groceries shops in El Boheira province, represented as 100 samples of processed cheese, 24 of processed cheese spread and 20 samples of processed cheese blocks. All collected samples were examined
mycologically. The mean values of total mold count for processed cheese samples were $1.44 \times 10^3$, $1.14 \times 10^3$, $1.67 \times 10^3$, $1.22 \times 10^3$ and $1.10 \times 10^3$, respectively. While processed cheese spread samples were all free from any mold contamination, but that for examined processed cheese blocks samples were $2.25 \times 10^3$ and $2.29 \times 10^3$, respectively. The most common species isolated from processed cheese were Penicillium, Cladosporium and Alternaria species, while species of low incidence were Fusarium, Geotrichum, Nigrospora, Rhizopus, Mucor, Basidiomycetes, Aspergillus fumigatus and Aspergillus flavus. Also the most common species were Alternaria and Penicillium while Mucor, Cladosporium and Aspergillus fumigatus were less common in processed cheese blocks. Aspergillus flavus isolated from 3 samples of processed cheese, were examined for its toxigenicity and were found as 6, 4 and 5 ppb respectively.

Chickens

growth and development

Effect of dietary enzymes supplementation on growth performance, immune response, some blood parameters and carcass quality of broiler chicks.

Abdel Hamid, H.S.; El Katch, M.I.Y.; Ahmed, H.A.; Emam, M.
Damanhour University - Faculty of Veterinary Medicine - Department of Poultry and Fish Diseases

Keywords: Chickens-immunology; Dietary Supplements; Enzymes; Leukocyte Count; Mortality

Abstract: One hundred and twenty, day old age healthy cobb broiler chicks were used to study the influence of dietary supplementation of enzymes on growth performance, immune response, some blood parameters and carcass traits of broiler chickens. Broiler chicks were allotted into four groups; chicks of group 1 [the control] were fed on basal diet only, chicks of group 2 were fed on the basal diet supplemented by Deltazyme plus [registered sign] at 0.5 g/kg diet, chicks of group 3 received 95%basal diet +5% wheat bran and chicks of group 4 received the same diet of group 3 supplemented with Deltazyme plus [registered sign] supplementation improved significantly $[P<0.05]$ total body weight gain of the broiler chickens in group 2 when compared with those of the control group and non significantly $[p>0.05]$ increased in chicks of group 4 when compared with those of group 3. Dietary enzymes supplementation [groups 2 and 4] reduced daily feed intake when compared with those groups 1 and 3 respectively. Dietary supplementation of Deltazyme plus [registered sign] at 0.5 g/kg diet improved significantly $[P<0.05]$ FCR and PER in chickens of groups 2 when compared with the control group, while non significantly improved in chickens of group 4 when compared with those of group 3. The present results revealed that enzyme supplementation increased phagocytic activity and phagocytic index. Dietary Deltazyme plus [registered sign] supplementation had significant effect on total protein, albumin, globulin content and had insignificant effect on glucose, cholesterol, and triglyceride. Also enzymes have specific effect on hormones as it found that Deltazyme plus [registered sign] supplementation increased insulin and T3. Dietary Deltazyme plus [registered sign] supplementation had no significant effect on dressing percent of broiler chickens and had no effect on relative weight of internal organs.

immunology

Biochemical effect of some feed additives and immunological response in broiler chickens.

Alsenosy, A.A.; Abdel Hamid, H.S.; El Gazzar, U.B.; El Far, A.H.
Damanhour University - Faculty of Veterinary Medicine - Department of Biochemistry
Alexandria Journal of Veterinary Science 2012; 35 (1): 131-142 (45 ref.)

Keywords: Animal Feed; Dietary Supplements; Prebiotics-utilization; Proteins-blood; Globulins-blood; Albumins-blood

Abstract: This study was investigated the effects of dietary supplementation with prebiotics beta-glucan, MOS 500 and Bio MOS [registered sign] on the broilers performance, biochemical parameters and immune response for 5 weeks. One hundred and twenty 1-day-old broiler chickens were randomly assigned to 4 dietary treatment groups as follows: control, beta-glucan [1g/kg], MOS 500 [0.5g/kg] and Bio MOS [registered sign] [1g/kg]. Each treatment was divided into three replicates [ten birds/ replicate]. The overall BW gains of birds treated with prebiotics were significantly $[P<0.01]$ higher than those of the control group. During the experiment, the birds fed supplemental Bio MOS [registered sign] gave the best FCR followed by beta-glucan MOS 500 and then the control group. Addition of these prebiotics were improved the levels of serum total protein and globulin which in turn support the immune function against NDV and IBDV. In addition to, supplementation of broiler chicks by beta-glucan, MOS 500 and Bio-MOS [registered sign] had no effect on the liver transamination enzymes and some kidney function which represent the non pathological metabolism of the liver and kidneys indicating their safety supplementation in broiler feed.
Chromium

Recycling of chromite waste for concrete: full factorial design approach.
Mesci, B.; Elevli, S.
E-mail: basakmi@omu.edu.tr
Ondokuz Mayis University - Department of Material Science and Engineering
Keywords: Recycling; Compressive Strength
Abstract: Recently full factorial design approach has been used to assess the recycling potential of a given waste. The objective of this study is to identify the significant factors and interactions involved in maximizing compressive strength of concrete when chromium waste is used as admixture. In this respect, experimental factors at two levels, which are admixture type [chromite/ chromite+ superplastizer], admixture percentage [5-15%] and cure duration [7-28 days], are selected as possible candidates affecting the compressive strength. The modeling technique presented in this paper is based on 2^3 full factor experimental design and can easily be implemented to see the effect of any input factor on a given response variable. According to the full factorial analysis, at the 5% percentage level when Naphtalene sulfonate is added to concrete with chrome waste, the compressive strength will be good enough after 28 days. The results demonstrate that chrome waste after neutralization can be used in construction industry.

Cisplatin

toxicity

The possible protective role of royal jelly against cisplatin-induced testicular lesions in adult albino rats: a histological and immunohistochemical study.
Raafat, Mona Hussein; Hamam, Ghada Galal
E-mail: raafat.mona@yahoo.com
Ain Shams University - Faculty of Medicine - Department of Histology
Keywords: Testis-pathology; Histology; Immunohistochemistry-methods; Protective Agents; Fatty Acids-therapeutic use; Treatment Outcome; Rats; Male
Abstract: Cisplatin [CP] is one of the most frequently used antineoplastic agents for various types of tumors. Royal jelly [RJ] is a health tonic widely consumed nowadays with various benefits. To evaluate the effect of CP on rat testes and investigate the possible protective effect of RJ on CP-induced testicular lesions. Twenty-four adult albino rats were used. They were divided into four groups of six animals each. Group I served as the control group. Group II comprised rats that received a single intraperitoneal injection of CP[7mg/kg]. Group III comprised rats that received CP [as in group II] plus RJ, which was administered daily by gavage at a dose of 100mg/kg for 10 days. Group IV comprised rats that received RJ alone at the same previous dose. At the end of the experiment, both testes were weighed and prepared for histological, immunological, and electron microscopic studies. Blood samples were taken to measure plasma testosterone level, and morphometric studies were conducted. The results showed that CP had serious deleterious effects on testicular structure and function. RJ reduced the changes occurring with CP administration and caused improvement in the structure and function of rat testes. RJ has a protective effect on CP-induced testicular lesions and can be used in patients who undergo treatment with CP.

Cleft Lip

Orofacial clefts and risk factors in Tehran, Iran: a case control study.
Taghavi, N.; Mollaian, M.; Alizadeh, P.; Moshref, M.; Modabernia, S.H.; Akbarzadeh, A.R.
E-mail: nasim.taghavi@yahoo.com
Shahid Beheshti University of Medical Sciences - Department of Oral and Maxillofacial Pathology
Keywords: Cleft Palate; Risk Factors; Case-Control Studies; Logistic Models; Folic Acid; Maternal Age; Tobacco Smoke Pollution
Abstract: Non-syndromic cleft lip with or without cleft palate [CL/P] or cleft palate only [CPO] are orofacial clefts with multifactorial etiology. These include environmental factors and heterogeneous genetic background. Therefore, studies on different and homogenous populations can be useful in detecting related factors. The aim of the present study was to evaluate the risk factors in patients with non-syndromic cleft in Tehran, Iran. Data from 300 patients and 300 controls were collected between 2005 and 2010. Binary logistic regression analyses were used to calculate relative risk by odds ratio [OR] and%95 confidence interval. Low maternal age [OR=1.06, 95% Cl. 1.011-1.113], low socioeconomic status [OR=0.23, 95% Cl. 0.007-0.074], maternal systemic disease [OR=0.364; 95% Cl. 0.152-0.873] and passive smoking [OR=0.613, 95% Cl. 0.430-0.874] increased the risk for CL/P and CPO. There was a significant difference in iron and folic acid use during pregnancy when the case and control groups were compared. In assessing for orofacial cleft risk, we should consider lack of folic acid supplementation use, maternal age and systemic diseases and passive smoking as risk factors.
Clinical Trials as Topic

Clinical trials in Iran; biannual report of clinical trial committee in Food and Drug Organization, Ministry of Health and Medical Education.
Hosseini, Seyed Ali Reza; Juibary, Ali Ghabeli
E-mail: ahosseini@fdo.ir
Ministry of Health and Medical Education - Food and Drug Organization - Office of Clinical Trials
Archives of Iranian Medicine 2012; 15 (1): 52-54 (7 ref.)
Keywords: Food; Pharmaceutical Preparations

Registration of clinical trials - a regional perspective.
Fathalla, M.F.
Assiul University - Eastern Mediterranean Region Advisory Committee on Health Research - Obstetrics and Gynaecology
EMHJ - Eastern Mediterranean Health Journal 2012; 18 (1): 4-6 (9 ref.)
Keywords: Clinical Trials as Topic-legislation and jurisprudence; World Health Organization

Clostridium perfringens

In silico fusion of epsilon and beta toxin genes of Clostridium perfringens types D and B.
Langroudi, Reza Pilehchian; Aghaiypour, Khosrow; Shamsara, Mahdi; Ghorashi, Saied Ali
National Institute of Genetic Engineering and Biotechnology - Department of Molecular Genetics
IJB - Iranian Journal of Biotechnology 2012; 10 (1): 54-60 (31 ref.)
Keywords: Bacterial Toxins; Genes
Abstract: Fusion protein technology represents the strategy to achieve rapid, efficient, and cost-effective protein expression. Epsilon and Beta toxins are the most potent Clostridial toxins and cause disease in animals. This study describes in silico fusion of Clostridium perfringens types D and B epsilon and beta toxin genes that was used for cloning in E. coli. The etx and cpb genes were retrieved from the GenBank and a fusion gene was designed to produce a chimeric fusion protein. Secondary and tertiary structures and specificities of fusion protein were determined by online software. Results showed that the designed fusion gene construction is suitable for chimeric fusion protein expression.

Colitis

chemically induced

The effect of melatonin on pentraxin-3 level and nuclear factor-kappa beta immunohistochemical expression on acetic acid-induced colitis and their relationship to pathophysiology of the disease.
Sayyed, Hayam G.; Idriss, Nagla K.; El Sers, Dalia A.; Wasfy, Salwa E.; Darwish, Abeer M.
Assiut University - Faculty of Medicine - Department of Medical Physiology
Assiut Medical Journal 2012; 36 (1): 157-172 (49 ref.)
Keywords: Acetic Acid-chemistry; Serum Amyloid P-Component; Immunohistochemistry; Melatonin-therapeutic use; Protective Agents; Lipid Peroxidation; Rats
Abstract: Taking into consideration the presence of melatonin [MEL] in gastrointestinal [GI] tissue and its role in gastrointestinal tract [GIT] physiology, it is practical to speculate that melatonin could influence inflammation-related GI disorders, including ulcerative colitis [UC]. We hypothesized the preventive, short and long term effects of melatonin administration on acetic acid [AA] induced colitis in rats and its potential underlying mechanism. We evaluate the immunohistochemical expression of nuclear factor NF-kappa beta [NF-kappa beta]. We also estimated the relation between AA-induced colitis and pentraxin-3 [PTX-3] serum level. The animals were divided into 5 groups. Control group, AA-induced-colitis group, Pre-treated group, Short-term treated group, and Long-term treated group. At the end of the experiment, blood samples were taken for measurement of PTX-3, lipid peroxide [LP] and total thiol [TT]. Colon was taken for histopathological examination and immunohistochemical study for detection of NF- kappa beta expression. MEL is effective in prevention and short-term treatment of AA-induced colitis as indicated by attenuating the colitis symptoms such as rectal bleeding, reduction of the body weight, the increase in the colonic weight and reduction of the severity of mucosal damage dramatically. MEL administration, also decreased NF- kappa beta immunohistochemical expression, decreased serum level of LP and PTX-3 and increased serum level of TT. However,
in long-term treatment MEL has negative effect on AA-induced colitis. MEL is effective in prevention and short-term treatment of colonic inflammatory process while long-term treatment exacerbate the colitis. The outcome also indicated that melatonin contributes in a variety of guard mechanisms against colonic inflammatory processes by inhibiting the NF- kappa beta and conserving the vital endogenous antioxidant reserve of TT, thus dipping the level of colonic damage, mainly in the early phase of colitis.

**Colitis, Ulcerative**

**epidemiology**

**Estimation of ulcerative colitis incidence in Hormozgan province, southern Iran.**
Masoodi, M.; Agah, S.; Kashani, A.H.; Faghihi, Eghbali, H.
E-mail: Masoodi47@yahoo.com
Tehran University of Medical Sciences - Tropical and Infectious Disease Research Center - Department of Internal Medicine
Govaresh 2012; 16 (4): 265-269 (32 ref.)

**Keywords:** Incidence; Inflammatory Bowel Diseases; Rectum; Gastrointestinal Hemorrhage

**Abstract:** The incidence of inflammatory bowel disease [IBD] may have changed over time. The incidence and prevalence of IBD appears to be lower in Asia and South America. Although once believed to be infrequent in Iran, there has been a rising trend in IBD over the past two decades. However, in Iran there is no data about the incidence and prevalence of IBD. Demographic and clinical features, extension of disease in new patients with UC that referred to Shahid Mohammadi Hospital Gastroenterology Clinic and one private clinic, the only gastroenterology centers in Hormozgan Province, were assessed over a two-year period [2004-2006]. There were 37 patients seen in 2004-2005 and 42 patients in 2005-2006, who were diagnosed with UC. The estimated incidence of UC was at least 3.25:100,000. The mean +/- SD age at diagnosis was 32.8 +/- 16 years, with a male to female ratio of 0.8. Most patients presented with rectal bleeding. The rectum was affected in 36.2% of cases and rectosigmoid colitis was reported in 29%, left-sided colitis in 26%, and pancolitis in 8.7% of cases. Geographic variation of the incidence of IBD within a country has also been observed and the incidence of IBD may have changed over time. The true epidemiologic profile of IBD in Iran is unknown, but with the continuing rise in IBD, more attention should be directed for evaluation of this disease.

**Colorectal Neoplasms**

**diagnosis**

**Role of multislice computed tomography in evaluation of colo-rectal neoplasm.**
Kamel, Hosam Eldeen M.; Abdallah, Abdel Karim H.; Selim, Aymen M.M.; Salem, Ahmed A.S.
Assiut University - Department of Diagnostic Radiology

**Keywords:** Multidetector Computed Tomography-methods; Neoplasm Staging; Endoscopy-methods

**Abstract:** Computed tomographic [CT] colonography is a noninvasive, rapidly evolving technique that has been shown in some studies to be comparable with conventional colonoscopy for the screening of colorectal cancer. The addition of intravenous contrast material to CT colonography can aid differentiation of true colonic masses from pseudolesions such as residual stool and improves the depiction of enhancing masses that might otherwise be obscured by residual colonic fluid. The aim of this study is to assess the role of multi detector computed tomographic colonography in staging of colo-rectal neoplasm and detection of synchronous lesions such as adenomatous polyp. The study included fifty-five patients with suspected colo-rectal neoplasm and underwent MDCT colonography and fibro-optic colonoscopy on the same day. The MDCT colonography with IV contrast media has 94% accuracy for identifying tumor wall invasion by colorectal carcinoma and 71% accuracy for identifying regional lymph nodes involvement and the sensitivity of both MDCT colonography and fibro-optic colonoscopy equal in detection of polyps more than 5 mms. The contrast enhanced MDCT colonography is an excellent investigating tool in staging of colorectal neoplasm in detection of synchronous adenomatous polyps more than 5 mms.

**Communicable Diseases**

**Teaching of major communicable diseases in Sudanese medical schools: a critical look.**
E-mail: samhamid2002@yahoo.co.uk
University of Gezira - Faculty of Medicine - Department of Community Medicine

**Keywords:** Teaching; Schools, Medical; Cross-Sectional Studies; Students, Medical; Knowledge; Curriculum
Abstract: This descriptive, cross-sectional study of Sudanes medical schools aimed to describe and analyse the proportion of their curricula currently allocated for teaching of communicable diseases and to assess the teaching methods and student assessment tools. Qualitative and quantitative data were collected from heads of departments and students in 20 of the 27 medical faculties and from ministry of health staff at federal and state levels. Curriculum designs ranged from traditional to innovative, community-oriented programmes. Problems regarding student evaluations were identified. Major limitations included shortages of staff, reference materials and teaching aids. Poor knowledge of students about different aspects of diseases endemic in Sudan was found. Recommendations include curriculum development, staff recruitment and training, and improvement of teaching and training of students.

Community Health Workers

Enhancing the CHW model for Afghanistan: training students as household or family health workers to increase access to community-based healthcare.
Natiq, Kayhan
E-mail: knatiq@jhsphs.edu
Johns Hopkins University
Keywords: Community Health Services; Family Health-manpower; Health Services Accessibility; Students; Health Policy
Abstract: Despite extensive investments in the health sector in Afghanistan, many Afghan families still do not have access to basic preventive and therapeutic health services. The central role of community health workers [CHWs] is clearly defined in a Basic Package of Health Services [BPHS] developed in 2003, and revised in 2005 and 2010, by the Afghanistan Ministry of Public Health [MoPH]. However, the status quo reliance of health service delivery on unpaid CHWs presents several challenges to a long-term viable strategic plan. To motivate a dialogue about alternative options to the provision of basic health services to communities, we compare three main options in this paper. These include [1] CHW [volunteer model] in which CHWs receive no payment [status quo]; [2] CHW [remuneration model] in which CHWs receive payments for their services; and [3] [Family health worker [FHW] model] in which the demand for CHWs is offset by educating all children in school with progressive components of the CHW training curriculum. We discuss these options in the context of several important attributes of decision making for health policy. These include effectiveness, feasibility, efficiency, community solidarity, legality and ability to implement the strategy. Finally, we present recommendations for policymakers and stakeholders.

Complementary Therapies

Public knowledge, attitude and practice of complementary and alternative medicine in Riyadh region, Saudi Arabia.
Elolemy, Ahmed Tawfik; AlBedah, Abdullah M.N.
E-mail: a_elolemy@yahoo.com
Tanta University - Faculty of Medicine - Public Health and Community Medicine
Keywords: Health Knowledge, Attitudes, Practice; Cross-Sectional Studies; Questionnaires
Abstract: Complementary and alternative medicine [CAM] is well established worldwide. The present work is aimed at studying the knowledge, attitude and practice of CAM by the people of Riyadh region, Saudi Arabia. A cross-sectional descriptive household survey study of the people living in Riyadh city, as well as the surrounding governorates. A multistage random sample was taken from 1st January to the end of March 2010, with a total number of 518 participants. Data were collected using a pre-designed questionnaire through direct interview. The data was collected based on socio-demography, as well as knowledge, attitude and practice of CAM. Participants were nearly sex-matched, consisting of approximately 70% Saudi and 30% non-Saudis. About 89% of the participants had some knowledge of CAM. Mass media e.g. [T.V., newspapers and radio] and family, relatives and friends represented the main sources of CAM knowledge, [46.5% and 46.3% respectively]. Nearly 85% of participants or one of their family members has used some form of CAM before, and the most common users of CAM practices were females, housewives, and illiterate subjects [or those who could just read and write], as well as participants aged 60 years and above. Medical herbs [58.89%], prayer [54%], honey and bee products [54%], hijama [35.71%] and cauterization or medical massage therapy [22%] were the commonly used CAM practices. Most participants agreed that there are needs for; CAM practices [93.8%], regulations for CAM [94.9%], health education [96.6%], specialized centers [94.8%] and CAM clinics [92.7%]. While only 8.3% of participants usually discussed CAM with their physicians. There is a high prevalence and increased public interest in CAM use in the Riyadh region. There is a positive attitude towards CAM, yet most participants are reluctant to share and discuss CAM information with their physicians.
Connexins

The anticipation and inheritance pattern of c.487 AG mutation in the GJB2 gene.
Falah, Masoumeh; Houshmand, Massoud; Mahmoudian, Saeid; Emanjomeh, Hessamaldin; Ghavami, Yaser; Farhadi, Mohammad
Tehran University of Medical Sciences - Head and Neck Surgery - Department and Research Centre of ENT
Archives of Iranian Medicine 2012; 15 (1): 49-51 (12 ref.)
Keywords: Gap Junctions; Mutation; Inheritance Patterns; Hearing Loss; Anticipation, Genetic
Abstract: Mutations in the GJB2 gene are the most common causes of hereditary hearing loss. This study reveals some facts about the inheritance pattern of M163V in the GJB2 gene. This study was performed on two different families with non-syndromic hearing loss. We screened the GJB2 coding region with direct sequencing. There was a substitution of A to G in exon 2 at nucleotide 487 [M163V]. This mutation was heterozygous in fathers and children while mothers were normal. Fathers of both families showed late onset hearing impairment, but there was early onset hearing loss in the children, which was more severe compared to the fathers. M163V has been reported as an unknown heterozygous mutation that leads to failure of the homotypic junctional channel formation. Another mutation in this codon is M163L, with an autosomal dominant inheritance, which impairs trafficking through the plasma membrane, resulting in cell death. Assessment of the familial pedigree has revealed anticipation in phenotype and autosomal dominant inheritance. These data in addition to the high conservation of methionine residue in mammalian species suggest that M163V is inherited with an autosomal dominant pattern. Therefore, the risk of inheritance will increase. Genetic counselors and otologists should prioritize the evaluation and prevention of this disorder in patients.

Conservation of Natural Resources

economics

Garantees of environmental protection in the administrative law.
Ghazali, Ashraf Abdel Rahman Mohamed Sadik
Assiut University - Faculty of Law
Assiut University Bulletin For Environmental Researches 2012; 15 (1): 15-45 (38 ref.)
Keywords: Conservation of Natural Resources-methods; Jurisprudence
Contact Tracing

Contact tracing of a 15-year-old girl with smear-negative pulmonary tuberculosis in Tehran.
Baghaie, N.; Khalilzadeh, S.; Bolursaz, M.R.; Parsanejad, N.
E-mail:p_nritld@yahoo.com
Shahid Beheshti University of Medical Sciences - National Research Institute of Tuberculosis and Lung Disease, Masih Daneshvari Hospital - Pediatric Respiratory Diseases Research Center
Keywords: Tuberculosis, Pulmonary-diagnosis; Early Diagnosis
Abstract: Early detection of tuberculosis [TB] cases and supervised treatment are vital for control of the disease. To assess TB transmission from a sputum smear-negative pulmonary TB case, the contacts of a 15-year-old Iranian girl diagnosed with smear-negative TB in 2010 were traced. In all, 52 classmates and close friends and 15 school staff were screened by tuberculin skin test and chest X-ray. Those with a positive skin test or abnormal chest X-ray were further evaluated by chest spiral computed tomography [CT] scan and triple gastric washing. All classmates and close friends were Iranian and female. Of the 52 girls, 17 [32%] had latent infection [either positive skin test or abnormal chest X-ray] and 3 [5.7%] had active TB [abnormal CT or positive culture additional to positive skin test or abnormal X-ray]. None of the staff had abnormal findings. Contact tracing should be considered for contacts of all children with symptomatic pulmonary TB, even those who are smear-negative.

Coral Reefs

Estimating total economic value of coral reefs of Kish Island [Persian Gulf].
Madani, S.H.; Ahmadian, M.; Araghi, M. Khalili; Rahbar, F.
E-mail:sh.madani@ino.ac.ir
Iranian National Institute for Oceanography
International Journal of Environmental Research 2012; 6 (1): 51-60 (80 ref.)
Keywords: Ecosystem
Abstract: This paper is concerned with the economic valuation of the coral reef within Kish Island in Persian Gulf of Iran. For calculating this value, all components of use and non-use values are estimated and then according to each of them, suitable method has applied. Many different evaluation tools such as contingent valuation method, zonal travel cost method, replacement cost method, avoided cost method, value at risk method are used. The semi non parametric distribution free estimator for calculating the contingent valuation method is applied. The probability of willingness to pay the same as the probability of accepting bids is estimated by using data based on questioners approach using stated preference method. The result indicates that the total economic value of this unique ecosystem in Kish Island is at least 14.6 million dollar per year, showing the importance of conservation value of the ecosystem. Its largest component of total economic value is about 62 percent attributed to the recreational value. This is followed by conservation value which is about 23 percent of the economic value. Since coastal protection and waste assimilation functions of coral reef are 10 percent, it is also suitable factor in illustrating total economic value. The economic value for each hectare of this ecosystem in Kish Island is US$ 237,000 in 2009.

**Corneal Ulcer**

chemically induced

Light and electron microscopic study of the corneal stroma during the healing process of alkali-induced ulcer.

Mohamed, Shehab Hafez
E-mail: shihababoaia@hotmail.com

Mansoura University - Faculty of Medicine - Department of Histology and Cell Biology


**Keywords:** Caustics-chemistry; Wound Healing-physiology; Corneal Ulcer-pathology; Corneal Ulcer-ultrastructure; Microscopy, Electron; Guinea Pigs

**Abstract:** Corneal exposure to alkali is associated with defective clarity and impaired vision. This study was designed to describe structural and ultrastructural changes in the corneal stroma following alkali-induced ulcer. Ten guinea pigs were anesthetized, and alkali burn was performed by touching a 4.0-mm-diameter applicator, a piece of sterile gauze, saturated with 1 mol/l sodium hydroxide on the corneas of the left eyes for 30 seconds. The right and left eyes were harvested. Corneas from the right side were used as controls. H and E-stained paraffin sections were prepared, and thin elongated strips from all the corneas were processed to be examined by transmission electron microscope. Two weeks after alkali burn, corneal stromal neovascularization with the appearance of postcapillary nevules was the most characteristic feature. This was associated with wide stromal spaces, inflammatory cellular infiltrate, activated fibroblasts, and irregularly deposited collagen. Despite corneal reepithelialization, stromal changes might account for defective clarity following exposure to alkali.

**Coronary Artery Disease**

Fasting adiponectin in relation to the metabolic syndrome in patients with coronary artery disease.

Tawfik, Nabawia M.; Al Shereef, Hala K.; Abdel Hafeez, Heba A.; Soleiman, Mona M.; Ez El Deen, Manal El Sayed; Ghaleb, Khaled A.

Assiut University - Faculty of Medicine - Department of Internal Medicine

Assiut Medical Journal 2012; 36 (1): 53-64 (49 ref.)

**Keywords:** Metabolic Syndrome X; Adiponectin-blood; Severity of Illness Index; Liver Function Tests-methods; Cholesterol-blood; Triglycerides-blood

**Abstract:** Metabolic syndrome and coronary artery disease [CAD] are increasing worldwide. The relationship between metabolic syndrome and fasting serum adiponectin concentration in CAD patients is not well elucidated. The aim of present study is to explore the relationship between serum adiponectin concentrations and the presence of metabolic syndrome [MetS] among patients with CAD. Sixty five patients with CAD; defined as more than 50% stenosis in any segment by coronary angiography, and twenty five matched controls, were enrolled in this study. The study was carried out in Cardiology Department Assiut University hospital between October 2009 and July 2010. Metabolic syndrome was defined according to International Diabetes Federation criteria. The blood samples including complete blood count, fasting blood glucose, liver function tests, creatinine, urea, adiponectin, high sensitive-C reactive protein [hs-CRP], insulin and lipids profile were obtained after overnight fasting. The homeostatic model assessment of insulin resistance [HOMA-IR] was calculated as: HOMA-IR = fasting blood glucose [mmol/l] x fasting serum insulin [micro U/ml]/22.5. Patients with CAD had significantly lower plasma adiponectin concentrations than those without CAD [P<0.013] and higher hs-CRP [P<0.009] and HOMA-IR [P<0.03]. Metabolic syndrome was present in 41 patients [63%] among CAD group. Fasting adiponectin values for these patients tended to decrease significantly in comparison to patients without metabolic syndrome [P value = 0.037]. Negative correlations were found between adiponectin and body mass index [BMI] [r=-0.205, P<0.05], waist circumference [WC] [r=-0.036, P=0.003], triglycerides [r=-0.222, P<0.036] and hs-CRP [r=-0.223, P< 0.035] whereas a positive correlation was found between adiponectin and HDL [r= 0.273, P<0.003]. Also, adiponectin was significantly lower in patients with multi-vessel disease compared to other [P<0.05] whereas hs-CRP and HOMA-IR were significantly higher in patients with multi-vessel disease with [P<0.01
and 0.03] respectively. Serum adiponectin concentration is inversely correlated with metabolic syndrome among patients with CAD. Lower adiponectin concentration, and higher HOMA-IR and hs-CRP are associated with CAD and metabolic syndrome, and may be useful for risk stratification of CAD patients. The measurement of plasma adiponectin, HOMA-IR and hs-CRP levels may be useful for prediction of severity of coronary artery disease.

Cough

Clinical and laboratory diagnosis of the patients with sputum smear-negative pulmonary tuberculosis.
Alavi Naini, Roya; Cuevas, Luis E.; Squire, S. Bertel; Mohammadi, Mehdi; Davoudikia, Ali Asghar
E-mail: alavi_naini@zaums.ac.ir
Zahedan University of Medical Science - Research Center for Infectious Diseases and Tropical Medicine - Department of Infectious Diseases, Boo-Ali Hospital
Archives of Iranian Medicine 2012; 15 (1): 22-26 (16 ref.)
Keywords: Tuberculosis, Pulmonary; Sputum; Chronic Disease; Retrospective Studies
Abstract: The objective of this study is to describe the proportion of patients with chronic cough and negative smear microscopy appropriately diagnosed as tuberculosis [TB] and to identify clinical features that could be used in developing a diagnostic scoring system for smear-negative patients. Records of patients with chronic cough and > 3 negative sputum smears for acid fast bacilli who attended a reference University hospital in south-eastern Iran and screened by culture were retrospectively reviewed. We compared confirmed smear-negative pulmonary TB [PTB; culture-positive] and unconfirmed smear-negative patients [culture-negative] to describe the appropriateness of treatment and their characteristics. Features independently predictive of smear-negative pulmonary TB [SNPTB] were entered into a logistic regression to create a diagnostic rule. This study enrolled 350 patients, of which 52 [14.8%] were culture-positive and 298 [85.2%] culture-negative. Of these, 38 out of 52 [sensitivity 73%] confirmed SNPTB were diagnosed as TB and 283 out of 298 [specificity 95%] unconfirmed sputum-negative patients were diagnosed as non-PTB. Variables associated with confirmed SNPTB were the presence of night sweats, family history of TB, typical chest radiography, erythrocyte sedimentation rate > 45 mm and white blood cell count < 1100/mL. The score constructed with these variables had a sensitivity of 94% and specificity of 74% with an area under the curve of 0.90. The clinical differences between SNPTB and control patients could be used to develop a clinical scoring system to identify patients with SNPTB.

Creatine Kinase, MB Form

drug effects

Reducing creatine kinase-MB levels following oxytocin administration during ischemia-reperfusion periods in isolated rat heart.
Khansari, Maryam; Imani, Alireza; Faghihi, Mahdieh; Anvari, Masood Aali; Moghimian, Maryam; Roodsari, Hamid Reza Sadeghipour
Tehran University of Medical Sciences - School of Medicine - Department of Physiology
Keywords: Oxytocin; Reperfusion Injury; Rats, Wistar; Heart; Receptors, Oxytocin; Nitric Oxide; Epoprostenol; Vasotocin-analogs and derivatives; NG-Nitroarginine Methyl Ester; Indomethacin
Abstract: Creatine kinase is a cardiac biomarker that is used for the assessment of ischemic injuries and myocardial infarction. The present study was designed to evaluate effects of oxytocin administration during ischemia and reperfusion periods on CK-MB levels in the coronary effluent of isolated rat heart and the possible role of oxytocin receptor, nitric oxide [NO], prostacyclin and mitochondrial ATP-dependent potassium channels in this regard. Male wistar rats [n=8] were anesthetized with sodium thiopental and their hearts were transferred to a Langendorff perfusion apparatus. All animals were randomly divided into nine groups as follow; in the ischemia-reperfusion group, hearts underwent 30 min of regional ischemia followed by 120 min of reperfusion. In oxytocin group, hearts were perfused with oxytocin 5 min after ischemia induction for 25 min. In other groups, 35 min prior to oxytocin perfusion, atosiban [a non-specific oxytocin receptor blocker], L-NAME [an NO synthase inhibitor], indomethacin [a non-specific cyclooxygenase blocker] and 5-HD [a specific mKATP channel blocker] were perfused for 10 min. In all groups, we measured CK-MB levels in the coronary effluent at the end of reperfusion. Moreover, coronary flow [mL/min] was measured at baseline, during ischemia period and 60 and 120 min after reperfusion. Oxytocin administration significantly reduced CK-MB level in oxytocin group as compared to ischemia-reperfusion group. Administration of atosiban, L-NAME, indomethacin and 5-HD prior to oxytocin perfusion abolished the effects of oxytocin on CK-MB levels. Administration of oxytocin during ischemia and reperfusion periods deceased CK-MB levels but infusion of atosiban, L-NAME, 5-HD and indomethacin inhibited oxytocin from exerting its effects.
Cross Infection

microbiology

Current status of nosocomial infections in the Lebanese Hospital Center, Beirut.
E-mail: psalameh@ul.edu.lb
Lebanese University - Faculty of Pharmacy - Department of Clinic of Pharmacy
Keywords: Cross Infection-drug therapy; Microbial Sensitivity Tests; Cross Infection-prevention and control; Drug Resistance, Bacterial; Retrospective Studies
Abstract: Nosocomial infections are a significant problem and hospitals need to be aware of their nosocomial infection status. This retrospective study aimed to identify nosocomial bacterial infections in patients admitted to the Lebanese Hospital Center from January 2006 to January 2008 and determine the causative micro-organisms, the antibiotic sensitivity of the micro-organisms and evaluate the hospital treatment. In total 96 patients with nosocomial infection were included. Urinary infections were the commonest nosocomial infections [42%] followed by pulmonary infections [28%]. Gram-negative bacteria were responsible for 89% of nosocomial infections and staphylococci for 7%, with Esherichia coli and Pseudomonos alrogenosa being the most common [46% and 26% respectively] The organisms were resistant to multiples antibiotics and 18% of the patients were treated with imipenem, 7% with vancomycin, 42% with third-generation cephalosporins and 24% with amikacin. Hospital hygiene measures and antibiotic prescription policies are required to fight nosocomial infections and reduce antibiotic resistance among organisms.

Culture Media, Conditioned

Effects of fibroblasts conditioned media on differentiation of programmable cells of monocytic origin to insulin-producing cells.
Chapari, Havva; Farokhi, Farah; Delirezh, Nowruz; Javadi, Shahram; Sabz, Fatemeh Tanhaye Kalate
E-mail: havva.ch@gmail.com
Urmia University - Faculty of Science - Department of Biology
Tehran University Medical Journal [TUMJ] 2012; 69 (11): 695-702 (18 ref.)
Keywords: Fibroblasts; Insulin; Cell Differentiation; Monocytes; Rats; Macrophage Colony-Stimulating Factor; Interleukin-3; Mercaptoethanol
Abstract: The characteristic of stem cells in self renewal and differentiation to different types of cells has stimulated the interests for using stem cells as a starting material for generating insulin secreting cells. We've evaluated the differentiation potential of Programmable cells of monocytic origin [PCMOs] into insulin producing cells effected from the growth factors and fibroblasts conditioned media [FCM]. Peripheral blood monocytes of rat were cultured for 6 days in RPMI with 15% FBS, beta- mercaptoethanol, MCSF and interleukin-3. Then, these cells were incubated in differentiation media with HGF, EGF, Nicotinamide, 15% fibroblasts conditioned media and glucose for 15days. Morphological differences of cells were studied by invert microscope. In several stages, the amounts of insulin in supernatant of cells were measured by radioimmunoassay kit. Also productions of insulin from differentiated cells were studied with DTZ special staining. In response to MCSF and IL-3, monocytes dedifferentiated. These programmable cells of monocytic origin [PCMOs] were capable of differentiating into insulin producing cells in differentiation media. The morphology of differentiated cells was similar to Beta cells and the amount of insulin in supernatant of differentiated cells was much higher than PCMOs [P<0.05]. HGF, EGF, Nicotinamide and fibroblasts conditioned media are differentiation factors of PCMOs into insulin producing cells. According to the results insulin producing cells can be differentiated from programmable cells of monocytic origin in presence of fibroblasts conditioned media.

Curcumin

therapeutic use

Protective effect of dendrosomal curcumin combination on colon cancer in rat.
Sarbolouki, Mohammad Nabi; Alizadeh, Ali Mohammad; Khaniki, Mahmod; Azizian, Saleh; Mohaghgheghi, Mohammad Ali
Tehran University - Zistmavad Research Center
Keywords: Colonic Neoplasms; Protective Agents; Rats; Azoxymethane; Immunohistochemistry
Abstract: Cancer is a multistep process that develops very rapidly after its onset. Previous studies have confirmed antitumor effects of curcumin [1,7-bis [4-hydroxy-3-methoxyphenyl] -1,6-heptadiene-3,5-dione; diferuloylmethane] that
can potentially prevent colon cancer development with low side-effects. Different methods have been performed to increase the efficiency and effectiveness of curcumin among which dendrosome, a nanoparticle created by Sarbolouki et al. was used in this study. The present study was undertaken to evaluate the effects of dendrosomal curcumin on rat colon cancer. In this study, which was performed in Cancer Research Center of Tehran University of Medical Sciences in 2010, forty rats were equally divided into control, curcumin and curcumin-dendrosome groups. Animals received azoxymethane [15 mg/kg s.c.], a carcinogen, once a week for two weeks. Curcumin [0.2%] and curcumin-dendrosome were administered to the respective animals 2 weeks before the first and 14 weeks after the last azoxymethane injections. Eventually, colorectal specimens from tumoral and adjacent non-tumoral mucosal tissues were fixed in 10% formaldehyde, and passed and embedded in paraffin. Histopathological and immunohistochemical studies were performed on the specimens. The mean number of lesions, nuclear/cytoplasmic ratio, epithelial stratification, loss of nuclear polarity, goblet depletion, structural abnormality and beta-catenin expression were higher in the control group compared to curcumin and curcumin-dendrosome groups. These parameters had significantly decreased in the dendrosomal curcumin group \( P<0.05 \). The present study shows that dendrosome can be used as a suitable nanoparticle to increase curcumin efficiency in the prevention or treatment of colon cancer.

**Dendritic Cells**

**Inducing maturation of monocyte-derived dendritic cells on human epithelial cell feeder layer.**

Bakhsh, Meysam Ganji; Nejati, Vahid; Asadi, Masoumeh; Delirez, Nowruz; Farokhi, Farah

E-mail: meysam_ganj@yahoo.com

Urmia University - Faculty of Science - Department of Biology and Embryology

**Tehran University Medical Journal [TUMJ]** 2012; 69 (11): 686-694 (26 ref.)

**Keywords:** Monocytes; Epithelial Cells; Feeder Cells; Granulocyte-Macrophage Colony-Stimulating Factor; Interleukin-4; Culture Media, Conditioned; Tumor Necrosis Factor-alpha; Antigens, CD14; Antigens, CD80; Antigens, CD86; Antibodies, Monoclonal; HLA-DR Antigens; Phagocytosis; T-Lymphocytes; Interleukin-12; Cytokines; Immunotherapy

**Abstract:** Nowadays, dendritic cells [DCs] have a special place in cancer treatment strategies and they have been used for tumor immunotherapy as they can induce immune response against tumor cells. Researchers have been trying to generate efficient dendritic cells in vitro; therefore, this research was done to generate them for use in research and tumor immunotherapy. This study took place at Urmia University in 2010-2011 years. In this study plastic adherent monocytes were incubated with granulocyte-macrophage colony stimulating factor [GM-CSF] and interleukin-4 [IL-4] for five days. Finally, fully matured and stable DCs were generated by 48 hours of incubation in a monocyte conditioned medium [MCM] containing tumor necrosis factor-alpha [TNF-alpha] and epithelial cells. Phenotypic and functional analysis were carried out by using anti-CD 14, anti-CD80, anti-CD86, and anti-CD83 monoclonal antibodies, and by determining their phagocytic activity, mixed lymphocyte reaction [MLR] and cytokine production, respectively. Dendritic cells were produced with high levels of surface molecule, i.e. of CD80, CD83, CD86, HLA-DR, expression and low levels of CD14 expression. Dendritic cells showed efficient phagocytosis and ability to stimulate T-lymphocytes. Moreover, dendritic cells could secrete high levels of interleukin-12 [IL-12] cytokine which was depictive of their full maturation. Measurement of the produced cytokines showed the generation of type-1 dendritic cells [DC1]. Our study showed that skin epithelial cells could induce maturation of monocyte-derived dendritic cells [DCs]. This feeder layer led to the production of efficient dendritic cells with the ability to be used for tumor immunotherapy.

**Dengue**

**Factors associated with the spread of dengue fever in Jeddah Governorate, Saudi Arabia.**

Kholedi, A.A.N.; Balubaid, O.; Milaat, W.; Kabbash, I.A.; Ibrahim, A.

Ministry of Health - Infectious Disease Department and EPI Program


**Keywords:** Dengue-epidemiology; Case-Control Studies; Dengue-etiology; Health Education; Risk Factors

**Abstract:** Dengue fever resurged sharply in Jeddah in 2004 and rose to 1308 cases in 2006. This case-control study determined factors potentiating the spread of the disease to provide an epidemiological baseline to help dengue control. All [650] suspected cases of dengue in Jeddah in 2007 were eligible for inclusion. Cases were those confirmed with dengue by laboratory investigations \[ n = 244 \] and controls those confirmed negative \[ n = 406 \]. Of these, 129 cases and 240 controls could be contacted and were included in the study. Variables found significant in the bivariate analysis were included in a logistic regression analysis. The presence of stagnant water in indoor drainage holes \[ OR = 4.9 \], indoor larvae \[ OR = 2.2 \], nearby construction sites \[ OR = 2.2 \], and older age \[ OR = 1.2 \] were independent determinants of dengue infection \[ P< 0.01 for all \]. Face-to-face health education significantly decreased the risk of dengue infection. Efforts are needed to control the modifiable factors identified in this study with emphasis on health education.
Dengue Fever

prevention and control

Knowledge, attitude and practice of Hadhramout university students about dengue fever, Al-Yemen.
El Habshiy, Haddad S.A.; Hany, Ahmed M.M.; Mohammed, Asmaa G.M.
Hadhramout University - Faculty of Nursing - Community Health Nursing
Assiut Medical Journal 2012; 36 (1): 145-156 (15 ref.)
Keywords: Students; Universities; Health Knowledge, Attitudes, Practice; Questionnaires; Health Education
Abstract: The study aimed to assess the knowledge, attitude and practice of Hadhramout university students about Dengue fever [DF]. Descriptive research design was used. The study was carried out at Hadhramout University that is located in Al-Mukalla city, 4 collages were taken randoml y to collect the necessary data. 679 students were chosed from the previous mentioned faculties by systematic random sample technique. Two tools were used for data collection, the first was a self administrated questionnaire sheet and the second tool was the Likert scale. The study revealed that [78.5%] of the students had a fair knowledge about the vector. The main sources of information as stated by the students were television and posters and brochures. The vast majority of students [96.3%] had adequate score of practice [>= 60%], while [98.1%] of the students had positive attitude [>= 60%] about DF. Low significant positive correlation between knowledge, attitude and practice of students about DF was noted. Recommendations: educational programs should be directed and organized to all students from different educational levels to increase the community participation in the combat of the disease.

Dental Casting Technique

Comparison of stress distribution in two type of metal and non metal posts by photo elastic method.
Jalalian, E.; Ale Taha N.; Meihami, A.; Sadegh, M.; Jalalian, S.H.
Islamic Azad University - Dental School - Department of Prosthodontics
Journal of Dental School - Shahid Beheshti University of Medical Sciences 2012; 29 (4): 250-259 (29 ref.)
Keywords: Dental Stress Analysis; Metals; Dental Pulp Cavity; Epoxy Resins
Abstract: Intrapulpal posts are used as retention for reconstructing of missed crown. Today fiber posts eliminated most of disadvantages of metal posts. The purpose of this study is a comparison of stress distribution in these types of posts [casting and Quartz fiber post] on root canals of teeth with photo elastic method. In this experimental study Quartz fiber and casting posts with length of 15mm and diameter of 0.9mm were used. Four epoxy resin models [10x20x40mm] were made that two of them include casting posts and two other include Quartz fiber posts. Then, cores were prepared for each model. Vertical force of 100N and oblique force with 30' and 150 N were applied on cores and isochromatic fringe patterns around post were recorded in the field of Polariscope. In the vertical loads the minimum cervical stress was observed in casting post that was 1.22 [in Quartz fiber post it was 2.65] But in apical region maximum stress was recorded in casting post that was 1.63 [in Quartz fiber post it was 1.38]. In the oblique load, casting post showed 1.39 stress in cervical that was the minimum [in Quartz fiber post it was 2.35] and in the apical region, casting post showed the maximum stress that was 1.68 [in Quarts fiber post it was 1] display more critical stress pattern [1.63]. In the vertical and oblique loads casting posts shows the maximum stress in the apical region that makes the worse fracture in tooth that couldn't be prepared but in Quartz fiber post maximum stress was in cervical region so it is more repairable.

Dental Implant-Abutment Design

Effect of platform switching on crestal bone stress distribution around 3i implants: a finite element analysis.
Sahabi, M.; Habibzadeh, S.; Mirhashemi, F.S.
Shahid Beheshti University of Medical Sciences - Dental School - Department of Prosthodontics
Journal of Dental School - Shahid Beheshti University of Medical Sciences 2012; 29 (4): 242-249 (15 ref.)
Keywords: Finite Element Analysis; Mandible; Molar; Tomography, X-Ray Computed; Dental Stress Analysis
Abstract: Over the last few years, concept of platform switching has gained popularity for reducing degree of crestal bone resorption. Many researchers believe that, this theory can be used for improving stress distribution in implant-bone interface. The purpose of this three dimensional Finite Element Analysis [FEA] was to study and compare stress distribution in implant-bone interface and implant-abutment interface of 3i implants [Biomet 3i, USA] in mandibular molar area. For this FEA, computed tomography [CT] images of an adult human mandible was used to make the three-dimensional model of posterior edentulous mandible. The implant systems which used was the 3i system consisted of 3i fixtures: 4 and 5 mm in diameter and 11.5 mm in length, and 3i Certain abutment 4.1 and 5mm [Biomet 3i, USA]. This implant systems were assembled on the mandible model in 3 different designs : a platform-switched configuration;
MODEL 4: 4-mm 3i fixture, 4.1-mm abutment; MODEL 5: 5-mm 3i fixture, 5-mm abutment; MODEL 6: 5-mm 3i fixture, 4.1-mm abutment, a platform-switched configuration. A linear static analysis was performed on the prepared 3D solid models with two different oblique load of 100 and 250 N in the lingobuccal direction with 15 degrees of inclination on the center of the abutment. Regardless of the implant system used, maximum Von Mises stresses in cortical bone around implants were lower in platform switched models compared to matching diameter implant-abutment. This effect was not related to the usage of larger implant diameters in these models. However, Von Mises stresses in implant-abutment interface were the lowest in models with larger implant diameter. The platform switching technique reduces the stress concentration in the area of crestal bone-implant interface and shifted it to the area of implant-abutment interface. In the present study, this stress reduction was not.

**Dental Pins**

Retention of creative pin placement vs. traditional method in human mandibular molar teeth [in vitro].
Rezvani, M.B.; Basir, M. Mohammadi; Moradi, Z.; Mollaverdi, F.
Shahed University - Dental School - Department of Operative Dentistry
Journal of Dental School - Shahid Beheshti University of Medical Sciences 2012; 29 (4): 268-273 (24 ref.)
Keywords: Composite Resins; Dental Bonding; Mandible; Molar; Tensile Strength
Abstract: Extensive caries restoration has always been considered as one of dental issues. To resolve this problem different methods have been suggested such as dentinal pins. Previous clinical studies revealed that the use of retentive pins, faces numerous risks [pulp exposure, dentin cracks, root perforations, etc]. Introducing of bonding and composite systems, resulted in minimized mechanical retention for cavity preparation. Advantages of amalgam restorations such as simplicity of use, better mechanical properties, suitable clinical longevity and being less costly sustained its use in practice. On the other hand, caries removal usually results in a cavity form with small undercuts. So if we fill these small undercuts with [Bonding and Composite], then insertion of pins in this base, could be considered as a safe way for obtaining retention. The purpose of this study was comparing the retention of creative pin placement [using composite] to the retention of traditional method. In this experimental study thirty sound human mandibular molar teeth free from decay and restoration were selected. The occlusal surface of samples was removed up to 3mm above CEJ. Teeth were divided in 2 groups: Group A: [N=15] T.M.S Minim pin inserted in dentin at 2mm depth. Group B: [N=15] One layer of composite [1mm] bond to flat occlusal surface of teeth and then the pin was inserted in it at 2mm depth so only 1mm of pin placed into dentin. Group C: [N=15] cylinders of composite were prepared [height=5mm, dimension=8mm] and pin was inserted in them at 2mm depth. The retention of pins was determined under tensile force with Zwick universal testing machine and data was charted by Test Xpert. 10-11 program. Data were analyzed by variance analysis [ANOVA] and L.S.D test. The ANOVA showed: a statistically significant difference between all groups. [p< 0.05] The L.S.D test showed: - No significant difference between A and B. [p> 0.05] - Significant difference between A, B and C. [p< 0.05]. The highest tensile strength belonged to group A. there was no significant difference between group A and B. So by using this technique 1mm depth of pin in dentin can result as same retention as 2mm depth. The lowest tensile strength belonged to group C.

**Depression**

Arabic version of the Major Depression Inventory as a diagnostic tool: reliability and concurrent and discriminant validity.
Fawzi, M.H.; Fawzi, M.M.; Abu Hindi, W.
E-mail:mounir.fawzi40@gmail.com
Zagazig University - Faculty of Medicine - Department of Psychiatry
Keywords: Questionnaires; Reproducibility of Results; Sensitivity and Specificity; Language; Arabs; Translations
Abstract: The Major Depression Inventory [MDI] is a brief questionnaire to assess the presence of a depressive disorder. We prepared an Arabic version of the MDI and tested its reliability and concurrent and discriminant validity as a diagnostic tool of major depressive disorder. A group of 50 Egyptian outpatients with major depressive disorder [assessed clinically and with the Structured Clinical Interview for DSM-IV-TR Axis 1 Disorders] were compared with 50 healthy controls using the MDI-A, Beck Depression Inventory [BDI] and Spielberger State-Trait Anxiety Inventory [STAI]. Cronbach a was 0.91 and intraclass correlation coefficient was 0.98 [95% CI: 0.97-0.99]. Scores on the MDI-A strongly correlated with BDI scores [r - 0.81] but insignificantly correlated with STAI scores. Using the MDI scoring algorithm, the sensitivity was 88.4% and specificity 78.9%. We conclude that the MDI-A has an excellent reliability and an acceptable concurrent and discriminant validity.
General practitioners’ awareness and management of common psychiatric disorders: a community-based survey from Karachi, Pakistan.
Naqvi, H.A.; Sabzwari, S.; Hussain, S.; Islam, M.; Zaman, M.
E-mail:haider.naqvi@aku.edu
Aga Khan University - Department of Psychiatry
Keywords: Anxiety Disorders-diagnosis; Awareness; General Practitioners; Health Surveys; Benzodiazepines-therapeutic use; Antidepressive Agents, Tricyclic-therapeutic use; Questionnaires
Abstract: This study assessed the knowledge and management of common psychiatric disorders by general practitioners [GPs] in Karachi, Pakistan. Structured interviews were carried out in 2009 with 360 GPs selected by cluster random sampling. Patients with psychiatric disorders were estimated to be up to 10% of the daily caseload according to 71.8% of doctors. Two-thirds of GPs were unaware of the ICD-10 diagnostic criteria for depression and anxiety disorders. Benzodiazepines were the most recognized category of medication [75.3%] and were the most commonly used medication for all mental health conditions. Fewer GPs were familiar with selective serotonin reuptake inhibitors [35.1%] or tricyclic antidepressants [20.2%]. Lack of time and patients financial constraints were reported to be barriers to care. Most GPs [69.2%] had not received any recent medical education about mental health problems. Gaps in GPs’ knowledge about the management of mental disorders have implications for the rational use of psychotropic medications in primary care.

Depression, Postpartum

epidemiology

Postnatal depression among Bahraini women: prevalence of symptoms and psychosocial risk factors.
Al Dallal, F.H.; Grant, I.N.
E-mail:drfareeda@hotmail.co.uk
Ministry of Health - Primary Health Care
Keywords: Depression, Postpartum-etiology; Depression, Postpartum-diagnosis; Depression, Postpartum-psychology; Risk Factors; Prevalence; Signs and Symptoms; Cross-Sectional Studies; Questionnaires
Abstract: The prevalence of postnatal depression in Bahrain is unknown and screening for known risk factors does not take place. This study estimated the prevalence of postnatal depressive symptoms and the associated risk factors among a random sample of Bahraini women attending primary health care centres with their babies for the 8-week child check-up. The Arabic version of the Edinburgh Postnatal Depression Scale [EPDS] was used with a cut-off score of >/=12 for depression. The prevalence of postnatal depressive symptoms among 237 mothers was 37.1%. No significant relationships were identified between depression symptoms and any of demographic variables or pregnancy/birth characteristics studied. However, several psychosocial risk factors were significantly associated with postnatal depression and, after multiple regression analysis, a history of depressive symptoms and perceived lack of support from the husband remained significant factors. Further studies that include diagnostic assessments are needed to confirm these findings.

Diabetes Mellitus, Experimental

chemically induced

Effect of alloxan-induced diabetes on implantation sites of pregnant rats with special emphasis on angiogenesis.
Elrakhawy, Fatma Ibrahim Khalil; Salah El Din, Rania; Shoukry, Youssef; Salem, Amgad Gaber Alsaid
Ain Shams University - Faculty of Medicine - Department of Anatomy and Embryology
Keywords: Alloxan-adverse effects; Embryo Implantation; Neovascularization, Physiologic-physiology; Vascular Endothelial Growth Factor A-blood; Rats; Pregnancy, Animal; Endometrium-ultrastructure; Microscopy, Electron, Scanning
Abstract: Diabetes is relatively common worldwide. According to the reports of the WHO, more than 150 million people suffer from diabetes across the world. A primary negative effect of a diabetic environment on the developing embryo is impaired vascularization of the yolk sac. Angiogenesis at the sites of blastocyst implantation is associated with increased vascular permeability. The present study aimed to investigate the effect of diabetes on the implantation site and intersite in albino rats during the early period of pregnancy with special emphasis on angiogenesis, by studying vascular endothelial growth factor expression. Forty adult female albino rats aged 4-6 months were used in this study. Rats were divided into two groups [20 rats each]. Group I constituted the control group and group II
constituted the alloxan-induced diabetic group. Diabetes was induced in rats by intravenous injection of alloxan monohydrate dissolved in normal saline into the dorsal tail vein at a dose of 40mg/kg body weight. Vaginal smears were collected from each animal; the presence of sperm in the smear was designated as day 1 of pregnancy. Pregnant rats from the control and diabetic groups were sacrificed at days 4, 5, 6 and 7 of pregnancy [n=5]. Examination of the uterine horn sections showed occurrence of implantation on day 6 in the control group, whereas implantation in the diabetic group occurred only on day 7. Granulated metrial glandular cells were clearly seen in the control group, whereas lymphocytic infiltration was obvious in the diabetic group. The expression of vascular endothelial growth factor was stronger in the diabetic group.

complications

Effect of Nigella sativa on pancreatic beta-cell damage in streptozotocin-induced diabetic rats: histological and immunohistochemical study.

Omar, Nesreen M.; Atia, Ghaila M.
E-mail:nesrinemoustafa@gmail.com
Mansoura University - Faculty of Medicine - Department of Histology and Cell Biology


Keywords: Insulin - Secreting Cells-pathology; Histology; Immunohistochemistry; Protective Agents; Nigella sativa; Plant Oils-therapeutic use; Treatment Outcome; Rats

Abstract: Diabetes mellitus is a metabolic disease characterized by chronic hyperglycemia. Nigella sativa [NS] is a medical plant used as a natural remedy for a variety of illness. The aim of this study was to determine the effect of NS on pancreatic beta-cell damage and serum levels of glucose and insulin in streptozotocin [STZ]-induced diabetic rats and to correlate these effects with the immunohistochemical changes. Forty-five male albino rats were used in this study. The animals were divided into three groups: group I [control], group II [diabetic], and group III [diabetic with NS]. Diabetes was induced in group II and III animals by a single intraperitoneal injection of STZ, 40mg/kg. Group III animals were given NS oil [0.2ml/kg/day] intraperitoneally for 4 weeks. Five rats from each group were sacrificed 2 days, and 2 and 4 weeks after STZ injection. Blood samples were collected for detection of serum glucose and insulin levels. Paraffin sections of the pancreas were prepared and stained with H and E stain and immunohistochemical stain using anti-insulin antibody. After STZ injection, the pancreatic islets appeared shrunken and showed degenerative changes and negative or weak positive insulin immunoreactivity. The serum level of insulin was decreased with elevation in the serum glucose concentration. NS injection improved the morphology of the islets, which nearly reverted to their normal size and structure with increased insulin immunoreactivity. NS also increased the lowered insulin and decreased the elevated glucose concentrations. NS has a protective effect on pancreatic beta-cell damage and improves serum levels of insulin and glucose in STZ-induced diabetic rats.

Diabetes Mellitus, Type 2

Role of soluble P-selectin among type 2 diabetic patients with and without coronary heart disease.

Ali, Ola Sayed M.; Shouman, Mohamed S.; Mahfouz, Mohamed H.; Zidan, Riham A.
E-mail:ola sayed m. ali@yahoo.com
Al-Azhar University - Faculty of Pharmacy [girls] - Department of Biochemistry


Keywords: Coronary Artery Disease; P-Selectin-blood; Cholesterol-blood; Triglycerides-blood; Lipoproteins, HDL-blood; Lipoproteins, LDL-blood

Abstract: Type 2 diabetes mellitus [T2DM] is associated with a marked increase in the risk of coronary heart disease. Platelets play a significant role in coronary artery disease [CAD]. P-selectin is a component of the platelet granule membrane that is expressed on the platelet surface membrane and shed into the plasma as sP-selectin on platelet activation. The current study was performed to investigate the association of soluble P-selectin with inflammatory marker high sensitivity C-reactive protein [hsCRP], lipid profile and glycemic control among type 2 diabetic patients with and without coronary heart disease. This study included 31 diabetic patients with coronary artery disease [group I], 29 healthy subjects as control group [group II], and 28 diabetic patients without coronary artery disease [group III]. The age and sex of diabetic groups were matched with normal control group. Glucose, HbA1c, lipid profile, hsCRP and sP-selectin were measured. The levels of glucose, HbA1c, total cholesterol, triacylglycerol. LDL-c, hsCRP and sP-selectin level were significantly higher in the diabetic group with coronary artery disease than in the control group and the diabetic group without coronary artery disease. The level of HDL-c was significantly lower in the diabetic group with coronary artery disease than in the control group and the diabetic group without coronary artery disease. There was a significant positive correlation between level of sP-selectin and duration of CAD diabetic patients with coronary artery disease. Also there was a significant positive correlation between sP-selectin and duration of diabetes mellitus in both diabetic groups with and without coronary artery disease. ROC curve analysis for hsCRP and sP-selectin indicated that, sP-selectin had higher sensitivity and specificity than hsCRP in diabetic patient with
coronary artery disease. In conclusion, measurement of soluble P-selectin seems more helpful marker of impending coronary artery insult in diabetic patients and had higher diagnostic value than hsCRP in diabetic patient with coronary artery disease.

**Diabetes, Gestational**

**physipathology**

**Histological and immunohistochemical changes in placental chorionic villi of patients with poorly controlled gestational diabetes.**
Abou Elghait, Amal T.; Abdel Aziz, Hoda A.; Mahmoud, Faten Y.
E-mail: amal682003@yahoo.co.uk
Assiut University - Faculty of Medicine - Department of Histology
**Egyptian Journal of Histology [The]** 2012; 35 (2): 259-271 (74 ref.)
**Keywords:** Placenta; Chorionic Villi-pathology; Histology; Immunohistochemistry

**Abstract:** Normal placental development is essential for normal fetal development. The placenta is a complex fetal organ that plays pleiotropic roles during fetal growth. It separates the maternal and the fetal circulation. The placenta is exposed to the regulatory influence of the hormones, cytokines, growth factors, and substrates present in the circulation, and thus may be affected by changes in any of these. Gestational diabetes is one of the most prevalent medical complications of pregnancy and may cause increased fetal wastage. To study the structural changes in the placental chorionic villi of women with poorly controlled gestational diabetes in comparison with metabolically normal pregnant women. The study was carried out on placentas from 22 full-term pregnant women. All the women delivered at 38-40 weeks of gestation. Ten placentas were from normal uncomplicated pregnancies [control group] and the other 12 were from gestational diabetic pregnancies [diabetic group]. The placentas were processed and examined using light and electron microscopy. An immunohistochemical study using S100 protein antibody was carried out. In comparison with the control group, the placentas of poorly controlled gestational diabetic mothers showed an increase in syncytial knots, partial shedding of trophoblastic microvilli, and thickening of the basement membrane of the trophoblast. Fibrinoid necrosis, villous fibrosis, and dilated congested fetal blood vessels were also observed. The frequent appearance of Hofbauer cells [placental macrophages] was observed in the diabetic placenta in comparison with the control placenta. Positive diabetic trophoblastic and stromal cells for S100 protein antibodies were observed. It is concluded that poor control of diabetes during gestation may result in structural changes in the placentas, which may contribute toward fetal complications. Further research in this field may help in finding a solution for the evaluation of the destructive changes in diabetic placenta in the initial stages of pregnancy.

**Diazinon**

**toxicity**

**Toxic effects of acute exposure of diazinon in turbot [Psetta maxima] early life stage [ELS].**
Mhadhbi, L.; Boumaïza, M.
E-mail: lazhar@uvigo.es
Toralla Marine Science Station [ECIMAT]
**International Journal of Environmental Research** 2012; 6 (1): 139-144 (22 ref.)
**Keywords:** Flatfishes; Environmental Exposure; Embryonic Structures; Larva; Toxicity Tests, Acute

**Abstract:** In the present study, the toxic effects on the embryos and larvae of the turbot were used as a model to investigate the diazinon, which contaminates aquatic ecosystems. The number of dead embryos significantly increased in response to diazinon concentrations 0.2, 0.4, 0.8, 1.6, 3.2, and 7.4 mg/L. The 48h LC[50] value of diazinon for turbot embryos was estimated at 1.85 mg/L. Dose-response decreases in hatching success were recorded as 97, 92.4, 80.3, 60.3, 38.7 and 27.1%, respectively. The number of dead larvae significantly increased with increasing diazinon concentrations exposed for 24-96 h [p < 0.05]. The 24, 48, 72 and 96h LC[50] values of diazinon for turbot larvae were estimated at 4.8 [6.4-5.12], 3.3 [4.73-2.52], 2.1 [3.29-1.65] and 1.23 [0.87-2.38] mg/L, respectively. There were significant differences in the LC[50] values obtained at different exposure times [p <0.05]. Diazinon caused lethal toxicity as well as nonlethal malformations during embryo-larvae development.
Diet

Low adherence of Kuwaiti adults to fruit and vegetable dietary guidelines.
Zaghloul, S.; Waslien, C.; Al Somaie, M.; Prakash, P.
E-mail: szaghloul@kisr.edu.kw
Kuwait Institute for Scientific Research
Keywords: Fruit; Vegetables; Cross-Sectional Studies; Life Style; Anthropometry; Body Mass Index
Abstract: The study aimed to assess the adherence of Kuwaiti adults to dietary guidelines for daily fruit and vegetable intake. Data were compiled from national cross-sectional studies from 2006 to 2008 including 9350 adults. Demographic data, frequency of fruit and vegetable consumption and anthropometric and lifestyle indicators were collected. Approximately 11% of people reported consuming 5 or more fruits and vegetables daily with a mean consumption of 3.04 times per day. Consumption increased with age and body mass index but decreased with smoking and non-exercising. Minimal change in compliance with 5-per-day fruit and vegetable consumption was observed between 2006 and 2008. However, the average daily consumption of total vegetables and green salads decreased and of total fruits, fruit juices and cooked and fried potatoes increased. The low frequency of fruit and vegetable consumption among Kuwaiti adults indicates the need to adopt more healthy eating patterns to control chronic diseases.

Diphosphates

adverse effects

Toxopathological studies on the effect of heavy metals emitted from superphosphate factory on the reproductive performance of male goats.
Sayed, Manal M.; Hassanein, Khaled M.A.
Animal Health Research Institute
Assiut University Bulletin For Environmental Researches 2012; 15 (1): 53-63 (32 ref.)
Keywords: Fertilizers; Metals, Heavy-toxicity; Reproduction; Goats; Male; Testis-pathology; Histology
Abstract: The present study was designed to evaluate toxopathological effects of heavy metals emitted from superphosphate factory on the reproductive performance of male goats. Thirty male goats were selected from Gaz. El-Akrad area adjacent to factory [group 1] and five male goats from Dairut area [group 2] served as control. Serum samples were used for determination of cadmium, fluorine, testosterone and prostatic acid phosphatase. Tissue specimens were obtained from testes, epididymis and prostate for histopathological examination. It was observed that the level of cadmium and fluorine was significantly increased in the serum of exposed group when compared with control group. It was observed that the mean level of testosterone in group 1 was extremely significantly decreased while the level of prostatic acid phosphatase was significantly increased when compared with control group. Histopathological findings in the testicle of male goat of the group 1 revealed testicular degeneration with formation of spermatid giant cells. Congestion of the blood vessel, edema and fibrosis of the interstitial tissue with formation of sperm granuloma were noticed. The epididymis showed edema, fibrosis and necrosis of the epididymal tubules. The prostate gland showed edema, fibrosis and hyperplasia. Our results strongly suggest that cadmium and fluorine intoxication produces adverse effects on sexual fertility with hormonal and pathological alterations in male goats.

Disease Transmission, Infectious

prevention and control

Management of the use of public health pesticides in the face of the increasing burden of vector-borne diseases in the Eastern Mediterranean Region.
Mnzava, A.; Zaim, M.; Yadav, R.S.; Elkhalifa, S.; Mahjour, J.
E-mail: mnzavaa@who.int
World Health Organization - Division of Communicable Disease Control - Vector Biology and Control
Keywords: Disease Vectors; Environment and Public Health; Pesticides; World Health Organization
Abstract: The Eastern Mediterranean Region of the World Health Organization is facing an increasing burden of vector-borne diseases. Progress in controlling these diseases is compromised by the limited number of vector control interventions, most of which rely on the use of pesticides. Seventeen countries of the Region participated in a global survey that aimed to map and document registration and management practices for public health pesticides. This paper aims to draw the attention of policy- and decision-makers to the challenges the Region is facing in managing public health pesticides properly to control disease vectors and, based on the outcome of the survey, recommends a set of actions to guide national policy and to strengthen national capacity for the sound management and judicious use of public health pesticides.
Doxorubicin toxicity

Comparative study on the effects of grape seed extract and telmisartan on doxorubicin-induced cardiotoxicity in adult male rats: light and electron microscopic study.

Abdel Samad, Abeer A.; Raafat, Mona H.
E-mail: abirmohsen@yahoo.com
Ain Shams University - Faculty of Medicine - Department of Histology


Keywords: Myocardium-pathology; Histology; Myocardium-ultrastructure; Grape Seed Extract-therapeutic use; Benzoates-therapeutic use; Comparative Study; Treatment Outcome; Rats; Male

Abstract: Doxorubicin [DOXO] is a chemotherapeutic agent used effectively for the treatment of several malignancies. The major side effect of DOXO is oxidative injury-related cardiotoxicity, which has markedly hindered its usage. Grape seed extract [GSE] has been reported to exert protective effects on DOXO -induced cardiotoxicity. However, studies have suggested that the angiotensin receptor blocker [telmisartan] may also play a protective role in DOXO -induced cardiotoxicity. The aim of this work was to determine the effect of DOXO on rats' hearts and to compare the effects of GSE and telmisartan against DOXO -induced cardiotoxicity. Thirty adult male albino rats were used. They were divided into six groups of five animals each. Group I served as a control. Group II was administered a single intraperitoneal injection of DOXO [20mg/kg]. Group III received GSE, which was administered daily by a gavage at a dose of 100mg/kg for 12 days and DOXO was administered on the seventh day as in group II. Group IV received telmisartan, which was administered daily by a gavage at a dose of 10mg/kg for 12 days and DOXO was administered on the seventh day as in group II. Group IV received telmisartan, which was administered daily by a gavage at a dose of 10mg/kg for 12 days and DOXO was administered on the seventh day as in group II. Group V received GSE alone for 12 days. Group VI received telmisartan alone for 12 days. At the end of the experiment, the heart was prepared for histological examination and morphometric studies were carried out. It was found that DOXO exerted deleterious effects on the heart structure. GSE and telmisartan exerted a protective effect against DOXO-induced heart damage. The present study indicated that DOXO affected the structure of the rat's heart, which could be protected by GSE and telmisartan. However, the protective effect of GSE on DOXO-induced cardiac injury needs further researches for a longer duration of time to obtain more definitive results.

Drug, Essential

Efficacy of constitutional support to enhance access to essential medicines as a human right to health in the Eastern Mediterranean Region.

Elsayed, L.M.
E-mail: lamiaa4@hotmail.com
University of Indiana - School of law

EMHJ - Eastern Mediterranean Health Journal 2012; 18 (1): 77-84 (33 ref.)

Keywords: Human Rights; World Health Organization; Health Policy

Abstract: Access to essential medicines is an element of the international agreements on the human right to health. This review summarizes the current situation concerning access to medicines in the Eastern Mediterranean Region [EMR] by examining the policies, constitutional provisions and other legal instruments of the Member States. The constitutions of 18 out of 22 EMR countries enshrine health as a human right [8 countries have a duty statement, 5 have a programmatic statement and 5 specify entitlement]; only 4 EMR countries do not enshrine health as a human right in a clause in their constitution. More than half the countries [i.e. 12] have an official national medicines policy, 4 have a draft policy and 6 have no national medicines policy. A total of 11 countries operate an essential medicines list. Realization of this right to health necessitates that duty bearers take all necessary legislative measures to respect, protect and fulfill this right.

Duodenal Ulcer complications

Risk factors for perforated duodenal ulcer.

Binbisher, Saeed A.; Alymani, Abdulla S.
Haramout University - Faculty of Medicine - Surgical Department

Assiut Medical Journal 2012; 36 (1): 139-144 (24 ref.)

Keywords: Pepsic Ulcer Perforation; Risk Factors; Aging; Smoking; Anti-Inflammatory Agents, Non-Steroidal

Abstract: The primary goal of this study is to describe the risk factors for perforated duodenal ulcer [PDU]. The secondary goal is to evaluate which one of the risk factors plays major role for perforated duodenal ulcer. This study
included 50 patients, was done in the period from January 2005 to December 2010. In Ibin Sina Referral Teaching Hospital [ISRTH] in Mukalla city in Yemen. To achieve the study objectives, a hospital-based, prospective case-control study was conducted to determine the risk factors for perforated duodenal ulcer, when case-control ratio 1:1. It was found that the factors; age, non-steroidal anti-inflammatory drugs use, heavy smoking and heavy last meal consumed were significant risk factors, while sex, H. pylori infection and Kat chewing were not significant risk factors. The increase in age is playing role in increasing risk of [PDU] and the risk while increase in age of ten years will increase the risk of perforation by 6.1 times. Those patients who use NSAID have increased risk of perforation by 9.3 times than those who don’t use. The [PDU] occurs among those who smoke heavily [5.7 times]. There was strong significant difference between cases and controls regarding taking the last meal. Those patients who had taken heavy meal were prone to have more perforation than those who had consumed light meal [Chi2 p. value was <0.004]. The non-steroid anti-inflammatory drugs play the major role of [PDU]. The risk of perforation increases by aging process. Heavy smoker patients and heavy last meal play significant role. H. pylori infection plays no role in [PDU] in this study.

Ectromelia

diagnosis

Fetal amelia: a case report.
Al Riyami, Nihal; Ahmed, Asfhaq; Tanzeem, Shahila; Abdul Latif, Mohammed
E-mail:drriyami@hotmail.com
Sultan Qaboos University Hospital - Department of Obstetrics and Gynecology
Oman Medical Journal 2012; 27 (1): 54-55 (15 ref.)
Keywords: Ectromelia-ultrasonography; Limb Deformities, Congenital; Stillbirth; Fetus
Abstract: Congenital limb defects are rare fetal anomalies with a birth prevalence of 0.55 per 1,000. Amelia is an extremely rare birth defect marked by the complete absence of one or more limbs. We report a case of fetal amelia, ultrasound findings, manifestations and the fetal outcome.

Education, Medical

The establishment and roles of the medical education department in the faculty of medicine, King Abdul Aziz university, Jeddah Saudi Arabia.
Al Shawwa, Lana A.
King Abdul Aziz University - Faculty of medicine - Medical Education Department
Oman Medical Journal 2012; 27 (1): 4-9 (38 ref.)
Keywords: Faculty, Medical; Schools, Medical; Research
Abstract: Medical Education departments oversee the process of medical education in medical schools and provide many educational services to support, evaluate and thus enhance the educational role of the medical school. Its roles revolve around research, teaching and providing educational support in areas of curriculum development and assessment. This paper provides a brief summary on the emergence of different medical education centers/units/departments around the world from a historical perspective. Special attention will be given to the process followed in establishing the Medical Education Department [MED] in King Abdul Aziz University [KAU]. This paper also explores the roles that are currently played within the department with a reflection on documented roles of the medical education departments worldwide. Special emphasis will be given to explore the current challenges faced by KAU MED and proposed suggestions to improve these challenges will also be addressed.

Emergency Service, Hospital

utilization

Reasons for using emergency departments of major hospitals in Greater Tunis.
Ben Gobrane, H.L.; Aounallah Skhiri, H.; Ben Hamida, A.; Somrani, N.; Ayachi, M.; Achour, N.; Hsairi, M.
E-mail:hadi_cherifa@yahoo.fr
National Institute of Public Health
Keywords: Emergency Service, Hospital-statistics and numerical data; Cross-Sectional Studies; Questionnaires
Abstract: Tunisia, similar to many countries, has a problem of overcrowding of the emergency departments [ED]. This study aimed to analyse the reasons for using EDs, and to describe the seriousness of the attendees’ condition and their itinerary before their arrival at ED. This cross-sectional study in 2009 was conducted in ED of 4 hospitals in GreaterTunis and targeted 1058 patients of both sexes, aged >/= 18 years, with stratification according to time of day
of presentation to ED [morning, afternoon and evening]. Information was recorded on the sociodemographic characteristics of the study participants, reasons for choosing ED, time of and reason for consultation, diagnosis and severity of illness. Over half the patients [52.5%] were male and the mean age was 46.0 [SD 18.1] years. The main reasons for choosing the ED were: speed [54.0%] and ease of access [47.7%] of ER and occurrence of an acute episode [26.4%]. Patients with serious illness accounted for only 6.3% of those interviewed. Implementation of good practices and better coordination between public and private services and the ED are needed to reduce unnecessary visits to ED.

**Enamel Microabrasion**

**Comparative evaluation of tooth enamel abrasion induced by different toothpastes.**

Yaghini, J.; Mogharehabed, A.; Kaveh, M.; Mousazadeh, H.; Madani, M.

Isfahan University of Medical Sciences - Dental School - Department of Periodontics

*Journal of Dental School - Shahid Beheshti University of Medical Sciences* 2012; 29 (4): 274-282 (31 ref.)

**Keywords:** Dental Enamel; Toothpastes; Tooth Abrasion

**Abstract:** Tooth brushing along with a toothpaste is the most frequent and important method in managing a healthy oral hygiene. However, using such products also has its side-effects and shortcomings. Considering the large range of toothpastes available and the insufficiency of proper researches in this area in Iran, this study was designed to evaluate the abrasiveness of a toothpaste for sensitive teeth and a whitening one with two similar Iranian brands. This was an in vitro experimental study. Four groups of enamel samples consisting of each 6 specimens were prepared and embedded in acrylic blocks. The initial surface profile for each specimen was calculated using a profilometer. The samples undertook the wear phase in a V8 Cross Brushing machine using toothbrushes and a toothpaste solution. The samples were then dried and the surface profile was again calculated. The variation of the first and second profilometer calculations demonstrate the amount of wear for each specimen. Data was analyzed using the SPSS program by means of One way ANOVA and Repeated Measure ANOVA tests. The amount of wear recorded for the 4 experimental groups was significantly different [p=0.039]. However, the two by two comparison tests showed that the Iranian brands did not appear to have a significant difference with their foreign counterparts [p>0.05]. The only difference was apparent between the two Iranian brand groups. According to the present study, it seems that there is no significant difference in the abrasive properties of the Iranian and foreign made toothpastes. However, similar researches considering different effects of toothpastes and especially in more clinical conditions and by utilizing different measurement methods appears to be necessary in Iran.

**Endometrium pathology**

**Assessment of rat endometrial pinopodes in normal cycles and following HCG ovarian hyperstimulation with or without progesterone supplementation: scanning electron microscopic study.**

Salama, Nagla M.; Abdel Fattah, Lamiaa I.; El Deeb, Dalia F.

E-mail:naglaassalama@hotmail.com

Cairo University - Faculty of Medicine - Department of Histology

*Egyptian Journal of Histology [The]* 2012; 35 (1): 4-12 (30 ref.)

**Keywords:** Ovarian Hyperstimulation Syndrome-pathology; Progesterone-therapeutic use; Embryo Transfer; Endometrium-ultrastructure; Microscopy, Electron, Scanning; Rats; Female

**Abstract:** Pinopodes, mushroom-like projections, arise from the endometrial surface at or just before the time of implantation. They have been proposed as a method of identifying endometrial receptivity for transferred embryo in programs of IVF. The present work was planned to assess the expression of pinopodes in rat endometrium in normal cycles and following ovarian hyperstimulation with or without progesterone supplementation as a trial to estimate the optimal date for successful embryo transfer in IVF programs. Forty-five adult female albino rats were divided equally into three groups. In the control group, ovulation was induced by mechanical vagino-cervical stimulation. Group II was subjected to ovarian hyperstimulation using human chorionic gonadotrophin [HCG] 350 IU/kg injected intraperitoneally [two injections 48h apart and vagino-cervical stimulation was performed on the evening of administration of the second injection. Group III was treated in the same way as group II, followed by a daily subcutaneous injection of progesterone 35mg/kg. All rats were sacrificed 3, and 5 days after vagino-cervical stimulation. The middle third of the right uterine horn were processes for scanning electron microscope examination. The mean number of pinopodes was statistically analyzed. In control rats, pinopodes started to appear on day 4 and significantly increased in number on day 5. In the HCG-ovarian hyperstimulated group, there was an early appearance of pinopodes on day 3, which increased in number on day 4 and regressed on day 5. With progesterone supplementation, there was an obvious increase in the number of pinopodes especially on day 4. It could be concluded that ovarian hyperstimulation using HCG may cause early expression of pinopodes and premature formation of an implantation window. Also, progesterone supplementation could enhance endometrial receptivity. This should be taken into consideration in IVF programs to synchronize embryo and endometrial development, which could improve pregnancy rates.
Abstract: Today, Economic and environmental performance are tightly closed to each other. The natural environment plays an important role in supporting economic activity, directly, by providing resources and raw materials such as water, timber and minerals that are required as inputs for the production of goods and services; and indirectly, through services provided by ecosystems including carbon sequestration, water purification, managing flood risks, and nutrient cycling. Natural resources are, therefore, vital for securing economic growth and development, not just today but for future generations. Economic growth has also provided developing countries the opportunity to improve the quality of life of their citizens, and to balance the environmental challenges they face. Investment, aid and demand for imports from advanced economies all have an important role in supporting economic growth and development through the world. The main objective of this paper is to highlight the role of the natural environment in supporting and contributing to economic growth, and the role of environmental policy in achieving improved environmental outcomes in ways that are compatible with the long-term health and stability of the economy. It does not try to answer the question of what the sustainable level of economic growth might be, but instead reviews the evidence and sets out an approach for securing environmentally sustainable economic growth for current and future generations.

Knowledge analytical approach on promoting environmental management.
Lahijanian, A.
Islamic Azad University[IAU] - Graduate School of the Environment and Energy - Department of Environmental Management
International Journal of Environmental Research 2012; 6 (1): 353-360 (33 ref.)
Keywords: Knowledge; Knowledge Management; Organizations; Questionnaires
Abstract: Aim of the present research was to design a proper model for management of knowledge in environmental organizations of country. In study of the model, suitability of the proposed model was researched by asking views of directors, deputies, managers of groups and scientific board members of environmental organizations of country. For this purpose, with review of research literature, insight process, independent technology process and alteration technology process, knowledge solution process, knowledge spiral process and knowledge management conceptual process, principal elements of model and components were determined by examination of models and theories of joint process in the learner organizations. Later, the model was proposed using questionnaire. Reliability of questionnaire was calculated 94.75% and 93.73% by means of re-testing method and Crown Bach's method, respectively. Admissibility of questionnaire was also determined by admissibility of content thereof and primary implementation [asking views of 30 of directors, deputies, managers of groups in environmental organizations of country]. Determination of admissibility, durability and amendments were followed by implementation of the proposed model in random selected statistical sample consisting of 360 individuals from 4 groups of directors, deputies, managers of groups and scientific board members in environmental organizations of country. The inputs were collected by means of descriptive statistics [frequency distribution tables and diagrams], conclusive statistics methods including Pearson correlation co-efficient matrix for the relation between components. Then, Anova [analysis of variance] the four groups under study, extraction and operative analysis and principal component analysis were performed using the SPSS software and the proposed model, with scale of 6.15 out of 7, was confirmed. Principal finding of present research was introduction of a proper model for knowledge management to be used in environmental organizations of country that consists of philosophy and aims, theoretical fundaments, and model implementation steps.

Structural equation model for environmentally conscious purchasing behavior.
Arslan, T.; Yilmaz, V.; Aksoy, H.K.
Eskisehir Osmangazi University - Department of Statistics
International Journal of Environmental Research 2012; 6 (1): 323-334 (40 ref.)
Keywords: Attitude; Behavior; Awareness; Students; Universities
Abstract: In this study, the effect of environmental concern, attitudes and behaviors of the university students on the environmentally conscious purchasing behavior was investigated with the help of Structural Equation Model [SEM]. SEM is an effective data analysis tool that expresses the complicated causative relations between the latent variables. In this study, we collected the data from 400 university students by means of a survey. The results of this research showed that environmental attitudes, environmental behavior and green product awareness have a positive effect on environmentally conscious purchasing behavior. The developed model showed that, environmental concern explains 48% of the variation in the environmental attitudes and 28% of the product recovery awareness; environmental attitudes and product recovery awareness explain 55% of green product awareness; environmental attitudes explains 44% of the variation in the environmental behavior; environmental attitudes, green product awareness and environmental behavior explain 74% of the variation in the environmentally conscious purchasing behavior.
Epilepsy

epidemiology

Epidemiology of intractable epilepsy in Al-Kharga district; new valley; [Egypt].
Farghaly, Wafaa M.A.; El Tallawy, Hamdy; Rageh, Tarek A.; Mohamed, Eman M.; Metwally, Nabil A.; Shehata, Ghaydaa A.; Abo Elfetoh, Noha M.; Abdel Rasol, Reda; Abdel Hamed, Mohamed A.
Assiut University - Department of Neurology and Psychiatry


Keywords: Disease Resistance; Prevalence; Causality; Epilepsy-etiolog

Abstract: Drug-resistant epilepsy, despite the advancement in epilepsy treatment, continues to be a major clinical problem with devastating consequences. Identification of the prevalence of intractable epilepsy, as well as causes of intractability. Total population of 62,583 persons were screened through door to door survey, including every door. All suspected cases of epilepsy were subjected to complete history taking, meticulous examination, conventional EEG, and Stanford-Binnet intelligence scale. Monitoring of serum level of AEDs was done for those with possible intractable seizures to ensure adequate dose compliance. Patients have an average seizure frequency of one or more per month during the last 6 months despite optimal and suitable use of AED were considered truly intractable Ohtsuka et al [2001]. They were subjected to video monitoring EEG, and brain MRI. In this study, 437 epileptic patients were identified with a lifetime prevalence rate of epilepsy 6.98/1000, out of whom, 11.4% [n = 50/134] of patients were intractable with a prevalence rate 0.8/1000. Possible etiology of intractable epilepsy was determined among 46% of cases [Remote symptomatic], while 58% of cases had unknown causes [idiopathic and cryptogenic]. Symptomatic and cryptogenic causes had significantly lower IQ than idiopathic group Perinatal complications should be better avoided and/or managed to avoid a large sector of intractable epilepsy.

Ergolines

toxicity

Does green tea have an ameliorative effect against cabergoline-induced cardiotoxicity in adult male albino rats? A histological and biochemical study.
Ibrahim, Nermien A.; Zidan, Rania A.; Karam, Rehab A.
Zagazig University - Faculty of Medicine - Department of Forensic Medicine and Clinical Technology


Keywords: Myocardium-pathology; Histology; Antineoplastic Agents-pharmacology; Protective Agents; Camellia sinensis; Plant Extracts-therapeutic use; Treatment Outcome; Rats; Male

Abstract: Cabergoline is an ergot alkaloid derivative with dopamine agonist activity. The use of cabergoline was associated with significantly increased frequency of heart disease. Green tea has been found to prevent many cardiovascular diseases. To determine whether green tea could have an ameliorative effect against myocardial and valvular injury induced by cabergoline toxicity in rats or not. Thirty-six adult albino rats were used in this study. Medications were administered 6 days/week for 3 months by an oral gavage. The animals were divided into three groups; group 1 served as a control. Group II was given 0.5mg/kg cabergoline dissolved in corn oil. In group III, the rats received green tea 1000mg/kg, dissolved in 3ml distilled water along with cabergoline. Venous blood samples were collected. Cardiac enzymes including serum cardiac troponin I, lactate dehydrogenase, and creatine kinase-MB were estimated. All rats were sacrificed and their hearts were dissected out and processed for light and electron microscopic examination. Cabergoline administration caused significant increases in the studied cardiac enzymes compared with the control groups. Histologically, evident myocardial lesions were revealed in group II in the form of widely separated and split muscle fibers. Ultrastructurally, the sarcoplasm contained irregular nuclei and bizarre-shaped mitochondria of different sizes. Localized areas of edema, corrugated sarcolemma, and interstitial collagen fibers were observed particularly in areas of myocardial damage. Alterations in the intercalated disc were also revealed. The mitral valve leaflets showed shortening and thickening of their leaflets. Coadministration of green tea with cabergoline caused a significant decrease in the mean troponin-I serum level compared with the cabergoline-treated group, whereas lactate dehydrogenase and creatine kinase-MB levels did not show any significant changes. Structurally, improvements in most myocardial and mitral lesions in the treated group were detected, except for some bizarre-shaped mitochondria and interruption of the intercalated discs. Cabergoline has a deleterious effect on the histological structure of cardiac muscle and valves. Green tea could ameliorate some of these effects.
Esophageal Neoplasms

Modeling the risk of esophageal squamous cell carcinoma and squamous dysplasia in a high risk area in Iran.
Etemadi, Arash; Abnet, Christian C.; Golozar, Asieh; Malekzadeh, Reza; Dawsey, Sanford M.
E-mail: arash.etemadi@nih.gov
Tehran University of Medical Sciences - Shariati Hospital - Digestive Disease Research Center
Archives of Iranian Medicine 2012; 15 (1): 18-21 (24 ref.)

Keywords: Carcinoma, Squamous Cell; Logistic Models; Risk

Abstract: Identifying people at higher risk of having squamous dysplasia, the precursor lesion for esophageal squamous cell carcinoma [ESCC], would allow targeted endoscopic screening. We used multivariate logistic regression models to predict ESCC and dysplasia as outcomes. The ESCC model was based on data from the Golestan Case-Control Study [total n = 871; cases = 300], and the dysplasia model was based on data from a cohort of subjects from a gastroenterology clinic in Northeast Iran [total n = 724; cases = 26]. In each of these analyses, we fit a model including all risk factors known in this region to be associated with ESCC. Individual risks were calculated using the linear combination of estimated regression coefficients and individual-specific values for covariates. We used cross-validation to determine the area under the curve [AUC] and to find the optimal cut points for each of the models. The model had an area under the curve of 0.77 [95% CI: 0.74-0.80] to predict ESCC with 74% sensitivity and 70.4% specificity for the optimum cut point. The area under the curve was 0.71 [95% CI: 0.64-0.79] for dysplasia diagnosis, and the classification table optimized at 61.5% sensitivity and 69.5% specificity. In this population, the positive and negative predictive values for diagnosis of dysplasia were 6.8% and 97.8%, respectively. Our models were able to discriminate between ESCC cases and controls in about 77%, and between individuals with and without squamous dysplasia in about 70% of the cases. Using risk factors to predict individual risk of ESCC or squamous dysplasia still has limited application in clinical practice, but such models may be suitable for selecting high risk individuals in research studies, or increasing the pretest probability for other screening strategies.

Evidence-Based Medicine

Evidence based surgery: how difficult is the implication in routine practice?
Maheshwari, Gaurav; Maheshwari, Namrata
E-mail: drgauravmaheshwari@gmail.com
Manipal University - Kasturba Medical College - Department of Surgery
Oman Medical Journal 2012; 27 (1): 72-74 (16 ref.)

Keywords: General Surgery; Evidence-Based Practice

Abstract: Surgery as a discipline has perhaps been slower than other specialties to embrace evidence based principles. Today, surgeons all over Asia are prepared to challenge the dogma of yesterday. Surgical science which rests on a strong foundation of laboratory and clinical research can now be broadened to include the armamentarium of evidence based practice to advance surgical knowledge. The sheer volume of easily accessed information creates a new challenge. This article discusses keeping up with new information and finding the best available answers to specific questions amidst all the other information.

Extraembryonic Membranes

Prophylaxis of retained fetal membranes in dairy cattle.
Nosier, M.B.; Metwelly, K.K.; Bakr, M.M.
Alexandria University - Faculty of Veterinary Medicine - Department of Theriogenology

Keywords: Cattle; Placenta, Retained-prevention and control; Ergonovine-therapeutic use; Reproductive Health

Abstract: This study aimed to evaluate the effect of usage some drugs to avoid retention of placenta [fetal membranes] in dairy cattle. This study was carried out in private dairy farm. The age of cows ranged between 2-5 years. The animals were divided randomly into 2 groups. First group [20 cows] to study the effect of vitamin E and Selenium injection for [re-partum prophylaxis of RPM. Second group [30 cows] to study the effect of Oxytocin or Methyl ergometrine injection for post-partum prophylaxis of RPM. The results indicated that using vitamin E and Selenium injection pre-partum reduced the incidence percentage of retention of fetal membranes also the usage of Methergin or Oxytocin injection immediately post-partum reduced the incidence of retention of fetal membranes and improved the reproductive performance in dairy cattle.
Family Planning Services

The value of family planning for improving maternal health in rural Afghanistan: the example of Kandahar.

Carvalho, Natalie; Goldie, Sue J.; Salehi, Ahmad Shah

Harvard School of Public Health - Center for Health Decision Science


Keywords: Maternal Welfare; Maternal-Child Health Centers; Maternal Mortality; Contraception; Cost-Benefit Analysis; Rural Population; Family Planning Policy

Abstract: Women in Afghanistan face some of the highest risks of maternal mortality and morbidity globally. The situation in rural parts of the country is particularly troubling, with women and girls residing in these areas suffering from much higher rates of death due to pregnancy-and delivery-related complications compared to urban areas. With a goal of increasing the contraceptive prevalence rate, particularly to assist in birth spacing, the Basic Package of Health Services seeks to provide access to family planning services equitably, regardless of ability to pay and with a special focus on rural and hard-to-reach populations. Using Maywand district in Kandahar province as a representative example of rural areas, we evaluate the benefits and assess the value [i.e., cost-effectiveness] of family planning for birth spacing and limiting, and to prevent pregnancy-related deaths. We synthesize the best available data to adapt a previously validated maternal mortality model to the situation of maternal health in Kandahar. Outcomes include total fertility rate [TFR], pregnancy-related complications, unsafe abortions, pregnancy-related deaths, maternal mortality ratio [MMR], lifetime risk of maternal death, and proportionate mortality ratio [proportion of deaths among women 15-49 years that are pregnancy-related]. We also estimate the life expectancy gains, years of life saved [YLS], and lifetime costs in order to assess the cost-effectiveness of family planning interventions. We compute the reduction in total fertility rate and pregnancy-related deaths and estimate the economic impact and cost-effectiveness of family planning interventions. Model-generated estimates of maternal mortality indicators, total fertility rate, and distribution of maternal death by cause closely approximated empiric data. Increasing family planning coverage from a baseline of 8% in rural Kandahar to 30% and 50%, would be expected to reduce the total fertility rate from 6.6 to 5.1 and 3.9, respectively, reduce maternal deaths by 21% and 40%, respectively, and reduce the proportionate mortality ratio from 45% to 38% and 31%, respectively. Incremental cost-effectiveness ratios of family planning strategies were below $145 per YLS, representing just a fraction of the per capita gross domestic product [GDP]. Extrapolating our results in rural Kandahar to the country as a whole, these strategies would prevent between 166,000 and 210,000 maternal deaths for a very modest investment and in the context of the current infrastructure. Of importance, further gains will require improvements in skilled birth attendants, care during labor and delivery, and access to emergency obstetrical care. Increasing access to family planning will improve the health of Afghan women, save lives and provide high value for the resources invested. Through the efficient use of public health resources, enhanced family planning efforts will improve the public health sector capacity to make necessary investments in skilled attendants, care during labor and delivery, and emergency obstetric care. These results provide strong support for the high value of family planning investments included in the Basic Package of Health Services.


Simbar, M.

E-mail:msimbar@sbmu.ac.ir

Shahid Beheshti Medical Science University - Department of Reproductive Health


Keywords: Health Promotion; Health Priorities; Family Planning Services-manpower; Family Planning Services-methods

Abstract: Family planning programmes initiated in the Islamic Republic of Iran from 1966 met with limited success. Following the 1966 census family planning was considered a priority and was supported by the country's leaders. Appropriate strategies based on the principles of health promotion led to an increase in the contraceptive prevalence rate among married women from 49.0% in 1989 to 73.8% in 2006. This paper reviews the family planning programmes in the Islamic Republic of Iran and their achievements during the last 4 decades and discusses the principles of health promotion and theories of behaviour change which may explain these achievements. Successful strategies included: creation of a supportive environment, reorientation of family planning services, expanding of coverage of family planning services, training skilled personnel, providing free contraceptives as well as vasectomy and tubectomy services, involvement of volunteers and nongovernmental organizations and promotion of male participation.
**Fatty Liver**

**etiology**

Role of hepatic stellate cells in fibrogenesis in a model of pomegranate-treated fatty liver induced by junk food in male albino rats immunohistochemical and electron microscopic study.

Soliman, Hala Mahmoud; Selim, Assmaa O.

Zagazig University - Faculty of Medicine - Department of Histology and Cell Biology


**Keywords:** Dietary Fats; Punicaceae-chemistry; Plant Extracts-therapeutic use; Hepatic Stellate Cells; Tumor Necrosis Factor-alpha-blood; Liver-pathology; Immunohistochemistry; Liver-ultrastructure; Microscopy, Electron; Rats; Male

**Abstract:** Hepatic fibrogenesis is a common result of liver injury. It is believed to be a critical factor that leads to hepatic failure. A critical event in fibrogenesis is activation of hepatic stellate cells (HSCs). The aim of this investigation was to study the role of HSCs in fibrogenesis in a model of pomegranate juice (PJ)-treated fatty liver induced by junk food using immunohistochemical and electron microscopic study. Thirty young male albino rats were divided into control [I] and experimental [II] groups. Group II was further divided into two subgroups: II-a [junk food] and II-b [pomegranate juice + junk food]. After 8 weeks, blood samples were collected for detection of leptin and tumour necrosis factor alpha TNF-alpha. Then half of the liver samples were processed for light microscopic examination, whereas the other half were prepared for electron microscopic examination. Paraffin sections were stained using H and E, glial fibrillary acid protein, alpha-smooth muscle actin, TNF- alpha, and transforming growth factor -beta-1 TGF-beta1. Morphometric and statistical studies for assessing immunoexpression were carried out. HSC's markers glial fibrilar acid protein and alpha-smooth muscle actin and cytokines TNF- alpha and TGF- beta1 in subgroup II-a showed strong positive immunoexpression. Electron microscopic study showed activated - HSCs containing granules and collagen fibrils. Proliferative and myofibroblast -HSCs were also seen in the same group. Subgroup II-b showed a nonsignificant increase in immunoexpression of HSC's markers and cytokines. However, only activated -HSCs were seen. Immunoexpression of HSC markers and cytokines may be used as an indicator for liver fibrosis. Presence of different types of HSCs in fatty liver explains their role in fibrosis. Further experimental and clinical studies directed toward inhibiting the activity of HSC may delay or prevent liver fibrosis occurs in many pathological conditions.

**Feces**

**parasitology**

Investigation on some internal parasites affecting stray dogs and cats.

Elbakery, Karema M.

Animal Health Research Institute, Alexandria Branch - Parasitological Department


**Keywords:** Dogs; Cats; Trematode Infections; Echinococcosis; Nematode Infections

**Abstract:** In the present study 33 stray dogs and 35 stray cats from various localities of Alexandria Governorate. These are subjected for parasitological examination. Parasitological investigation revealed that nine species of parasites were identified. The infestation of Trematodes were Hetrophyes hetrophyes [27.2% and 11.4%] in dogs and cats respectively. And Ascocotyle sp[3.03%] in dogs. Cestodes were Dipylidium caninum [60.6% and 25.7%] in dogs and cats respectively, Echinococcus spp [24.2% and 8.6%] in dogs and cats respectively. Echino casinus perfoliates [9.99%] in dogs Nematodes were Toxocaracanis [15.1%] in gods, Toxocaracati [14.2%] in cats, Ancylostoma caninum [21.2% and 2.8%] in dogs and cats respectively and Protozoawas: Cryptosporidium oocyst [22.8%] in cats. The result of the present investigation emphasis on the potential risk of dogs and cats in the biological pollution of the environment and their role in transmission of serious zoonotic pathogens and the importance of the application of dog and cats control measures and excluding them from public places.

**Fetal Death**

**etiology**

Predictors of fetal demise after trauma in pregnant Saudi Arabian women.

Al Mulhim, A.S.; Balaha, M.H.; Tudiver, F.

King Faisal University - Department of Surgery

Keywords: Accidents, Traffic-statistics and numerical data; Retrospective Studies; Case-Control Studies; Pregnant Women; Wounds and Injuries; Pregnancy Outcome

Abstract: In Saudi Arabia, road traffic crashes are becoming a serious public health problem and there are no recent, large-scale, published reports discussing maternal and fetal injuries. We aimed to explore the predictors of fetal death-abortion after maternal trauma. A retrospective case-control study was performed exploring cases of maternal trauma. The study group included 118 women with pregnancy loss while 308 women without loss represented the control group. All data were compared using univariate analysis followed by multivariate regression analysis. Only 3 predictors were associated with significant effect on pregnancy loss after trauma [P < 0.05]: second trimester of pregnancy [OR 2.77, 95% CI: 1.66-4.63], placental abruption [OR 3.69, 95% CI: 2.01-6.79] and severe injury score [OR 6.78, 95% CI: 4.04-11.37].

Fibrosarcoma

diagnosis

Intraosseous fibrosarcoma of maxilla in an HIV patient.
Kotrashetti, Vijayalakshmi S.; Kale, Alka D.; Hallikeremath, Seema R.; Mane, Deepa R.; Angadi, Punnya V.; Bhatt, Pooja
E-mail: drvijul8@yahoo.com
KLE VK Institute of Dental Sciences - Department of Oral Pathology and Microbiology
Archives of Iranian Medicine 2012; 15 (1): 59-62 (22 ref.)
Keywords: Maxilla; Maxillary Neoplasms; HIV; HIV Infections; Acquired Immunodeficiency Syndrome
Abstract: Fibrosarcoma is a malignant mesenchymal neoplasm of fibroblasts that rarely affects the oral cavity and can cause local recurrences or metastasis. Fibrosarcomas account for 15% of all soft tissue sarcomas, which represent only 1% of all malignant tumors of the head and neck region. The clinical behavior of the fibrosarcoma is characterized by a high local recurrence rate, and low incidence of loco regional lymph node and/or distant hematogenous metastasis. The etiology for fibrosarcoma has no definite cause but is thought to occur from preexisting lesions or in previously irradiated areas of bone lesions. Immunosuppression associated with HIV infection and acquired immune deficiency syndrome [AIDS] has been consistently linked to various cancers, including Kaposi's sarcoma, non-Hodgkin's lymphoma, and invasive cervical cancer. Rare neoplasms like Hodgkin's disease, anal cancer, leukemia, basal cell carcinoma, and squamous cell carcinoma have also been demonstrated. This paper presents one such a rare incidence of an intraosseous fibrosarcoma occurring in an HIV-positive patient.

Flatfishes

Bioaccumulation of metals in tissues of Solea vulgaris from the outer coast and Ria de Vigo, Ne atlantic [Spain].
Mhadhbi, L.; Palanca, A.; Charred, T.; Boumaiza, M.
E-mail: lazhar@uvigo.es
Vigo University - ECIMAT [Estacion de ciencias Marinas de Toralla]
Keywords: Metals, Heavy; Metals; Cadmium; Lead; Mercury; Copper; Zinc; Arsenic; Selenium; Manganese; Liver; Kidney
Abstract: Ria and coastal zone are, in particular, vulnerable to heavy metals pollution. Concentrations of 10 metals in liver, muscle and kidney of the sole [Solea vulgaris] from Ria of Vigo and its coastal zone [Spain] were measured from April 2006 to February 2007 and the relationships between fish size age and metal concentrations in the tissues was investigated. Concentrations of the heavy metals in examined fish ranged as follows: Cd [0.01 - 0.7], Pb [0.1 - 2.5], Hg [0.01 - 0.7], Cu [3.3- 46.7], Zn [15- 274], As [3-151], Se [0.9- 18.2], Mn [0.9- 9.76] microg/g dryweight. Kidney and liver showed the highest levels of Cd, Cu, Pb and Zn. The concentration of metals was significantly affected by the sampling site and fish tissues. Our results indicated that all heavy metals were found the highest in muscle tissue. A comparison of metals concentration in fishes from both sites showed higher bioaccumulation in the examplars captured in Ria. This indicates that there is a trend of higher metal pollution level in the estuarine environment. Although, metals levels in the tissues in the area do not exceed contamination levels, measures are recommended for lowering heavy metals inputs into Ria of Vigo. Heavy metals in the edible parts of the investigated fish were in the permissible safety levels for human uses.
Flutamide toxicity

Does eulexin exert toxic effects on the prostate of adult male albino rats? Histological and immunohistochemical study.

Zaki, Mohamed M.; Ibrahem, Sali O.; Shenouda, Helpies D.; Morsy, Sherifa A. El Salam; Faruk, Eman M.
Benha University - Faculty of Medicine - Department of Histology and Cell Biology


Keywords: Prostate-pathology; Histology; Immunohistochemistry-methods; Rats; Male

Abstract: Eulexin [flutamide] is a pure nonsteroidal antiandrogen drug widely used in the treatment of prostatic cancer, hirsutism, and acne vulgaris. The aim of this work is to determine the histological and immunohistochemical effects of eleuxin on the prostate of adult albino rats. Thirty adult male albino rats were used and divided into a control group of six rats and an experimental group of 24 rats. This group was further subdivided into three subgroups [eight rats each]. Each rat of the experimental subgroups received a daily dose of 67.5mg/kg body weight of flutamide by the oral route. Animals were weighed and sacrificed after 2, 4 and 6 weeks. The prostate specimens were subjected to H and E, PAS reaction, and immunohistochemistry for androgen receptor [AR] and estrogen receptor [ER] localization. Statistical analysis of body weight and area % of the immunoreactivity of ARs and ERs was carried out. Eleuxin induced a significant reduction in the body weight of the rats of the experimental subgroups. Moreover, the experimental groups showed a significant decrease in the immunoreactivity of ARs and an increase in the immunoreactivity of the ERs. Early changes in acini were represented by folding of some areas of acini, whereas other acini were rudimentary after 2 weeks of treatment. Cystic dilatation of acini with a decrease in epithelial height was observed in acini treated for 4 weeks. Highly dilated and irregular acini with no stroma in between were observed after 6 weeks of treatment and there was an apparent acini decrease in the cell number with dilated and congested blood vessels. There was a decreased PAS reaction in the apical parts of epithelial cells with an irregular apparent thick basement membrane especially in the folded area. Eleuxin exerted many histological effects on the prostate of adult albino rats. Further study is required to determine the effect of flutamide on the function of the male reproductive system, especially fertility.

General Surgery

Under representation of women in surgery in Nigeria: by choice or by design?

Makama, Jerry G.; Garba, Ekundayo S.; Ameh, Emmanuel A.
E-mail:jerlizabeth@yahoo.com
Ahmadu Bello University Teaching Hospital - Department of Surgery

Oman Medical Journal 2012; 27 (1): 66-69 (20 ref.)

Keywords: Women; Cross-Sectional Studies; Consultants; Internship and Residency; Questionnaires

Abstract: Female Doctors' lack of interest in surgical careers has raised much concern in recent times. An understanding of the factors responsible for this lack of interest and evolving attitude is needed. The aim of this report was to determine the local factors that may be responsible and the most likely surgical specialty female doctors would prefer. This is a cross sectional study involving all female [consultant and resident] doctors in one teaching hospital. Information was obtained using a structured questionnaire which determined what formed the respondent's choice of present specialty. It also included the likely local factors that might have some bearings on the interest of female doctors in surgery. Data obtained were analyzed using SPSS version 11.5. There were a total of 105 respondents. The age range was 26 - 63 years [mean: 26.88±2.19]. The factors that were considered as deterrents to female doctor choice of surgical career were: a) the impact on their time for family and other social engagements 29 [27.6%]; b) heavy work load 22 [21%]; c) involvement of a lot of physical effort 18 [17.1%]; d) lack of women in surgery 9 [8.6%]; and e) lack of role models 4 [3.8%]. Twenty three [21.9%] considered all the above factors. The subspecialty preferred by most female was plastic and reconstructive surgery, followed by Pediatric surgery. The rigorous requirements of the training and practice of surgery deterred female doctors' interest in choosing and sustaining a surgical career. To maintain surgery as a premier career choice, female doctors should find surgery to be professionally and personally rewarding.
**Glucocorticoids**

**immunology**

Effect of glucocorticoids on surface IL-10 receptors and intracellular IL-10 in mouse splenocytes, thymocytes, monocytes, and dendritic cells: immunofluorescence, confocal microscopy, and electrophoresis study.

Ahmed, Mohamed Abd Elrahman  
E-mail: mekwawy906@hotmail.com  
Ain Shams University - Faculty of Medicine - Department of Histology  
*Egyptian Journal of Histology [The]* 2012; 35 (2): 236-248 (51 ref.)

**Keywords:** Receptors, Interleukin-10-blood; Thymocytes; Monocytes; Dendritic Cells; Immunohistochemistry-methods; Blotting, Western-methods; Luminescence-diagnostic use; Mice; Male

**Abstract:** Glucocorticoids are capable of stimulating the secretion of interleukin -10 [IL-10] by leukocytes. The probable role of glucocorticoids in the susceptibility of immune cells to IL-10 mediated actions has not yet been studied. In this study, we examine the expression of IL-10 and IL-10 receptors [IL-10R] in mouse splenocytes, thymocytes, monocytes, and dendritic cells. In addition, we determined the effects of the glucocorticoid [methylprednisolone] on IL-10 secretion and IL-10R expression in the previous immune cells. Forty-eight male mice with the C57BL/6 genetic background were used. The animals were 10-12 weeks of age and were divided equally into two groups. The animals in group I were provided with a balanced standard diet and water ad libitum. The animals in group II were provided with a balanced standard diet and methylprednisolone [0.5mg/kg/day] in the drinking water daily for 7 days. The mice in groups I and II were sacrificed after 7 days and the spleen and thymus were removed to isolate the splenocytes and thymocytes. The blood was also aspirated to isolate monocytes. Group III included mice with the mouse dendritic cell line [JAWS II]. Cells of the mice in this group were divided into two subgroups. Group IIIa included the dendritic cells cultured in Iscove's modified Dulbecco's medium and group IIIb included the dendritic cells cultured in Iscove's modified Dulbecco's medium supplemented with methylprednisolone [2micro g/ml] for 6h. All the previous cells were processed for immunohistochemistry, western blotting, immunoassay analysis, and electrophoresis. All the cells examined showed an intense fluorescent surface expression of IL-10R as detected by the immunofluorescence technique. On using methylprednisolone, there were rare and faint expressions of IL-10R. The intracellular IL-10 molecules were rare in the dendritic cells but after treatment with methylprednisolone, the IL-10 molecules were numerous and intense. Western blotting and electrophoresis techniques showed intense precipitation of IL-10 at 35 kDa and faint precipitation of IL-10R at 110kDa in all the cells examined after glucocorticoid treatment. There was also a highly significant [P<0.001] increase in the level of IL-10 in all the cells examined after using methylprednisolone as detected by immunoassay. Our findings could contribute toward understanding the immunomodulating mechanism of the action of glucocorticoids, which may result in greater therapeutic benefit in some diseases by enhancing the synthesis of the anti-inflammatory cytokine IL-10 and decreasing the expression of IL-10R in some immune cells.

**Glucosephosphate Dehydrogenase Deficiency**

**epidemiology**

Glucose-6-phosphate dehydrogenase deficiency among male blood donors in Sana'a City, Yemen.

Al Nood, Hafiz A.; Bazara, Fakiha A.; Al Absi, Rashad; Al Habori, Molham  
E-mail: hafizalnood@yahoo.co.uk  
Sana'a University - Faculty of Medicine and Health Sciences - Department of Hematology  
*Oman Medical Journal* 2012; 27 (1): 46-49 (14 ref.)

**Keywords:** Blood Donors; Prevalence; Cross-Sectional Studies; Spectrophotometry; Electrophoresis; Phenotype

**Abstract:** To determine the prevalence of Glucose-6-phosphate dehydrogenase [G-6-PD] deficiency among Yemeni people from different regions of the country living in the capital city, Sana’a, giving an indication of its overall prevalence in Yemen. A cross-sectional study was conducted among Yemeni male blood donors attending the Department of Blood Bank at the National Centre of the Public Health Laboratories in the capital city, Sana’a, Yemen. Fluorescent spot method was used for screening, spectrophotometric estimation of G-6-PD activity and separation by electrophoresis was done to determine the G-6-PD phenotype. Of the total 508 male blood donors recruited into the study, 36 were G-6-PD deficient, giving a likely G-6-PD deficiency prevalence of 7.1%. None of these deficient donors had history of anemia or jaundice. Thirty-five of these deficient cases [97.2%] showed severe G-6-PD deficiency class II [<10% of normal activity], and their phenotyping presumptively revealed a G-6-PD-Mediterranean variant. The results showed a significant presence of G-6-PD deficiency with predominance of a severe G-6-PD deficiency type in these blood donors in Sana’a City, which could represent an important health problem through occurrence of hemolytic anemia under oxidative stress. A larger sample size is needed to determine the overall prevalence of G-6-PD deficiency, and should be extended to include DNA analysis to identify its variants in Yemen.
Glutamic Acid

toxicity

Histological and immunohistochemical study on the protective effect of Ginkgo biloba extract against glutamate-induced neurotoxicity in male albino rat retinal cells.

Zaghlool, Somaya S.; Hanafy, Laila K.; Afifi, Noha M.; Ibrahim, Ehab R.
Cairo University - Faculty of Medicine - Department of Histology

Keywords: Retina-pathology; Histology; Immunohistochemistry; Protective Agents; Ginkgo biloba; Plant Extracts-therapeutic use; Rats; Male

Abstract: Monosodium glutamate [MSG] has a flavor-enhancing effect; hence, it is added to processed food. It is known for its neurotoxicity. This study was conducted to demonstrate the possible protective effect of the natural antioxidant, Ginkgo biloba extract, against the neurotoxicity of MSG on the retinal cells of male albino rats. Thirty adult male albino rats were used. The animals were divided into the following groups: group I was the control group and group II was subdivided into subgroup IIa, which received MSG injections for 7 days, and subgroup IIb, which received Ginkgo biloba [EGb 761] orally for 7 days and then received MSG injections, in addition to EGb. Retinal sections were stained with H and E stain, toluidine blue stain, and immunohistochemical staining for glial fibrillary acidic protein [GFAP]. Total retinal thickness, thickness of the outer nuclear layer, and the mean area % of GFAP were measured using an image analyzer. MSG caused complete loss of the outer and inner segments of the photoreceptors, a decrease in the thickness of the outer nuclear and plexiform layers, focal cytoplasmic vacuolation in the inner nuclear layer, and complete distortion of the ganglion cell layer. Such abnormalities were, to a large extent, prevented with the use of EGb 761. Statistically significant differences in the total retinal thickness, the thickness of the outer nuclear layer, and mean area % of GAP were found between the groups. MSG exposure was shown to induce deleterious morphological changes on the retina, many of which were prevented with the use of EGb 761. Thus, this natural extract could have further clinical implications in reducing glutamate-induced excitotoxicity in several ophthalmic diseases.

Glycolates

Removal of glycolic acid from aqueous solution using bagasse fly ash.

Soni, A.B.; Keshav, A.; Verma,V.; Suresh, S.
National Institute of Technology [NIT] Raipur - Department of Chemical Engineering
International Journal of Environmental Research 2012; 6 (1): 297-308 (20 ref.)

Keywords: Cellulose; Coal Ash; Adsorption; Kinetics

Abstract: Present study deals with the adsorption of glycolic acid [GA] from aqueous solutions by using bagasse fly ash [BFA]. BFA is a solid waste generated from bagasse fired boilers and can be used as an adsorbent. Batch adsorption studies were carried out to evaluate the effect of various parameters like adsorbent dose, contact time, initial concentration and temperature on the removal of GA from aqueous solutions. For the selected dosage, it was found that the adsorption increases with increase in BFA doses and decreases with increase in acid concentration. The effect of contact time on removal shows that the adsorption of glycolic acid on BFA is very fast. The kinetics of the sorption of GA was well represented by Elovich model, first order, pseudo-second order and Weber and Morris intra-particle diffusion model. The adsorption isotherm analyses were also carried out by using Langmuir and Freundlich isotherm equations. Freundlich equation was found satisfactory to represent the equilibrium data. Thermodynamic studies revealed that the adsorption of GA on BFA is exothermic in nature.

Health

Protecting Pakistan's health during the global economic crisis.

Jooma, R.; Khan, A.; Khan, A.A.
Ministry of Health

Keywords: Delivery of Health Care-economics; Health Priorities; Fund Raising

Abstract: The world is facing an unprecedented global economic crisis, with many countries needing to reconsider their level of health care spending. This paper explores the many consequences of the global economic downturn on Pakistan's health, including reduced government and donor spending and increased poverty with the consequent diversion of funds away from health. Nevertheless, these challenges may provide opportunities not only to mitigate the adverse effects of the economic crisis but also to institute some much-needed reforms that may not receive political support during more affluent times. Our suggestions focus on setting priorities based on the national disease burden, prioritizing prevention interventions, demanding results, curbing corruption, experimenting with innovative funding mechanisms, advocating for increased funding by presenting health spending as an investment rather than an expense.
and by selected recourse to civil society interventions and philanthropy to bridge the gap between available and needed resources.

Health Education

Peer-led versus teacher-led AIDS education for female high-school students in Yazd, Islamic Republic of Iran.
Baghianimoghadam, M.H.; Forghani, H.; Zolghadr, R.; Rahaei, Z.; Khani, P.
E-mail: dr.forghani@gmail.com
Shahid Sadoughi University of Medical Sciences - Faculty of Health
Keywords: Acquired Immunodeficiency Syndrome; Students; Peer Group; Faculty; Questionnaires; Schools; Knowledge
Abstract: Peer-led programmes on AIDS prevention have shown a good level of effectiveness when tested among high-risk populations. This study compared peer-led and teacher-led methods of education about HIV/AIDS among female high-school students in Yazd city, Islamic Republic of Iran. In 2009 students in 3 high schools were trained by their classmates [peer-led], by the research team [teacher-led] or had no education [controls]; 180 students completed a specially designed questionnaire based on the health belief model, before and after the intervention. Post-intervention mean knowledge scores increased 2-fold in the peer-led group, and this was significantly higher than the increase in the teacher-led group scores [1.5-fold]. Control group scores were unchanged. In the peer-led programme all of the components of the model were significantly improved whereas in the teacher-led programme, only perceived severity and perceived barriers scored significantly higher after the intervention.

Health Manpower

Planning and reform of human resources for health in Afghanistan.
Shahir, Ihsanullah; Homayee, Sarwar; Fitzwarryne, Caroline; Hoffiani, Maroof; Sadiq, M.
E-mail: Dr.Shahir2006@gmail.com
Ministry of Public Health - Acting General Director of Human Resources
Keywords: Human Development; Health Priorities; Health Planning
Abstract: Afghanistan is ranked 155 out of 169 countries on the human development index [HDI], a composite measure of three basic dimensions of human development, one of which is health. While some progress has been made, many of the key indicators of health status have not improved in the last decade. Many factors contribute to the lack of progress, but central to improving the situation is strengthening the national health system, particularly in the arena of human resources. The Ministry of Public Health [MoPH] has prioritized the issue of human resources, viewing this as a fundamental necessity to the provision of healthcare. To bring together a number of distinct planning efforts, the General Directorate of Human Resources [GDHR], MoPH organized a process to develop a comprehensive plan. In this paper, we summarize the process that was established by the GDHR to lay a foundation for developing the strategic plan to address human resources for health [HRH] in Afghanistan. This plan includes the synthesis and harmonization of data and the involvement of all key stakeholders. We document both success and shortcomings, discuss the remedial action initiated to continue to advance the HRH agenda, and conclude with several recommendations.

Health Status

Reproductive and non-reproductive health status of women aged 15 years and above in southern Jordan.
E-mail: fatheieh@ju.edu.jo
University of Jordan - Faculty of Nursing
Keywords: Health Surveys; Needs Assessment; Reproductive Behavior; Overweight-epidemiology; Obesity-epidemiology; Urinary Tract Infections; Body Mass Index; Anemia-epidemiology; Hypertension-epidemiology
Abstract: Failure to address women's health, including their reproductive health needs, increases health care costs and social inequity. This descriptive study assessed the reproductive and non-reproductive health status of women over 15 years old in poverty pockets in the southern region of Jordan. Two villages were selected using purposive sampling and all women in the villages were invited to participate in a [healthy family week]: 259 responded to the
invitation. Although 49.4% of the surveyed women were overweight or obese, only 8.5% had high blood pressure. Reproductive health concerns included the high proportions of women married at an early age [15-20 years] [76.8%], having 5+ children [43.1%] and with haemoglobin level < 12 g/dL, indicating anaemia [55.5%]. Urinary tract infection was the most common health problem [29.0%]. Health care providers should be sensitized to the health needs of Jordanian women in general and those living in disadvantaged areas in particular.

Health Systems Plans

Strengthening Afghanistan's health system: challenges, progress, and opportunities.
Goldie, Sue J.
Harvard University - Harvard School of Public Health
Keywords: Delivery of Health Care; Health Priorities; Health Policy

Hearing Loss

epidemiology

Middle ear and hearing disorders of schoolchildren aged 7-10 years in South Sinai, Egypt.
Yamamah, G.; Mabrouk,A.; Ghorab, E.; Ahmady, M.; Abdulsalam, H.
E-mail:Yamamahg@hotmail.com
National Research Centre - Paediatrics Department
Keywords: Ear Diseases-epidemiology; Hearing LossHearing Loss, Sensorineural-epidemiology; Otitis Media-epidemiology; Students; Mass Screening; Cross-Sectional Studies
Abstract: Hearing loss among schoolchildren in developing countries is reported to be a significant health problem. Data on child hearing loss in South Sinai, a remote governorate of Egypt, are lacking. Middle ear diseases and hearing impairment were assessed among 453 primary-school children aged 7-10 years in South Sinai [906 ears]. Otoscopic examination, tympanometry and pure tone audiometry [PTA] were done. Ear disease was found in 27.5% of the ears examined. The commonest cause was secretory otitis media [10.8%], followed by occluded earwax [9.5%]. Mild and moderate hearing loss affected 8.5% of the sample, while sensorineural hearing loss affected 2.4%; only 0.4% had moderate and severe hearing loss. Hearing impairment affects 19.3% of this age group in South Sinai. None of the children with hearing impairment had been previously diagnosed or was receiving treatment and support. Hearing and middle ear screening at schools is recommended for early detection and management of middle ear and hearing problems.

Heat Stroke

Electrocardiographic findings in heat stroke and exhaustion: a study on Makkah pilgrims.
Mimish, L.
E-mail:layth_mimish@hotmail.com
King Abdulaziz University Hospital - Unit of Cardiovascular Diseases
Keywords: Heat Exhaustion; Electrocardiography; Heart Rate; Tachycardia, Sinus; Islam
Abstract: Over two million pilgrims perform annual rituals in Makkah region, which when coincides with summer months, exposes them to outdoor temperatures exceeding 45 °C and humidity approaching 80%. Accordingly, heat illnesses are common including explicit heat strokes and heat exhaustion. No previous studies elaborated on electrocardiographic changes among this unique cohort. To compare electrocardiographic changes in three groups exposed to high outdoor temperatures, namely, patients with heat stroke compared to patients with heat exhaustion and a control group exposed to the same outdoor temperatures without clinical manifestations. Through case control design, two case groups of patients were selected. The first group [Gl] was 34 patients admitted to the cooling units with clinical picture of heat stroke and the second group [G2] comprised 28 patients admitted with heat exhaustion. The control group [G3] included 31 patients selected from relatives of patients and outdoor workers. The outcome for comparison was 12-lead electrocardiographic changes done for all selected individuals. For [Gl], the ECG was done while they were prepared for cooling or immediately when cooling was started. In Gl, 18 were females and 16 males with ages of 20-76 years [59 +/- 11 years]. Their heart rates ranged from 64 to 160 beats per minute [mean 120 +/- 24 per minute]. Only 5/34 ECGs were completely normal. Sinus tachycardia was present in 27/34 patients [79%], with ischemic changes in 9/34 ECGs. In G2, 24 were males and four females with ages of 25-80 [mean 47 +/- 15 years], the heart rate ranged from 64 to 170 per minute [mean 97 +/- 16 per minute]. Seven out of 28 ECGs were normal [25%] while 21/28 had some abnormalities. None had ischemic changes. Control group [G3], was five females and 26 males ages 18-80 years [mean 38 +/- 15 years], 22/31 had normal ECGs [71%]. All had normal sinus rhythm, 56-98
beats per minute [74 +/- 11]. Nine patients had some electrocardiographic abnormalities but none had ischemic changes. We conclude that electrocardiographic abnormalities occur with a high frequency in patients with heat stroke and heat exhaustion, with sinus tachycardia and ischemic changes occurring more frequently in patients with heat stroke.

**Helicobacter pylori**

[Evaluation of efficacy of H. pylori eradication regimens in Iran: a systematic review].
Barazandeh, F.; Moradi, G.H.; Malekzadeh, R.
Tehran University of Medical Sciences - Digestive Disease Research Center - Fellow of Gastroenterology
Govaresh 2012; 16 (4): 215-222 (39 ref.)
**Keywords:** Helicobacter Infections-drug therapy; Amoxicillin; Furazolidone; Disease Eradication; Treatment Outcome; Outcome Assessment [Health Care]
**Abstract:** Treatment regimens for the eradication of H. pylori as suggested in Western studies may not be applicable for Iran. Herein, we conduct a systematic review to ascertain the efficacy of eradication therapy regimens used for Iranian patients and introduce the more successful treatment regimens for Iranians. This review was a comprehensive search of English and Farsi electronic databases conducted from June to September 2011. A total of 11 trials were included in our study. In these, there were 28 different eradication regimens studied. Of the 28 regimens, 8 had an H. pylori eradication rate of over 85% and in 3 the eradication rate was greater than 90%. In Iran, the regimens that contained amoxicillin-furazolidone or amoxicillin-clarithromycin for two weeks were the most effective for H. pylori eradication, although the furazolidone-based regimen was less expensive. For first-line treatment, the amoxicillin-furazolidone-based regimen for 2 weeks is cost-effective for H. pylori eradication in Iranian patients.

**Hematoma, Epidural, Spinal**

**diagnosis**

Spontaneous resolution of paraparesis because of acute spontaneous thoracolumbar epidural hematoma.
Gundag, M.; Seyithanoglu, M.H.; Dogan, K.; Kitis, S.; Ozkan, N.
Bezmialem Vakif University - Faculty of Medicine - Department of Neurosurgery
**Keywords:** Paraparesis; Spinal Cord Compression; Back Pain; Hypesthesia; Magnetic Resonance Imaging; Thoracic Vertebrae; Lumbar Vertebrae
**Abstract:** Symptomatic spontaneous spinal epidural hematoma [SSEH] is an uncommon cause of cord compression that commonly is considered as an indication for emergent surgical decompression. We aimed to investigate a patient with a SSEH that completely resolved clinically and radiographically, without surgical treatment. The patient presented three days after the sudden onset of back pain, numbness, and weakness. Magnetic Resonance Imaging [MRI] revealed a posterior thoracolumbar epidural hematoma extending from the level of T10 to L2 with significant cord compression. Decompression was recommended but he refused surgery and was managed conservatively. One month later, weakness totally recovered and hematoma was absent on MRI.

**Hemorrhagic Fever, Crimean**

**epidemiology**

Crimean-Congo haemorrhagic fever outbreak investigation in the Western Region of Afghanistan in 2008.
Mofleh, J.; Ahmad, A.Z.
E-mail:jmofleh@yahoo.com
Ministry of Public Health - Afghan Public Health Institute - Disease Early Warning System
**Keywords:** Hemorrhagic Fever, Crimean-transmission; Contact Tracing; Prognosis; Hemorrhagic Fever, Crimean-drug therapy; Hemorrhagic Fever, Crimean-diagnosis
**Abstract:** Crimean-Congo haemorrhagic fever [CCHF] is a life-threatening viral haemorrhagic fever. This paper reports on the first multifocal outbreak recorded in the Afghanistan. The outbreak was detected in 2008 in the Western Region of the country and 30 cases [17 males and 13 females] were detected between 10 July and 22 October 2008. Standard case definitions based on World Health Organization sources were used. Most of the cases [27] occurred in Herat province; 25 were aged between 18-55, 1 was > 55 years and 4 were 12-18 years [median age was 27 years].
The case fatality rate was 33%; 41% among males and 23% among females [P - 0.29]. Significantly more patients infected by contact with meat and body fluids died that those whose contact was through animal husbandry or ticks [P = 0.0048]. Of the 30 cases, 33 close contacts were traced; 3 were positive for CCHF IgM with no symptomatic evidence of the disease.

**Heparin**

**therapeutic use**

**Efficacy of a single dose intravenous heparin in reducing sheath-thrombus formation during diagnostic angiography: a randomized controlled trial.**
Alamri, Hussein S.; Almoghairi, Abdulrahman M.; Alghamdi, Abdullah A.; Almasood, Ali S.; Aalotaiby, Mohamed A.; Kazim, Hameedullah M.; Almutairi, Meshal; Alanazi, Aziz
The Military Hospital - Prince Sultan Cardiac Center
Journal of the Saudi Heart Association 2012; 24 (1): 3-7 (15 ref.)

**Keywords:** Injections, Intravenous; Thrombosis; Angiography; Femoral Artery; Coronary Angiography; Placebos; Heart Catheterization; Double-Blind Method

**Abstract:** Femoral arterial sheath thrombosis and distal embolization are well-recognized complications of cardiac catheterization but the occlusion is extremely rare. Heparinized saline flushes are used during diagnostic coronary angiography to prevent thrombus formation within the sheath lumen. However, the use of prophylactic intravenous heparin following the femoral arterial sheath insertion is controversial. The aim of this study is to evaluate the effectiveness of 2000 units of intravenous heparin bolus in comparison to a saline placebo on the thrombus formation within the arterial sheath during the diagnostic coronary angiography. Eligible patients were randomized to receive either a study drug or placebo at the time of femoral sheath insertion. The sheath was aspirated and flushed for any presence of thrombus after each catheter exchange and at the end of the procedure. Five milliliters of blood were extracted and visualized on clean gauze followed by a saline flush. The primary end-point was the effectiveness of the study drug on reducing the incidence of sheath-thrombus formation. Three hundred and twenty patients were randomized into two arms. Three hundred and four patients were analyzed: 147 patients in heparin arm and 157 patients in placebo arm after exclusion of 13 patients in heparin arm and three in placebo arm because of incomplete reports. The baseline characteristics were similar and sheath-thrombi formation was observed in 20% of the total cohort. Of the heparin arm, 12% [19 patients] developed sheath-thrombus formation, whereas 26% [42 patients] in the placebo arm, p-value = 0.002. An adjusted logistic regression model showed that the only predictor for the sheath-thrombus formation was the study drug [i.e. heparin]. The odds ratio of developing a thrombus in the control arm was 2.5 [95% CI: 1.4-4.5, p = 0.003]. There were no bleeding events observed. The risk of thrombus formation is significant and intravenous heparin significantly reduced thrombus formation during diagnostic coronary angiography, with no excess bleeding events.

**Hepatitis B**

**epidemiology**

**Hepatitis B surface antigen carrier rate in unvaccinated and vaccinated children with thalassaemia major at Bahawal Victoria Hospital, Bahawalpur, Pakistan.**
Rehman, A.; Mazhar, A.; Sheikh, M.A.; Naeem, M.M.; Bhatti, A.
E-mail:drarehman100@gmail.com
Quaid-e-Azam Medical College - Department of Paediatrics

**Keywords:** Hepatitis B Surface Antigens; Hepatitis B Vaccines; beta-Thalassemia-virology; Carrier State; Cohort Studies

**Abstract:** Screening of blood reduces but does not eliminate the risk of hepatitis B virus [HBV] infection in multi-transfused thalassaemia patients. This study was done to evaluate efficacy of HBV vaccination on hepatitis B virus surface antigen [HBsAg] carrier rate in children with thalassaemia major receiving multiple blood transfusions. In a cohort study conducted at a hospital in Bahawalpur, Pakistan, during 2009-10, children with thalassaemia major aged < 60 months who received more than 24 blood transfusions and were HBsAg negative at the time of first blood transfusion were included. Of 196 unvaccinated children, the seropositive rate was 12.2%; while among 218 children vaccinated during the first year of life via the Pakistan Expanded Programme on Immunization, the seropositive rate was only 0.9%. The HBV vaccine was highly effective in reducing the HBsAg carrier rate in children with thalassaemia aged < 5 years.
Hepatitis C

Dermatologic manifestations of hepatitis C infection and the effect of interferon therapy: a literature review.
Jadali, Zohreh
E-mail: zjadali@razi.tums.ac.ir
Tehran University of Medical Sciences - School of Public Health - Department of Immunology
Keywords: Interferons; Skin; Hepacivirus; Lichen Planus; Cryoglobulinemia; Porphyria Cutanea Tarda; Psoriasis; Vitiligo; Alopecia; Sarcoidosis; Polyarteritis Nodosa; Pruritus
Abstract: The skin could be a main target organ for extrahepatic manifestations in hepatitis C virus- [HCV] infected patients and research data suggest that interferon treatment may be associated with immune-mediated skin lesions. However, case reports propose that the response of dermatologic extrahepatic manifestations to interferon in patients with chronic HCV is greatly different. The objective of this study is to summarize currently available data on dermatologic conditions associated with chronic HCV infection. In addition, we investigate the incidence of the development of immune mediated dermatologic disorders during interferon therapy in these patients.

epidemiology

Hepatitis C virus infection among multi-transfused patients and personnel in haemodialysis units in central Islamic Republic of Iran.
Samimi Rad, K.; Hosseini, M.; Asgari, F.; Alavian, S.M.; Tahaei, M.E.; Satari, M.H.
E-mail: ksamimirad@sina.turns.ac.ir
Tehran University of Medical Sciences - School of Public Health - Department of Virology
Keywords: Blood Transfusion; Health Personnel; Hemodialysis Units, Hospital; Prevalence; Cross-Sectional Studies; Risk Factors
Abstract: A cross-sectional study was made of the prevalence of HCV and associated risk factors in 382 multi-transfused patients and haemodialysis staff in Yadz province in 2006. Of those tested for anti-HCV antibodies, 50.6% of patients with inherited bleeding disorders, 11.8% with thalassaemia and 5.0% undergoing haemodialysis were seropositive. First transfusion before 1996 [when blood donor screening started] was the common risk factor associated with HCV infection. Only 1/52 haemodialysis staff members was HCV infected [an intravenous drug user]. Infection control measures were poor in all centres. In patients with inherited bleeding disorders genotype 1 [65.0%] was the predominant followed by genotype 3 [35.0%]. The results provide evidence that blood donor screening and use of virus-inactivated factor concentrates have lowered the risk of HCV infection among multi-transfused patients.

genetics

Distribution of hepatitis C virus genotypes in haemodialysis patients of Guilan, northern Islamic Republic of Iran.
Joukar, F.; Khalesi, A.K.; Jafarshad, R.; Rahimabadi, M.S.; Mansour Ghanaei, F.
E-mail: ghanaei@gums.ac.ir
Guilan University of Medical Sciences - Gastrointestinal and Liver Diseases Research Centre
EMHJ - Eastern Mediterranean Health Journal 2012; 18 (3): 236-240 (38 ref.)
Keywords: Genotype; Renal Dialysis; Incidence; Prevalence; Cross-Sectional Studies
Abstract: The incidence of hepatitis C virus [HCV] infection among patients undergoing haemodialysis is high. The aim of this study was to identify the HCV genotypes among chronic haemodialysis patients who were HCV positive in Guilan province, northern Islamic Republic of Iran. All patients on haemodialysis at Guilan haemodialysis centres were enrolled. Enzyme-linked immunosorbent assay and polymerase chain reaction testing were performed. Out of 514 enrolled patients, 11.9% were serologically HCV positive and 6.2% had positive HCV-RNA. HCV genotypes were determined with HCV genotype-specific primers. The most frequent genotypes were la [59.4%] and 3a [40.6%]. There was no significant relationship between virus genotypes and sex or age. The HCV genotype pattern among haemodialysis patients in Guilan province was different from other countries of the Middle East and was more similar to North American and European countries where genotype 1 is predominant.
HIV Infections

HIV knowledge, attitude, and risk perception among healthcare workers in Afghanistan Hospitals.
Salehi, Ahmad Shah; Njindam, Iliassou Mfochive
E-mail:salehiamadshah@yahoo.com
Ministry of Public Health
Keywords: Health Knowledge, Attitudes, Practice; Risk Assessment; Health Personnel; Cross-Sectional Studies; Questionnaires; Health Surveys; Hospitals
Abstract: The knowledge and attitudes of healthcare workers regarding HIV infection are important factors influencing the readiness of people living with HIV to access care, and the quality of the care they receive. In addition to factors such as stigma and bias, how healthcare workers perceive their own risks in relation to caring for HIV-positive patients may potentially influence their willingness to provide care and their attitudes towards HIV-infected patients. In Afghanistan, there is a lack of information on the prevalence of HIV in general population. The country, however, has many risk factors that could facilitate HIV transmission. To assess HIV-related knowledge, attitudes, and risk perception amongst healthcare workers in Afghanistan national and regional hospitals. A cross-sectional survey among healthcare workers was conducted in five large hospitals selected in Afghanistan. Approval was obtained from the Institutional Review Board of the Ministry of Public Health of Afghanistan and interviews were voluntary. Data analysis was conducted using STATA 11.0 to calculate frequencies and to perform cross-tabulation and logistic regressions with adjusted odd ratio and 95% confidence interval in order to detect statistical significance on differences in knowledge and attitude among healthcare workers in the targeted hospitals. Among 741 healthcare workers who participated in the study, 34.4% [255] correctly identified all correct modes of HIV transmission and 32.1% [238] correctly identified all incorrect modes of HIV transmission. Only 10.4% [77] correctly identified both correct and incorrect modes of HIV transmission. Nurses 12.3% [27] were most knowledgeable by correctly identifying all correct and incorrect modes of HIV transmission. The majority of healthcare workers expressed a willingness to care for people living with HIV. While 88% of healthcare workers believed that it is necessary to take extra infection precautions for people living with HIV, 76% presumed that people living with HIV should be nursed separately from other patients. Nearly 2 of every 3 Afghan healthcare workers in this sample lacked basic knowledge about the routes of transmission of HIV. These findings provide support for both improving the education of current healthcare workers, and integrating teaching modules that include the topics of disease transmission, clinical care, and universal precautions into curricula of health educational institutions.

HIV-1

drug effects

Drug resistance profile and subtyping of HIV-1 RT gene in Iranian patients under treatment.
Baesi, Kazem; Ravanshad, Mehrdad; Hosseini, Younes; Abdolbaghi, Mahboubeh Haji
E-mail: ravanshad@modares.ac.ir
Tarbiat Modares University - Faculty of Medical Sciences - Department of Virology
IJBB - Iranian Journal of Biotechnology 2012; 10 (1): 1-7 (30 ref.)
Keywords: Drug Resistance; Reverse Transcriptase Polymerase Chain Reaction; Phylogeny; Reverse Transcriptase Inhibitors; Nucleosides; DNA, Complementary; RNA; Sequence Analysis, DNA
Abstract: Identification of drug resistant mutations is important in the management of HIV-1 infected patients. The aim of the current study was to evaluate drug resistance profile of RT gene and assess subtypes among the HIV-1 circulating strains and intensification of physician's options for the best therapy. HIV-1 RNA of 25 samples was extracted from plasma and RT Nested- PCR was performed and the final products were sequenced and phylogenetically analyzed. Stanford HIV drug resistance sequence database was used for interpretation of the data. The results of phylogenetic analysis showed subtypes A1 and B in 14 [58%] and 10 [42%] patients respectively. Of the 24 patients, 16 [66.6%] had resistance to NRTIs, 8 individuals [32%] to NNRTIs and one patient was susceptible to NRTIs as well as NNRTIs. The drug resistance interpretation in this study showed: 87.7% susceptible for AZT, 70.8% susceptible, and 25% high-level resistance for 3TC, 87.7% susceptible and 25% high-level resistance for EFV. Our data suggests that probably, the use of 2 NRTIs plus 1 protease inhibitor [PI] regimen is more effective than 2 NRTIs plus 1 NNRTI regimen in Iranian patients that use 2 NRTI plus NNRTI regimen and also continuous surveillance should be perform to evaluate resistance patterns for more effective therapeutic approaches.
Houseflies

microbiology

Isolation of pathogenic bacteria from house flies [Musca domestica L] in Saudi Arabia.
Al Mijali, Samiah H.
Princess Nora Abdul Rahman University - Scientific Section - Biology Department
Keywords: Escherichia coli; Staphylococcus aureus; Bacillus; Microbial Sensitivity Tests
Abstract: House fly as a potential mechanical vector of pathogenic bacteria was elucidated in this study by using normal isolation technique. Potentially ten pathogenic and several non-pathogenic microorganisms, Escherichia coli O157, E. coli sp., Staphylococcus aureus, Bacillus sp, Streptococcus sp, Enterococcus faecium, Enterococcus faecalis, Klebsiella sp, Proteus species and Acinetobacter spp. These bacteria, were isolated on blood agar medium at 37[degree sign] C from 45 samples of house flies [Musca domestica]. Flies were collected from various sites [Food restaurants, houses, schools and vegetable stores] at Riyadh City in Saudi Arabia. The capacity for the flies to act as vectors was demonstrated by successful transfer of the microorganisms from live flies to blood agar medium. From which E. coli sp., Enterococcus faecalis, and Klebsiella sp were recorded in all sites. The house fly has long been considered as a potential agent for disease transmission. This is the first study in Saudi Arabia to demonstrate the potential of these flies as vectors for the transmission of pathogenic microorganisms. In addition the MIC of each of the tested 90 isolates was determined by serial dilution in nutrient broth against 9 antibiotics. Most isolates showed moderate to high resistance toward [CL] Clindamycin with the exception of S. aureus strain that exhibited a lower MIC of 4 ug/ml, but comparatively good susceptibility towards [EM] Erythromycin with an MIC[50]/MIC[90] range of 1/1ug/ml to 2/8ug/ml with the exception of S.aureus strain that exhibited an elevated MIC. All isolates, however were resistant to [CF] Cefoxitin as judged by the breakpoint of susceptibility [MIC<8 ug/ml].

Hydrocarbons

Hydrocarbon degrading microflora in a tropical fuel-contaminated aquifer: assessing the feasibility of PAH bioremediation.
Castro Gutierrez, V.M.; Rodriguez Rodriguez, C.E.; Vargas Azofeifa, I.
University of Costa Rica [UCR] - Faculty of Microbiology and Research Center of Environmental Pollution [CICA] - Laboratory of Food and Water Microbiology
International Journal of Environmental Research 2012; 6 (1): 345-352 (35 ref.)
Keywords: Biodegradation, Environmental; Petroleum; Environmental Pollution; Polycyclic Hydrocarbons, Aromatic; Groundwater; Naphthalenes; Phenanthrenes; Fluorenes; Pyrenes; Pseudomonas; Comamonas; Sphingomonas; Stenotrophomonas; Delftia
Abstract: An aquifer located within a petroleum processing plant in Moin, Costa Rica, suffers hydrocarbon pollution. This study aimed to determine the ability of indigenous microorganisms from this site to degrade polycyclic aromatic hydrocarbons [PAHs] to evaluate the feasibility of an eventual bioremediation process. Aerobic conditions were found in the aquifer, while microbial analyses of the groundwater indicated the presence of important hydrocarbon-degrading populations. Sixteen PAH-degrading strains were isolated with the ability to grow on naphthalene [5 strains], phenanthrene [3], fluorene [6] and pyrene [2]. Most of the identified isolates belonged to the genus Pseudomonas, although, Comamonas, Sphingomonas Stenotrophomonas and Delftia were also found. A mixture of selected strains was evaluated by its performance of PAH degradation in soil-slurry systems, where efficiency of removal was naphthalene > fluorene > phenanthrene > pyrene. This study is an initial approach to evaluate the feasibility of applying a bioremediation process in the contaminated site.

Hyperprolactinemia

chemically induced

Histological study of experimental hyperprolactinemia on the prostate lateral lobe of adult albino rats.
Azmy, Abeer M.; Abdallah, Maha A.
Zagazig University - Faculty of Medicine - Department of Histology and Cell Biology
Keywords: Hyperprolactinemia-complication; Prostate-pathology; Histology; Prostate-ultrastructure; Microscopy, Electron; Rats; Male
Abstract: Prolactin, besides androgens, plays an important role in the regulation of prostatic function. This study aimed to demonstrate the influence of experimental hyperprolactinemia on the structure of the prostate lateral lobe in adult albino rats. Twenty healthy adult albino rats were equally divided into two groups: a control group and an experimental group. Rats of the experimental group were intraperitoneally injected with metoclopramide at a dose of 2.2mg/kg for 14 successive days to induce hyperprolactinemia. The control group was injected with saline in the same manner. Hormonal assays for serum prolactin and testosterone levels were carried out. Prostate was extirpated and the lateral lobes were processed for examination by light and electron microscopy. Epithelial height of the prostatic lateral lobes acini was determined morphometrically and analyzed statistically. In the experimental hyperprolactinemic group, numerous prostatic acini were lined by multiple layers of epithelial cells [hyperplasia]. Acinar epithelium had different ultrastructural features. Some acini had pleomorphic nuclei, cytoplasmic vacuoles, and residual bodies. Others were packed with extensive cisternae of rough endoplasmic reticulum and secretory vesi. Others had few secretory vesicles and the majority of them had centrally located flocculent material surrounded by electron-lucent zones. Some epithelial cells contained lipofuscin pigments. The prostatic epithelial lining was infiltrated by inflammatory cells. Stromal thickening was found in between some acini that was surrounded by prominent smooth muscle cells and may connective tissue cells. Hormonal assays showed increased serum prolactin and decreased testosterone as compared with the control group. The estimated and analyzed epithelial height of the prostatic acini showed a highly significant increase compared with the control group. Hyperprolactinemia altered the morphology of epithelium and stroma of the prostate lateral lobe. It played a significant role in inducing a prostatic hyperplasia and an inflammatory response that triggered the abnormal growth of prostate.

Hypertension, Pulmonary

Early recognition and management of pulmonary arterial hypertension: a case for profiling.
Kosuri, Kalyan; Saydain, Ghulam
E-mail:gsaydain@hotmail.com
Wayne State University - School of Medicine - Pulmonary Critical Care SC Sleep Division
Keywords: Disease Management

Hysteroscopy utilization

Monopolar versus bipolar electrosurgery in hysteroscopic polypectomy.
Abdel Kader, Abdelrahman M.M.; Darwish, Atef M.M.; El Saman, Ali M.; Makarem, Mohammad H.
Assiut University - Faculty of Medicine - Department of Obstetrics and Gynecology
Assiut Medical Journal 2012; 36 (1): 21-26 (14 ref.)
Keywords: Polyps-surgery; Electrosurgery-methods; Treatment Outcome
Abstract: The aim of this study is to compare in random manner the intraoperative feasibility, effectiveness and safety of monopolar and bipolar electrosurgery in hysteroscopic polypectomy. 36 Symptomatic patients attending at outpatient clinics and diagnosed to have intrauterine polyps by HSG, transvaginal sonography or Diagnostic hysteroscopy were included. Patients were randomly assigned to two groups to have hysteroscopic polypectomy using either bipolar [Group A] or monopolar [Group B] electrosurgery under general anesthesia. Intraoperatively, the following parameters were noted and recorded: time of start of anesthesia, time of introduction of the resectoscope, time of end of the procedures, time of recovery, amount of fluid used, amount of fluid Collected in the graduated suction, postoperative serum sodium was measured. Sociodemographic data for patients in both groups were comparable. The mean duration of operation was comparable in both group [14.76 +/- 2.95 minutes in bipolar group versus 14.79 +/- 2.94 minutes in monopolar group]. Fluid inflow, fluid outflow and fluid deficit were significantly higher in the monopolar group than in bipolar group. Bipolar electrosurgery seems effective, feasible and safe alternative to conventional monopolar system in hysteroscopic management of intrauterine pathologies.

Immunoglobulin Light Chains

Light chain deposition disease presenting as cholestatic jaundice: a case report.
Kumar, Prasanna N.; Sandhya, V.; Venkatakrishnan, L.; Krishnaveni, J.; Mohanakrishnan, A.; Nirmala, V.
E-mail:prasanna@omc.edu.om
Oman Medical College
Oman Medical Journal 2012; 27 (1): 56-59 (9 ref.)
Keywords: Jaundice, Obstructive; Liver Failure; Congo Red; Liver Function Tests; Amyloid; Bone Marrow
Abstract: Light-chain deposition disease [LCDD] is characterized by tissue deposition of the immunoglobulin light chains in multiple organs. These deposits appear similar to amyloid on routine sections, but differ in their staining properties and ultrastructural appearance. The deposits of LCDD are non-Congophilic and do not exhibit a fibrillar ultrastructure; while, the proteinaceous substance seen in primary amyloidosis is Congo red positive and fibrillar. One of the most common organs to be involved in LCDD is the kidney. Earlier reports on cases of LCDD have mostly shown simultaneous liver and renal involvement, there are very few cases in the literature describing LCDD of the liver without renal involvement. This report describes a patient who presented with severe cholestatic jaundice and liver cell failure with normal renal function.

Immunohistochemistry

standards

Immunohistochemistry: a need for standardization.
Mazroa, Shireen A.
E-mail: shireenmma@yahoo.com
Mansoura University - Faculty of Medicine - Department of Histology and Cell Biology
Keywords: Immunohistochemistry-methods; Reproducibility of Results; Review Literature as Topic
Abstract: As immunohistochemical techniques continue to evolve, their application to surgical and research pathology is becoming increasingly valuable. Despite this, there is no standard method that can be applied for the analysis of the results of immunostaining to ensure that the selected antibody reacts with the expected antigen specifically. The main goal of standardization in immunohistochemical is to obtain reproducible and consistent results within each laboratory and comparable results among different laboratories. During the technique, specimens are subjected to different preanalytical, analytical and postanalytical variables that may affect the reliability of the stain. Therefore, it is important to highlight the different tissue processing and staining variables that may alter the results of immunohistochemistry and assess the magnitude of reported factors in the literature that require standardization.

Inflammatory Bowel Diseases

Inflammatory bowel disease and its impact on fertility and pregnancy.
Vakili, S. Taba Taba; Daryani, N. Ebrahimi
Shahid Beheshti University of Medical Sciences [SBMU]
Govaresh 2012; 16 (4): 248-257 (58 ref.)
Keywords: Fertility; Pregnancy; Crohn Disease; Collitis, Ulcerative; Delivery, Obstetric; Breast Feeding; Mesalamine; Sulfasalazine; Adrenal Cortex Hormones; Azathioprine; 6-Mercaptopurine
Abstract: The peak age of onset of inflammatory bowel disease [IBD] is simultaneous with the peak reproductive years. Patients have many concerns about the impact of IBD on fertility and pregnancy outcomes. The most important reason for voluntary childlessness is the fear of side effects from medications for IBD. Decision making for medical therapy is a complex equation. It is important to summarize available information about the management of IBD during pregnancy and its interactions. Among IBD patients, those undergoing surgery are at risk for reductions in fertility. Patients with ileal pouches-anal anastomosis [IPAA] experience higher rates of infertility. Disease activity at the time of conception is the main determinant of the impact of IBD on adverse pregnancy outcomes. In different nations, disease activity and relapse depend on many factors and may even be slightly lower during pregnancy. The recommended mode of delivery in IBD is still controversial. However, there is an increased rate of cesarean sections in women with IBD. Choosing the appropriate method of delivery should be based on the obstetrician's opinion, however active perianal disease and the presence of an ileoanal pouch are two major exceptions. If women remain on their maintenance therapy, there would be no increased risk of a flare-up during the postpartum period. In most patients, maintaining remission with medication outweighs the risks of their adverse effects. However, the pros and cons must be discussed with the patient and decisions should be made on an individual basis. Among all drugs used in IBD treatment, only methotrexate [MTX] and thalidomide are contraindicated in pregnancy.

Influenza A Virus, H1N1 Subtype

H1N1 influenza infection complicated with diabetic ketoacidosis.
Moghadami, Mohsen; Honarvar, Behnam; Sabaeean, Behnam; Zamiri, Nima; Pourshahid, Omid; Rismanchi, Mojtaba; Lankarani, Kamran Bagheri
Shiraz University of Medical Sciences - HIV/AIDS Research Center
Keywords: Influenza, Human; Diabetic Ketoacidosis; Real-Time Polymerase Chain Reaction; Oseltamivir; Tachypnea; Tomography, X-Ray Computed
Abstract: The 2009 H1N1 Influenza virus was the first infectious pandemic of the 21st century which spread rapidly throughout the world. High-risk groups, such as diabetics, suffered more and showed higher hospital admission and death rates due to this virus. Patients with diabetes mellitus [DM] may develop the fulminant picture of their disease after being infected with influenza. From June to December 2009 at Nemazee Hospital, affiliated with Shiraz University of Medical Sciences, two patients with diabetic ketoacidosis [DKA] were admitted. The H1N1 influenza virus triggered DKA and its complications in these patients. Both patients were female, of ages 16 and 40 years. When admitted, they had signs of influenza-like illness [ILI], tachypnea, laboratory confirmation of acidosis, and high blood sugar levels. The 2009 H1N1 influenza viral RNA was detected in their nasopharyngeal specimens by real time polymerase chain reaction [RT-PCR]. Both patients received oseltamivir, but eventually both died. This was the first report of an association between DKA and H1N1 influenza in Iran. Conclusively, rapid diagnosis of influenza by RT-PCR and early treatment with oseltamivir should be considered in diabetics and/or DKA patients with flu-like symptoms.

**Influenza in Birds**

**classification**

**Factors affecting hemagglutination activity of avian influenza virus subtype H5N1.**
Awad, Ashraf M.; Okela, Mohamed; Mohamed, Basma Abdullah
Alexandria University - Department of Poultry Disease

**Keywords:** Hemagglutination; Influenza in Birds-virology; Serologic Tests

**Abstract:** Hemagglutination [HA] and hemagglutination inhibition [HI] tests for avian influenza [AI] virus [H5N1] were standardized using varying various factors like erythrocytes from different species, type of diluent, incubation temperature and incubation period. The virus was propagated in embryonated chicken eggs [9-11 days]. The allantoic fluid [AF] was harvested 36 hours post incubation and was confirmed by slide hemagglutination test. The maximum HA titres were obtained using 1% RBCs of chicken, sheep, duck, geese, pigeon, quails and turkey for 30-40 minutes. The haemagglutination activity showed best titer when used phosphate buffer saline than normal saline and also when incubated at 25[degree sign] C instead of 37[degree sign] C.

**epidemiology**

**Epidemiological studies on highly pathogenic avian influenza H5N1 during late 2009 and 2010 in Egypt.**
Awad, Ashraf M.; El Lakany, Hany F.; Elsamahy, Hanan S.; Abdel Hamid, Hatem S.
Alexandria University - Department of Avian and Aquatic Animal

**Keywords:** Signs and Symptoms, Respiratory; Diarrhea; Incidence; Mortality; Influenza in Birds-virology

**Abstract:** Epidemiological studies on AI virus H5N1 in different governorates in Egypt [Alexandria, Bohera, Cairo, El-fayom, Gharbia, Giza and Dakahlia] during late 2009 and 2010 were carried out. These studies included seventy five flocks [49 broilers, 17 layer, 4 breeder and 5 duck flocks] showing high mortality rate with respiratory manifestations and diarrhea, through isolation in specific pathogen free eggs and identification by hemagglutination inhibition test using H5N1 antiserum. The data revealed the following: a percentage of 32.7%, 76.5%, 50% and 40% in broiler, layer, breeder and duck flocks respectively were positive for AIV H5N1. The highest incidence was recorded in layer flocks followed by broiler breeder flocks, duck then broiler flocks with total incidence of 44% in all species. Sequencing and phylogenetic tree of hemagglutinin [HA] gene of six positive AIV H5N1 isolates from chickens during 2010 were done. Phylogenetic tree showed that all HA gene sequences belonged to highly diverse clade 2.2.1 viruses according to WHO/FAO/OIE nomenclature. Analysis of amino acid sequences of HA glycoprotein revealed some mutations at the receptor binding site of the HA molecule.

**Influenza, Human**

**epidemiology**

**Early outcomes of pandemic influenza [H1N1] 2009 surveillance in Abu Dhabi Emirate, May-August 2009.**
Ahmed, F.; Al Hosani, F.; Al Mannalaie, A.; Harrison, O.
E-mail:fahmed@haad.ae
Health Authority for Abu Dhabi [HAAD] - Public Health and Policy Division - Public Health Surveillance

**Keywords:** Incidence; Influenza A Virus, H1N1 Subtype; Pandemics; Population Surveillance
**Insulin resistance and adipocytokine levels in high fat high fructose-fed growing rats: effects of cinnamon.**

Mohamed, Maha M.; Abdel Halim, Shawkia S.; El Metwally, Eman M.
E-mail:maha_nutrition@yahoo.com
Ain Shams University - Women's College - Home Economic Department


**Keywords:** Adipokines-blood; Dietary Fats; Fructose; Rats-growth and development; Cinnamomum zeylanicum-drug effects; Metabolic Syndrome X; Glucose Tolerance Test; Antioxidants; Rats; Leptin-blood; Resistin-blood

**Abstract:** The main objective of this study was to investigate the effects of high fat fructose [HF/HFr] diet on the onset of the characteristics of the metabolic syndrome and the levels of some adipocytokines in growing male and female rats. Also we aimed to study the possible protective effects of cinnamon [CN] against [HF/HFr] diet induced-metabolic disturbances. Forty eight growing Sprague-Dawley rats were randomly assigned into 4 groups [12 rats/group; 6 males + 6 females] and were fed for a period of 6 weeks the following diets [i] basal diet, control [C] [ii] high fat diet containing 20 g CN/kg diet [C+CN], [iii] high fat diet [15% beef tallow + 5% corn oil] combined with fructose [13% W/v] in drinking water [HF/HFr], [iv] HF/HFr diet containing 20 g CN/kg diet [HF/HFr+CN]. HF/HFr diet resulted in elevated levels of fasting blood glucose, serum insulin, and homeostasis model assessment [HOMA] index along with impaired glucose tolerance, as well as elevated serum triacylglycerols [TG], total cholesterol [TC], low-density lipoprotein cholesterol [LDL-C], resistin, leptin, tumor necrosis factor - alpha [TNF-alpha] and total oxidant capacity [TOC] with a decrease in high-density lipoprotein cholesterol [HDL-C] and total antioxidant capacity [TAC] compared to control. These deleterious effects were more pronounced in male and female rats. Cinnamon reinstated most of the altered measured parameters. So HF/HFr diet developed characteristics of metabolic syndrome in growing male and female rats. Females were protected against some metabolic disturbances of HF/HFr diet. The inclusion of cinnamon in the diet was effective in modulating some aspects of metabolic parameters associated with metabolic syndrome.

**Interferon-alpha**

**adverse effects**

The structure of the optic nerve after the administration of interferon alpha-2a in adult male albino rats and the role of alpha-lipoic acid supplementation.

Hassan, Zeinb A.; Abdel Haleem, Manal Reda; Amer, Mona G.
Zagazig University - Faculty of Medicine - Department of Histology and Cell Biology


**Keywords:** Optic Nerve-pathology; Histology; Optic Nerve-ultrastructure; Microscopy, Electron; Thiocitic Acid-therapeutic use; Rats; Male

**Abstract:** Interferon alpha [IFN-alpha] therapy is used considerably in Egypt because of a high prevalence rate of chronic hepatitis C virus infection. Alpha-Lipoic acid [ALA] has been found to play a neuroprotective role in many insulins. The aim of this study is to observe the histological structure of the topic nerve of rats after an injection of IFN-alpha and to determine the role of ALA supplementation. Forty adult male albino rats were divided equally into four groups. Group I served as the control group. Group II included rats that received ALA alone [100mg/kg/day, intraperitoneally]. Group III included rats that received IFN-alpha alone [100000 IU/kg/three times/week, intraperitoneally]. Group IV included rats that received both IFN-alpha and ALA. After 8 weeks, the optic nerves were extirpated and processed for light and electron microscope examination. Optic nerves of the group that received IFN-alpha showed nerve damage manifested as axonal damage and changes in the myelin sheath. Neuroglia showed vacuolation in their cytoplasm and heterochromatic nuclei. Morphometric and statistical analyses showed a significant increase in the surface area of positive glial fibrillary acidic protein astrocytes, indicating reactive astrogliosis. Blood capillaries were distorted with ill-defined walls and protrusion of the endothelial cells into their lumina. These changes were limited by concomitant ALA supplementation with IFN-alpha. IFN-alpha exerted a deleterious effect on the histological structure of the optic nerve in rats and ALA supplementation minimized these effects.
Intestine, Small
growth and development

Pre- and postnatal development of rabbit small intestine; a light and scanning electron microscopic study.
Abo Elnor, Asmaa S.; Sayed Ahmed, A.; Abo Ghanema, I.; Elbashary, M.
Damanhour University - Faculty of Veterinary Medicine - Histology and Cytology Department
Keywords: Rabbits; Intestine, Small-ultrastructure; Microscopy, Electron, Scanning
Abstract: The small intestine is a highly differentiated organ that accomplishes both digestive and absorptive functions with great efficiency. The small intestine of rabbit was studied from early prenatal stage to full term in 15 fetuses and during the early days of life till maturity in 21 rabbits using light and scanning electron microscopy. In 15 days old fetuses, the epithelium was flat and stratified and the lumen was elliptical in shape. By the E18, the epithelial ridges were formed. The first rudimentary villus formation was formed in 21 days old fetuses and the true villi appeared by 24[th] days of gestation. At 27 days old fetuses, intestinal glands were not appeared yet. By the first day of postnatal life the duodenal glands appeared. The histological maturity of the rabbit small intestine occurred one month after birth. In conclusion, at all stages, the sequential morphologic changes of the rabbit small intestine developed to meet the structural and physiological demands during the fetal stage to be prepared to extra uterine life.

Iron
deficiency

Iron deficiency in Yemeni patients with sickle-cell disease.
Kassim, A.; Thabet, S.; Al Kabban, M.; Al Nihari, K.
E-mail:taizmedicine@yemen.net.ye
University of Taiz - Faculty of Medicine - Department of Internal Medicine
Keywords: Anemia, Sickle Cell; Iron-analysis; Iron-blood; Transferrin; Reticulocyte Count
Abstract: Despite the general view that patients with sickle-cell disease [SCO] have iron overload, there are reports of iron deficiency in a proportion of these patients. We studied Yemeni patients aged 1-30 years with homozygous SCD to determine their iron status using a set of 4 criteria [low serum iron, low transferrin saturation, high total iron binding capacity and low mean corpuscular volume for age]. Of the 75 patients, 44 had never been transfused while 31 patients had received blood transfusions but not during the 3-month period prior to the study. Of the patients, 10 [13.3%] met the criteria for iron deficiency, 9 of whom were from the non-transfused patients [20.5%]. The sensitivity and specificity were 40% and 98% respectively for reticulocyte count and 80% and 90% respectively for reticulocyte index. We recommend screening non-transfused SCD patients for iron deficiency.

Isoniazid
adverse effects

Early-onset severe isoniazid-induced motor-dominant neuropathy: a case report.
Zaoui, A.; Abdelghani, A.; Ben Salem, H.; Quanta, W.; Hayouni, A.; Khachnaoui, N.; Rejeb, N.; Benzart, M.
Sahloul Hospital - Department of Physiotherapy
Keywords: Peripheral Nervous System Diseases-etiology; Isoniazid-toxicity; Peripheral Nervous System Diseases-rehabilitation
**Isosorbide Dinitrate**

**pharmacology**

The effects of isosorbide dinitrate on in vitro proliferation of WEHI-164 cells and peripheral blood mononuclear cells.

Hajighasemi, Fatemeh; Madani, Fatemeh Zahra Resvan
E-mail: resoome@yahoo.com
Shahed University - Faculty of Medicine - Department of Immunology

**Tehran University Medical Journal [TUMJ] 2012; 69 (11): 671-677 (23 ref.)**

**Keywords:** Leukocytes, Mononuclear-drug effects; Cell Proliferation-drug effects; Fibrosarcoma; Cell Line-drug effects; Trypan Blue

**Abstract:** Isosorbide dinitrate has been broadly used in the treatment of various ischemic heart diseases. Isosorbide is a nitric oxide donor which increases blood flow to tumors through vasodilatation and consequently accelerates the access of chemo-drugs to them. Furthermore, this drug has inhibitory effects on angiogenesis, tumor growth and metastasis in vivo. Moreover, its anti-inflammatory effects have also been reported. In the present study we evaluated the effects of isosorbide on the proliferative activity of fibrosarcoma WEHI-164 cell line and peripheral blood mononuclear cells [PBMCs]. WEHI-164 fibrosarcoma cells and human PBMCs were cultured in complete Roswell Park Memorial Institute [RPMI] 1640 medium with 10% fetal bovine serum and 2x10⁴ cells/mL for WEHI-164 and 2x10⁵ cells/mL for PBMCs. The cells were then incubated at the exponential growth phase with different concentrations of isosorbide [4x10⁻⁶-1.6x10⁻³ M] for 24, 48 and 72 hours. Subsequently, isosorbide effects on proliferation of the cells were evaluated by trypan blue dye exclusion [TB] test and MTT assay. Statistical comparisons between groups were made by analysis of variance. The proliferative activity of WEHI-164 fibrosarcoma cells and human PBMCs treated with different concentrations of isosorbide, did not show any significant difference with untreated control cells. The results of this study showed that isosorbide neither had any significant effects on the proliferative activity of fibrosarcoma WEHI-164 cells nor on human PBMCs. Our findings suggest that anti-tumoral effects of isosorbide reported by other investigators may be mediated through non-cytotoxic mechanisms.

**Learning**

The study of effectiveness of blended learning approach for medical training courses.

Karamizadeh, Z.; Zarifsanayei, N.; Faghihi, A.A.; Mohammadi, H.; Habibi, M.
Shiraz University of Medical Sciences - Department of Pediatric Endocrine

**IRCMJ - Iranian Red Crescent Medical Journal 2012; 14 (1): 41-44 (14 ref.)**

**Keywords:** Education, Medical; Questionnaires; Students, Medical

**Abstract:** Blended learning as a method of learning that includes face to face learning, pure E-learning and didactic learning. This study aims to investigate the efficacy of medical education by this approach. This interventional study was performed in 130 students at different clinical levels participating in class sessions on [congenital adrenal hyperplasia and ambiguous genitalia]. Sampling was done gradually during 6 months and all of them filled a pretest questionnaire and received an educational compact disk. One week later, a presence class session was held in a question and answer and problem solving method. Two to four weeks later, they filled a posttest questionnaire. There was a significant correlation between pretest and posttest scores and the posttest scores were significantly more than the pretest ones. Sub-specialized residents had the most and the students had the least attitude towards blended learning approach. There was a significant correlation between the research samples’ accessibility to computer and their attitude and satisfaction to blended learning approach. Findings generally showed that the blended learning was an effective approach in making a profound learning of academic subjects.

**Leishmania infantum**

**isolation and purification**

First detection of Leishmania infantum in Phlebotomus kandelakii using molecular methods in North-Eastern Islamic Republic of Iran.

E-mail: abaimr@tums.ac.ir
Tehran University of Medical Sciences - School of Public Health - Department of Medical Entomology and Vector Control


**Keywords:** Phlebotomus-parasitology; Polymerase Chain Reaction; Insect Vectors
Abstract: Shirvan district in north-eastern Islamic Republic of Iran is a new focus of visceral leishmaniasis. This study aimed to identify the vector[s], the parasite and the species composition of sand flies in the district during July-September 2009 using polymerase chain reaction techniques. In all, 2088 sand flies were collected from 3 villages. Nine sand fly species were identified: Phlebotomus kandelakii [Shchurenkova], P. major [Annandale], P. halepensis [Theodor], P. popatasi [Scopoli], P. sergenti [Parrot], P. longidoctus [Parrot], P. caucasicus [Marzinovsky], Sergentomyia sintoni [Pringle] and S. sumbarica [Perfiliev]. P. sergenti and P. kandelakii were the most prevalent Phlebotomus species at 31.3% and 10.0% respectively. Of 59 female P. kandelakii, 2 [3.4%] were naturally infected with L infantum. This is the first finding of natural infection of P. kandelakii by L infantum in this region suggesting P. kandelakii may be the vector of L infantum in the area although it is the second most prevalent phlebotomine species.

Leishmaniasis, Cutaneous

Knowledge, attitudes and practices about leishmaniasis among cutaneous leishmaniasis patients in Aleppo, Syrian Arab Republic.
Abazid, N.; Jones, C.; Davies, C.R.
E-mail:sdcm@pisem.net
London School of Hygiene and Tropical Medicine
Keywords: Health Knowledge, Attitudes, Practice; Questionnaires; Cross-Sectional Studies; Health Education
Abstract: Cutaneous leishmaniasis [CL] is endemic in Aleppo and yet the knowledge, attitudes and practices [KAP] of CL patients in Aleppo has never been studied. We conducted a KAP study among 70 CL patients attending 4 clinics in Aleppo. Participants were interviewed at recruitment and then at the end of treatment to ascertain their views on access to treatment and the quality of care provided. The mean age of respondents was 32.3 [SD 12.4] years and 59% were female. Most respondents referred to the disease as [one-year sore], linked it to insect bites and believed it was not contagious. Most believed it was preventable by the use of bednets and insecticides and knew the treatment mode. Only 26 [37%] respondents completed the second part of the questionnaire after treatment. Most of these [80%] rated the quality of care as acceptable or better. Assessment of the quality as [bad] correlated with failure to complete follow-up.

therapy

Evaluation of thermotherapy for the treatment of cutaneous leishmaniasis in Kabul, Afghanistan: a randomized controlled trial.
Safi, Najibullah; Davis, Gary D.; Nadir, Mohammed; Hamid, Hamida; Robert, Leon L.; Case Alan J.
E-mail:najibullah.safi@gmail.com
World Health Organization Country Office - Primary Healthcare Department
Keywords: Hyperthermia, Induced; Leishmaniasis, Cutaneous-drug therapy; Treatment Outcome
Abstract: Anthroponotic Cutaneous Leishmaniasis is a common cause of ulcerative lesions and disfiguring scarring among children in Afghanistan. Most lesions occur on the face, and are commonly caused by the trypanosome protozoan parasite Leishmania Tropica, transmitted by the bite of an infected sandfly [Phlebotomus Sergenti]. This study compares the effectiveness of a single localized treatment with thermotherapy to five days of intra-lesional administration of Glucantime for the treatment of cutaneous leishmaniasis. Three hundred and eighty two patients with cutaneous leishmaniasis were randomly assigned to the two treatment groups and followed for six months. The cure rate for the thermotherapy group was 82.5%, compared to 74% in the Glucantime group. The authors conclude that a single localized treatment with thermotherapy was more effective than five days of intra-lesional administration of Glucantime. Additionally, thermotherapy was more cost effective, with fewer side effects, of shorter duration, and with better patient compliance than intra-lesional Glucantime.

Lens, Crystalline

ultrastructure

Age-related changes in the ocular lens of the albino rat: a light and scanning electron microscopic study.
Atia, Ghalia M.; El Bassouny, Dalia R.; Omar, Nesreen M.
Mansoura University - Faculty of Medicine - Department of Histology and Cell Biology
Keywords: Microscopy, Electron, Scanning-methods; Age Factors; Rats; Male
Abstract: The eye lens is a minute organ with a complex structure that plays an indispensible role in the process of vision. The study was conducted to detect age-related structural changes that occur in the rat ocular lens and to correlate these changes with the development of senile cataract. Fifteen male albino rats were used in this study. They were divided into three groups: young, adult, and aged [1, 6 and 18 months, respectively]. The animals' lenses were removed, dissected, and processed for light and scanning electron microscopy. The width, thickness, and number of lens fibers were assessed using an image analyzer. Statistical analysis of data was carried out using analysis of variance and the Student t-test. In H and E stained sections, the lens of aged rats was seen to be covered by a thick capsule and had a double layer of epithelial cells. The aged lens showed marked disorganization and vacuolation of nuclear fibers. Scanning electron microscopic study revealed irregularities of the lateral borders of the cortical fibers, folding of their surfaces, and few ball and socket interlocking patterns. The nuclear fibers showed microvilli and a decrease in their cross-sectioned areas. Statistical analysis revealed a significant increase in the number and width of the aged nuclear lens fibers and a significant decrease in their thickness, compared with younger ones. Lens fibers undergo some structural changes as a result of aging in the form of irregularities in shape and arrangement, thinning and compaction. These changes could be correlated to age-related optical problems such as senile presbyopia and cataract.

Leptin

blood

Correlation between leptin and chronic periodontitis.
Sattari, M.; Khajeh Noori, B.; Mozeh, M.B.; Mehrmofakham, S.H.; Mollahoseini, M. Haji; Yeganeh, F.
Shahid Beheshti University of Medical Sciences - Iran center for Dental Research and Medical School - Department of Immunology
Journal of Dental School - Shahid Beheshti University of Medical Sciences 2012; 29 (4): 283-289 (18 ref.)
Keywords: Chronic Periodontitis; Gingiva; Enzyme-Linked Immunosorbent Assay; Interleukin-6; Inflammation
Abstract: One important function of leptin is the regulation of immune or inflammatory responses. Moreover, in a recent study no correlation between leptin and periodontal diseases was found. Therefore the aim of this study is to determine the correlation between leptin concentration and chronic periodontitis. In this analytical study, 20 healthy gingival tissue samples [control group] and 20 gingival tissues with advanced and moderate chronic periodontitis [case group] and 20 blood samples were taken from 20 patients. Patients were consisted of 55% females and 45% males with average age of 42.25 yrs. Tissue samples were cultured for 72 hours. In the case of blood samples, the serum was immediately collected. Then ELISA was used for detecting of leptin and IL-6 in supernatant fluids of explant cultures and leptin in serum samples. Statistical analysis was made by Paired T-test and Wilcoxon signed Ranks test. There was no leptin in gingival samples of both cases and control groups. The mean concentration of IL-6 in control and case groups was 81.08 +/- 36.72 and 90.35 +/- 29.71 pg/ml, respectively. Statistical analysis has shown no difference between case and control groups regarding IL-6 concentration. It is concluded that leptin does not have any role as an inflammatory protein in chronic periodontitis and regarding the absence of leptin in all of gingival samples, we could not consider gingiva as a possible source of leptin.

Lice Infestations

epidemiology

Pediculosis capitatis among primary-school children in Mafrak Governorate, Jordan.
Al Bashtawy, M.; Hasna, F.
Al Bayt University - Faculty of Nursing
Keywords: Students; Schools; Prevalence; Cross-Sectional Studies; Risk Factors; Questionnaires
Abstract: Pediculosis capitatis [head lice infestation] is a worldwide public health concern affecting mostly primary-school children. In a cross-sectional study in 2009/2010, the prevalence of pediculosis capitatis and some risk factors for infestation were investigated among 1550 randomly selected primary-school children in Mafrak governorate, Jordan. The prevalence of pediculosis capitatis was 26.6%. There were significant differences in the prevalence between girls [34.7%] and boys [19.6%], rural [31.2%] and urban [23.5%] residents, and history of infestation in the previous year [57.4%] versus no history [11.5%], as well as between children of different ages, family size and income [P< 0.001]. Longer hair length, lack of bathing facilities, low frequency of hair-washing and bathing, and sharing of articles [e.g. combs, scarves] were significantly associated with infestation [P< 0.001]. The prevalence of infestation was higher than reported in previous studies in Jordan [<14%]. Programmes are needed to increase awareness of pediculosis capitatis and the importance of good personal hygiene.
Liver Diseases

surgery

Different modalities of hepatic resection in liver diseases.
Taha, Ahmed M.I.; Mourad, Farouk A.; Mohamad, Salah I.; Riad, Hisham A.
Assiut University Hospital - Department of General Surgery
Assiut Medical Journal 2012; 36 (1): 37-52 (30 ref.)
Keywords: Hepatectomy-methods; Follow-up Studies; Liver Function Tests; Hospitals, University; Prospective Studies
Abstract: Blood loss and bile leak remain major issues during liver resection. We aimed to compare the efficacy of two commonly used transaction techniques; the ultrasonic-dissector [UD] and ultrasonic-coagulation-shears [UCS]. 143 consecutive patients were enrolled into a prospective, observational, non-randomized, comparative study, performed from the March 2008 till end of May 2009, in Liver Unit, Queen Elizabeth Hospital, University of Birmingham, UK. Outcomes looked at are blood-los, speed of transaction and morbidity. Study groups are comparable except that there are more major resections in the UD than in the UCS, [86.9 and 42.4% respectively, p=0.04]. There is no statistically significant difference [SSD] in the mean surface areas of resected liver specimens between the two groups [114 [+/- 11] versus 94 [+/- 9] cm2 [p=0.06]. there is no SSD in the amount of lost blood, amount of blood loss per square centimeters of resection surface area, amount of blood transfused or the percentages of patients, who required blood transfusion, intra- or post-operatively, between the groups. There are no SSD in the mean transaction time, haemostatis times, mean transaction and haemostasis speeds. The overall "identification of landmarks" score is 4/5 for UD and 3/4 for UCS which is not SSD. The Pringle manoeuvre was resorted to in significantly more patients in the UD than in the UCS [17 [20.2%] and 5 [8.5%] respectively, p=0.03], with mean ischaemic time significantly more in the UD [17 +/- 3] versus 4 [ +/- 4] minutes respectively, p=0.02]. There is no SSD in the magnitude of post-operative liver cell injury reflected by the mean of ALT, AST, bilirubin and INR peak values. There is also no SSD among the two groups regarding postoperative minor [grade 1 and 2] or major [grade 3, 4, and 5] complications, median ICU and hospital stays. This study confirms that both instruments of transaction can be used safely in elective liver resection and it is not possible to recommend any of these two instruments over the other.

ultrasonography

Endoscopic ultrasonography in patients with chronic liver disease: a case control study.
E-mail: r.sotoudehmanesh@ams.ac.ir
Tehran University of Medical Sciences - Associate Professor, Digestive Disease Research Institute
Govaresh 2012; 16 (4): 270-274 (28 ref.)
Keywords: Chronic Disease; Endosonography; Case-Control Studies; Portal Vein; Splenic Vein; Azygos Vein; Hypertension, Portal
Abstract: The portal system and azygos vein are the main drainage systems during portal hypertension. This study aims to compare the diameter of these veins by endoscopic ultrasonography [EUS] in patients with and without chronic liver disease [CLD]. During one year, patients with CLD enrolled as the study group. Patients who underwent EUS for other reasons during the same period served as controls. In cases with CLD, we assessed the relationship between degrees of hepatic dysfunction [Child-Pugh class], history of varical bleeding, presence of hyponatremia, thrombocytopenia, and endoscopic grading of varices with the sizes of the portal, splenic, and azygos veins on EUS. During the study period, there were 63 patients [20 females and 43 males] with CLD and 85 control subjects [42 females and 43 males] enrolled. The mean ages of cases was 45.60 +/- 14 years and controls was 48.6 +/- 15 years. The most common cause of CLD was post-necrotic cirrhosis due to hepatitis B virus. Patients with CLD had significantly higher mean portal, splenic, and azygos vein diameters than the control group [p < 0.001]. With azygos, portal, and splenic vein diameters of 10, 11 and 9 mm, sensitivity for the diagnosis of portal hypertension was 66%, 71%, and 66%, while specificity was 94%, 99% and 99%, respectively. Splenic and portal vein dilation, and thrombocytopenia significantly correlated with varical bleeding [p < 0.05]. EUS allows for the collection of valuable quantitative data from the portal system, the diagnosis of portal hypertension, and follow up of patients with CLD.

Lupus Erythematosus, Systemic

Extent of subclinical pulmonary involvement in childhood onset systemic lupus erythematosus in the Sultanate of Oman.
Abdulla, Eiman; Ali Zakwani, Ibrahim; Baddar, Sawsan; Abdwani, Reem
Sultan Qaboos University Hospital - College of Medicine and Health Sciences - Department of Pharmacology and Clinical Pharmacy
Keywords: Child; Respiratory Function Tests; Lung Diseases; Vital Capacity; Forced Expiratory Volume; Carbon Monoxide
Abstract: The aim of this study was to investigate the frequency of pulmonary function abnormalities in clinically asymptomatic children with Systemic Lupus Erythematosus and to determine the relationship of these abnormalities to clinical, laboratory, and immunological parameters as well as to disease activity. Forty-two children with childhood onset Systemic Lupus Erythematosus were included in this study. Demographic, clinical, laboratory, and immunological parameters, as well as disease activity were assessed. Pulmonary function tests (PFT) were performed routinely to screen for subclinical lung disease. Out of the 42 children, 19% [n=8] had clinical evidence of pulmonary involvement. The patients with no clinical evidence of pulmonary involvement [n=34] represent the study cohort. From our cohort of patients with no clinical evidence of pulmonary involvement 79% [n=27] had PFT abnormality; including 62% [n=21] had reduced FVC, 71% [n=24] had reduced FEV1, and 67% [n=12] had reduced DLCO. Similarly, 56% [n=15] had a restrictive PFT pattern, and 2.6% [n=2] had an obstructive PFT pattern, while 33% [n=7] had an isolated impairment of diffusion capacity. Due to small sample size, it was not possible to find a statistically significant difference between the cohort of asymptomatic SLE patients with abnormal PFT findings [n=27] and those with normal PFT findings [n=7] in terms of clinical, laboratory, immunological or disease activity index score. Subclinical lung disease, as demonstrated by abnormal PFT in patients with normal radiographs, may be common but should be interpreted with caution as an early sign of lung disease. Although PFT studies do not correlate well with pulmonary symptoms in patients with childhood onset SLE, they nevertheless provide objective quantification of the type and severity of the functional lesions.

Lymphadenitis

Sheep caseous lymphadenitis: causative bacterial agents and their in vitro some antimicrobial susceptibility.

Sayed, S.M.; El Berbawy, S.M.; Al Habaty, S.H.
Assiut Regional Laboratory

Assiut University Bulletin For Environmental Researches 2012; 15 (1): 65-76 (30 ref.)

Keywords: Sheep; Prevalence; Anti-Infective Agents-therapeutic use; Tuberculosis, Lymph Node

Abstract: Corynebacterium pseudotuberculosis [C. pseudotuberculosis] is the etiologic agent of caseous lymphadenitis. It is a serious, economically important disease for sheep production. This study was carried out on 762 sheep reared in private flocks [616 females and 146 males] with different ages at different localities in Assiut Governorate. The prevalence of the disease in sheep was 22.7% on the basis of clinical signs and 20.1% on the basis of bacteriological examination. The disease prevalence was significantly higher in females'sheep [25.3%] than that in males [11.6%]. Caseous lymphadenitis was highly significantly different among age groups. The high prevalence of caseous lymphadenitis was recorded in sheep of 1-2 years old [37.34%], followed by animals of 2-3 years old [25.77%] and the low prevalence was in sheep under one year old [8.33%], this may be due to occurrence of maternal antibodies from colostrums. Parotid lymph nodes were the most common affected lymph node [11.81%], followed by superficial cervical lymph nodes [7.87%], while prefemoral lymph node was less affected [0.39%]. The superficial lymph nodes of the anterior body half showed the highest rate of infection then the posterior body half. C. pseudotuberculosis was the main causative agent of caseous lymphadenitis in sheep, where it was isolated either in pure form or in combination with Staph. aureus from 142 cases [82.1%] and 7 cases [4%] of the clinically infected sheep, respectively. On the other hand Staph. aureus was isolated as a sole pathogen from 4 cases representing 2.3%. All isolated strains of C. pseudotuberculosis were highly virulent to Guinea pigs and 97.3% of them were nitrate reduction negative. In vitro antimicrobial susceptibility test of C. pseudotuberculosis strains showed that Enrofloxacin and Ciprofloxacin had strong inhibitory effect on the isolates, while the most strains were highly resistant to Lincomycin, Streptomycin, Amoxicillin and Penicillin. From the obtained results, it can be concluded that C. pseudotuberculosis is the main causative agent of caseous lymphadenitis in sheep. The superficial lymph nodes of the anterior body half show the highest rate of infection than the posterior body half. Enrofloxacin and Ciprofloxacin are the most effective drugs during in vitro tests.

Lymphoma, Extranaodal NK-T-Cell

pathology

Primary intestinal NK/T cell lymphoma: a clinicopathologic study of 25 Chinese cases.
Zheng, Shumei; Ouyang, Qin; Li, Gandi; Xu, Hui; Jiang, Mingde; Cui, Dejun; Xue, Linyun; Li, Jinnan
West China Hospital of Sichuan University - Department of Gastroenterology

Archives of Iranian Medicine 2012; 15 (1): 36-42 (28 ref.)

Keywords: Intestinal Neoplasms; Immunophenotyping; Gene Rearrangement, gamma-Chain T-Cell Antigen Receptor; Immunohistochemistry; In Situ Hybridization; Polymerase Chain Reaction; Herpesvirus 4, Human; Lymphoma
Abstract: Primary intestinal NK/T cell lymphoma is extremely rare and early diagnosis is frequently difficult. The aim of this study is to investigate the clinicopathological findings, immunophenotype, and T cell receptor [TCR] gamma gene rearrangement of primary intestinal NK/T cell lymphomas in 25 Chinese cases. Clinical data of the 25 cases were analyzed. Immunohistochemistry for immunophenotype, in situ hybridization for EBER, and polymerase chain reaction for TCR y gene rearrangement were investigated. Survival curves according to clinical characteristics were analyzed. The median age was 33 years and the median survival was 7 months. The common symptoms consisted of abdominal pain, fever, marasmus, diarrhea, and hematochezia. Endoscopically, the tumors were mainly featured by focal, multifocal or diffuse irregular ulcers, which most frequently emerged in the ascending colon. Histologically, the tumors were characterized by the proliferation of pleomorphic atypical lymphoid cells [ALCs], necrosis, lympho-epithelial lesions, and mixed inflammatory infiltration. The positive frequency of CDepsilon was 88.2%, of CD56 was 84%, granzyme B was 90%, and EBER was 84.2%. A total of 12 out of 14 cases [85.7%] highly expressed Ki67. The negative prognostic factors for survival were Ann Arbor stage HIE or IVE [P = 0.039] and more than one extranodal site of disease [P = 0.019]. Primary intestinal NK/T cell lymphomas most frequently favor young people and have a poor prognosis. Due to the nonspecific clinical and endoscopic findings, it is difficult to distinguish intestinal NK/T cell lymphomas from inflammatory and infectious disorders. Histopathology, immunophenotype, and DNA study play key roles in differential diagnosis.

Magnetics

Rock magnetic investigations of surface and sub-surface soil samples from five lake catchments in tropical southern India.
Sandeep, K.; Warrier, A.K.; Harshavardhana, B.G.; Shankar, R.
E-mail: paleosoil@gmail.com
Mangalore University - Department of Marine Geology
Keywords: Soil; Lakes
Abstract: Iron oxide minerals in soils provide valuable insights into pedogenic processes. A wealth of such information has been obtained by rock magnetic investigations on temperate soils but similar studies on tropical soils are rare. Here, we report rock magnetic data on pristine soil profiles and surficial soils from five catchments in the tropical southern India and throw light on the pedogenic processes. We ruled out contributions from greigite, bacterial magnetite and anthropogenic sources; hence, the magnetic signal is mainly from the catchment, principally pedogenic and, thus, has a climatic signature embedded in it. The Pookot profile from a high rainfall (~4000 mm/year) region does not exhibit any magnetic enhancement at the surface. In fact, there is hardly any difference between surface and sub-surface samples, which reflects on its deeply weathered nature as a result of the high rainfall. The Shantisagara profile exhibits lessivage of magnetic minerals, resulting in a thick magnetically enhanced zone. It shows the highest chi[fi] values among the five profiles studied. The Thimmammayanayakanakere [TK] and Ayyanakere [AK] soil profiles do not exhibit any magnetic enhancement of top-soil. In fact, chi[fi] values increase towards the profile-bottom, suggesting top-soil erosion, besides contribution of magnetic minerals from parent rocks. In the TK profile, there is a clear distinction between surface and sub-surface samples, the former being magnetically coarser grained. The Kurburukere profile exhibits moderate to strong chi[fi] values and a mild magnetic enhancement at the surface. The data would be useful for establishing soil-sediment linkages for paleoclimatic studies of lake sediments.

Maternal Mortality

Maharlouei, Najmeh; Zakeri, Zeinab; Mazloomi, Ezat; Lankarani, Kamran Bagheri
Shiraz University of Medical Sciences - Health Policy Research Center
Archives of Iranian Medicine 2012; 15 (1): 14-17 (21 ref.)
Keywords: Cross-Sectional Studies; Postpartum Period; Uterine Hemorrhage; Influenza A Virus, H1N1 Subtype; Hemorrhage
Abstract: The high rate of maternal mortality [MM] remains a challenge, especially in developing countries. In 2000, the World Health Organization [WHO] targeted a 75% reduction by the end of 2015. In this survey, we determine trends in MM rates and associated factors in Pars Province, southwestern Iran. All MM in Pars Province from March 2003 to March 2010 were considered in this cross-sectional study. Data were recorded for demographic characteristics, autopsy findings, medical and obstetric histories. The data were then analyzed with a z-test to identify differences in the rate of MM during the study period. The mean MM rate was 22.18 per 100 000 live births [95% CI, 17.55-26.8] during the seven year study period, and was highest [32.3/100 000] in the first year. Most deaths [71.3%] occurred in the postpartum period, and the lowest proportion occurred during delivery [5%]. High-risk mothers accounted for 79.2% of maternal deaths. Among the mothers who died, 62% received satisfactory prenatal care, and at least two years elapsed between successive pregnancies in 78%. Hemorrhage was the main cause of death [35.6%] and the least frequent cause was H1N1 virus infection [2%].This study provides evidence of serious deficiencies in postpartum care that need urgent action. Priority should be given to vaginal bleeding and high-risk status mothers.
Okour, A.M.; Khader, Y.; Amarin, Z.; Jaddou, H.; Gharaibeh, M.
E-mail:aokour@just.edu.jo
Jordan University of Science and Technology - Faculty of Medicine - Department of Public Health and Community Medicine


Keywords: Health Care Quality, Access, and Evaluation; Health Surveys; Cross-Sectional Studies; Retrospective Studies; Questionnaires; Delivery of Health Care; Health Services Accessibility

Abstract: Understanding the factors that operate during pregnancy, delivery and postpartum is the key to success in the prevention of maternal mortality. This cross-sectional survey in Jordan for the years 2007-2008 aimed to identify the role of substandard care and delays in maternal deaths. All maternal deaths among women aged 15-49 years over this period [n = 76] were investigated retrospectively through file review and household interviews in all hospitals [n =102] and forensic medicine departments in Jordan; elements of substandard care and delays at hospital, home and transport levels were evaluated. Substandard care accounted for 52.6% of deaths, delay in seeking care 55.3%, delay in transport 15.8% and delay in hospital care 17.1%. Women who did not recognize the danger signs of pregnancy [OR 6.32], refused medical advice to terminate the pregnancy [OR 1.78] or at a gestational age > 37 weeks [OR 1.85] were significantly more likely to delay seeking care, as were those with larger mean family size.

Matrix Metalloproteinase 3

blood

Serum level of matrix metalloproteinase-3 in patients with oral Lichen planus.
Farzin, M.; Mardani, M.; Ghabanchi, J.; Fattahi, M.J.; Rezaee, M.; Heydari, S.T.; Tadbir, A. Andisheh
Shiraz University of Medical Sciences - Dental School - Department of Prosthodontics

IRCMJ - Iranian Red Crescent Medical Journal 2012; 14 (1): 10-13 (22 ref.)

Keywords: Lichen Planus, Oral-blood

Abstract: Oral Lichen planus [OLP] is a chronic lesion of the oral mucosa with unknown origin. Basement membrane changes are common in OLP and may be mediated by proteases such as matrix metalloproteinase [MMPs] and mast cell chymase. The aim of our study was to evaluate the level of serum MMP-3 in OLP compared to normal individuals and assess its clinical significance. Thirty four serum samples from patients diagnosed with OLP [12 males, 22 females, age: 42.2 +/- 10.8 years] and 34 serum samples from healthy control subjects [11 males, 23 females, age: 42.5 +/- 13.3 years] were collected and MMP-3 concentration was measured by ELISA. The serum MMP-3 level in OLP patients was higher [21.64 +/- 24.31 ng/ml] compared with healthy controls [16.52 +/- 23.63 ng/ml], but showed no statistically significant difference. A statistically significant difference was demonstrated between the two types of OLP, being more pronounced in the erosive/atrophic form [6]. The different clinical appearances of OLP are associated with significant differences in MMP-3 serum level.

Menstruation Disturbances

epidemiology

Prevalence and pattern of menstrual disorders among Lebanese nursing students.
Karout, N.; Hawai, S.M.; Altuwaijri, S.
E-mail:nkarout@yahoo.com
Saad College of Nursing and Allied Health Sciences


Keywords: Prevalence; Students, Nursing; Questionnaires; Cross-Sectional Studies; Dysmenorrhea-epidemiology; Oligomenorrhea-epidemiology; Premenstrual Syndrome-epidemiology

Abstract: Menstrual disorders frequently affect the quality of life of adolescents and young adult women and can be indicators of serious underlying problems. The objective of this study was to determine the prevalence and pattern of menstrual symptoms among nursing students in Beirut, Lebanon. Of 352 students completing a written questionnaire, the most common menstrual disorders were irregular frequency of menstruation [80.7%] premenstrual syndrome [54.0%], irregular duration of menstruation [43.8%], dysmenorrhea [38.1%], polymenorrhea [37.5%] and oligomenorrhea [19.3%]. On logistic regression analysis, there were significant associations between irregular cycles and marital status [OR 2.18] and menarcheal age [OR 4.76]; oligomenorrhea and residency [OR 2.06] and menarcheal age [OR 3.17]; abnormal blood loss and menarcheal age [OR 6.92]; dysmenorrhea and marital status [OR 8.93] and residency [OR 2.04]; and premenstrual syndrome and marital status [OR 2.10]. Dysmenorrhea and premenstrual symptoms were serious enough to affect daily activities or academic attendance in many cases and this is a concern for policy-makers.
Mental Disorders

epidemiology

Psychiatric problems and suicidal behaviour in incarcerated adolescents in the Islamic Republic of Iran.
Ghanizadeh, A.; Nouri, S.Z.; Nabr, S.S.
E-mail:ghanizad@sina.turns.ac.ir
Shiraz University of Medical Sciences - School of Medicine - Research Center for Psychiatry and Behavioral Sciences
Keywords: Suicide; Behavior; Prevalence; Cross-Sectional Studies; Conduct Disorder-epidemiology; Prisoners-psychology
Abstract: Data are lacking about the prevalence of psychiatric disorders and suicidal behaviour in incarcerated adolescents in Asia. This cross-sectional study evaluated the prevalence of psychiatric disorders and the prediction of suicidal attempts in 100 incarcerated males aged 12-19 years in Shiraz. Data were collected in face-to-face interview using the Kiddie Schedule for Affective Disorders and Schizophrenia [Farsi version]. The mean age was 16.8 [SD 1.3] years and mean age at first imprisonment was 16.0 [SD 1.5] years. Nearly 70% of the adolescents had at least one current psychiatric disorder, the commonest being: conduct disorder [55%], oppositional defiant disorder [48%] and attention deficit hyperactivity disorder [33%]; 11% had major depressive disorder and 2% schizophrenia. In all, 20% had self-harmed without intent to kill themselves and 12% had attempted suicide, 50% of whom had tried more than once. In logistic regression analysis only self-harming behaviour and major depressive disorder were significant predictors of attempted suicide.

Mesenchymal Stem Cells

drug effects

Role of 5-azacytidine in the differentiation of rat bone marrow mesenchymal stem cells into cardiomyogenic cells.
Hammed, Samy Hosny; El Shawarby, Amany Mohamed; Ahmed, Mohamed Abd Elrahman; Abo Golayel, Mohamed Kamel; Mohamed, Asmaa Abd Elmonen
Ain Shams University - Faculty of Medicine - Department of Histology
Keywords: Azacitidine-therapeutic use; Cell Differentiation; Myocytes, Cardiac-physiology; Mesenchymal Stem Cells-ultrastructure; Microscopy, Electron
Abstract: Increasing attention is being paid to the use of mesenchymal stem cells [MSCs] for treatment of human diseases such as myocardial infarction. To study the differentiation of the bone marrow mesenchymal stem cells [BM-MSCs] into cardiomyogenic cells using 5-azacytidine. Forty adult male albino rats were used in this study. BM-MSCs were isolated and cultured in a complete Dulbecco's modified Eagle's medium containing 1% antibiotics and 10% fetal bovine serum [the control group]. Second passaged cells were treated with 10micro mol/l 5-azacytidine for 72h. Then, the medium was removed and kept in a 5-azacytidine-free medium for 4 weeks [the 5-azacytidine-treated group]. The adherent cells of both groups were examined using a phase-contrast microscope and a transmission electron microscope. Expressions of cytoskeleton protein desmin and cardiac muscle-specific cardiac troponin T were assessed by immunohistochemistry. BM-MSCs of the control group were spindled and star shaped with multiple processes and vesicular nuclei. After adding 5-azacytidine for 1 week, the cells showed multinucleation. On the second week, the cells formed stick-like structures. The cells showed extensive cytoplasmic striations in the third week. Finally, in the fourth week, the cells formed myotube-like structures. Immunohistochemical staining of cells of the 5-azacytidine-treated group revealed a positive immune reaction for desmin and cardiac troponin-T. Ultrastructural examination of the 5-azacytidine-treated group revealed that the cells were elongated with central oval large nuclei. The mitochondria were elongated with well developed cristae. There were abundant free ribosomes and extensive dilated rough endoplasmic reticulum. Myofibrils started to appear in the peripheral part of the cytoplasm and T-tubules appeared. MSCs can be differentiated in vitro by 5-azacytidine into cardiomyogenic cells, which are important for repairing infarcted myocardium.
Mesenteric Lymphadenitis
diagnosis

Mesenteric adenitis in children: sonographic criteria for diagnosis.
Bin Ghouth, Wadhaa Saeed; Alhaddad, Zain Hasan
Hadramout University - Jordanian Board, Arab Board in Radiology - Radiology - Department of Surgery
Assiut Medical Journal 2012; 36 (1): 221-228 (20 ref.)
Keywords: Abdomen, Acute-ultrasonography; Child; Acute Disease

Abstract: The purpose of this study is to highlight mesenteric adenitis as a frequent cause of acute and recurrent abdominal pain in children and identify the sonographic criteria that can be used in diagnosis and differentiation from other causes of mesenteric lymphadenopathy. 107 children [70 boys, 37 girls] referred to Almadeena medical polyclinic in Mukalla-Yemen with acute or recurrent abdominal pain were evaluated using graded compression sonography for features of mesenteric adenitis. The children were divided into two groups according to their clinical presentation: acute and subacute or recurrent, and into three subgroups according to age: A:1 - less than 5, B: 5 - less than 10, C: 10-15 y. The number, size, shape, site, echogenicity and color doppler findings of each mesenteric node was recorded and evaluated. The frequency of mesenteric adenitis was higher in boys [n=70 [65.4%]] than girls [n=37 [34.6%]]. Acute presentation resembling appendicitis was higher in older children [age group C], while recurrent presentation is more frequent in younger age [less than 10 years], and in general the disease had a more frequent subacute presentation [67.3%]. The mesenteric lymph nodes detected in each patient were more than 5 in number, mainly in clusters, ovoid or spherical in shape, hypoechoic and sharply demarcated from surroundings, with a hyperechoic center which showed color doppler signal and located mainly in the right lower abdomen but also seen in the left lower abdomen and preaortic area, each one measures >/= 5 mm in short axis, and the long axis of the largest one measures >/= 10 mm. Mesenteric adenitis can be diagnosed when mesenteric lymphadenopathy with sonographic features mentioned above detected by ultrasound in children with acute or recurrent abdominal pain in the absence of sonographic features of appendicitis or other inflammatory abdominal processes.

Metabolic Syndrome X

Effects of losartan vs enalapril on the markers of metabolic syndrome.
Al Thanoon, Zeina A.; Mahmood, Isam H.
E-mail:isam_mahmood@yahoo.com
College of Pharmacy - Pharmacology Department
Oman Medical Journal 2012; 27 (1): 27-30 (33 ref.)
Keywords: Losartan; Enalapril; Waist Circumference; Body Weight; Body Mass Index; Blood Pressure; Blood Glucose; Triglycerides; Cholesterol, HDL

Abstract: To compare the effects of losartan and enalapril on the markers of metabolic syndrome. One hundred and twenty six newly diagnosed hypertensive patients having other markers of metabolic syndrome participated in this study. The study was performed in the department of pharmacology, college of medicine at Ibn-Sina Teaching Hospital in Mosul city, Iraq, during the period between December 2007 and June 2009. The patients were divided into 2 main groups: 1] Losartan group: consisted of 60 patients, and 2] enalapril group: Consisted of 66 patients. Waist circumference, weight, Body mass index, blood pressure, serum glucose concentration, triglyceride and HDL-cholesterol were measured before and after administration of therapy. The effects of therapy were assessed by statistically comparing the results before and after the drug administration. Comparison of waist circumference, blood pressure, FSG, triglycerides of the patients before drug administration [baseline data], with those of the controls showed a significant elevation, while HDL-cholesterol showed a significant reduction. A significant reduction of waist circumference, BP, FSG and a significant elevation of HDL-cholesterol were also noted after therapy with both losartan and enalapril. Both losartan and enalapril produced a significant reduction of markers of metabolic syndrome and may be regarded as effective drugs for treatment of hypertension in patients with markers of metabolic syndrome.

Metals

In situ measurement of bioavailable metal concentrations at the downstream on the Morava river using transplanted aquatic mosses and DGT technique.
Divis, P.; Machat, J.; Szkanadera, R.; Docekalova, H.
E-mail:divis79@yahoo.com
Brno University of Technology - Faculty of Chemistry
International Journal of Environmental Research 2012; 6 (1): 87-94 (33 ref.)
Keywords: Zinc; Lead; Nickel; Copper; Rivers; Water-analysis

Abstract: This work summarized the results of a long term monitoring programme performed downstream on the Morava river [Czech Republic]. During this programme the total dissolved concentrations and bioavailable fraction of...
selected metals [Zn, Pb, Ni, Cu] were monitored. For the determination of bioavailable metals species, diffusive gradients in thin films technique [DGT] together with moss bags technique utilizing Fontinalis antipyretica moss species were used. All of the measured metal concentrations were compared with an amount of accumulated mass by Fontinalis antipyretica, represented as a concentration factor, CF. Obtained results shown that further investigation of DGT technique and metal accumulation processes by Fontinalis antipyretica is needed to conclude if the DGT technique is a good alternative for the biomonitoring technique using Fontinalis antipyretica moss bags as a means to measure [bio] available metal concentrations in natural water. Significant correlation with CF was found in the case of DGT[Zn] and DGT[Pb] concentrations. On the other site, accumulated mass of Cu by Fontinalis antipyretica correlated significantly with total dissolved concentration of Cu. In the case of Ni no correlation was found between total dissolved Ni concentrations, DGT[Ni] concentration and CF of Fontinalis antipyretica.

**Metals, Heavy**

**Bioaccumulation of heavy metals in fish species collected from former tin mining catchment.**

Ashraf, M.A.; Maah, M.J.; Yusoff, L.
University of Malaya - Department of Chemistry

*International Journal of Environmental Research* 2012; 6 (1): 209-218 (52 ref.)

**Keywords:** Fishes; Tin; Mining; Arsenic; Copper; Lead; Zinc

**Abstract:** This study has been carried out to determine the accumulation of heavy metals [arsenic, copper, lead, tin and zinc] in fish samples collected from former tin mining catchment. Total eight types of fish having fifteen different species are identified. Cyperinidae is the most abundant family with eight different species found in the catchment. Fish samples were analysed by using inductively coupled plasma optical emission spectrophotometer ICP-OES. The accuracy of method is validated by certified reference material. The highest level of arsenic was observed in Hampala macrolepida while Ostechilus hasselti shows the least. For Copper concentrations, the maximum was obtained in Mastacembelus armatus and the minimum in Oxyeleotris marmorata. High levels of lead, tin and zinc were found in the Rasbora elegans, Trichogaster trichopterus, Oxyeleotris marmorata respectively while Macrobrachium resenbergii, Mastacembelus armatus, Rasbora elegans had the least concentrations. The sequence of order of the heavy metals measured was Sn > Pb > Zn > Cu > As, respectively. The results showed elevated levels of tin, lead and zinc in all the fish samples although copper and arsenic were available in relatively low concentration in the most samples. Sn, Pb, and Zn concentration in the samples were greater than Malaysia food act permissible levels. Hazard index < 1 suggests unlikely adverse health effects whereas HI > 1 suggests the probability of adverse health effects. Although the heavy metals analysed in the catchment did not pose any immediate health risk to humans but due to the bioaccumulation and magnification of these heavy metals in humans, it is essential to safeguard levels of the metals in the environment.

**Choose of heavy metals pollution biomonitor: a critic of the method that uses sediments total metals concentration as the benchmark.**

Okuku, E.O.; Peter, H.K.
Kenya Marine and Fisheries Research Institute

*International Journal of Environmental Research* 2012; 6 (1): 313-322 (24 ref.)

**Keywords:** Geologic Sediments; Benchmarking; Edetic Acid; Hydrochloric Acid; Nitric Acid; Aluminum; Cadmium; Copper; Iron; Manganese; Zinc; Nickel; Water

**Abstract:** The study aimed to come up with a list of specific macroalgae species, which could be used to biomonitor specific metal elements in the coastal waters of East Africa. Water extraction, EDTA, aqua regia extraction and optimized BCR 3-step sequential extracts were used to mimic bioavailable metals under various environmental conditions. The results indicated that Viva lactuca could be used as a biomonitor to predict BCR 3-step sequential bioavailable Al, Cd, Co, Fe, Mn, Zn and Ni whereas Sargassum species could be used as a biomonitor for BCR 3-step sequential bioavailable Co, Cu, Fe, Mn and Zn. In Sargassum spp. only Co showed significant correlation with concentration in sediment's aqua regia extracted metals whereas in Viva lactuca only Al, Co and Fe showed significant correlation with total metals extracted through aqua regia procedure. This study therefore recommends the use of Viva lactuca and Sargassum for biomonitoring of Al, Cd, Co, Fe, Mn, Zn, Ni and Co, Cu, Fe, Mn, Zn respectively. The study recommends the use of labile fraction of BCR sequential extraction for screening of macroalgae to be used for heavy metal pollution monitoring in East Africa region.

**analysis**

**Estimation of some heavy metal residues in beef and poultry meat in Elgiza province.**

Abdel Fatah, Noha R.M.
Animal Health Research Institute


**Keywords:** Poultry; Meat Products; Liver; Kidney; Spectrophotometry, Atomic-methods

**Abstract:** A total of 120 random samples of beef and poultry samples [60 of each]. The beef samples were beef meat, liver and kidney [20 of each] and the poultry samples were poultry meat, liver and kidney [20 of each] were
randomly collected from butcher's and poultry shops at El.Giza province. The samples were transferred to the laboratory for estimation of lead, cadmium and arsenic residues by using atomic absorption spectrophotometer. The obtained results revealed that the mean values of lead, cadmium and arsenic residues in beef meat were 1.745 +/- 0.61 ppm, 0.93 +/- 0.05 ppm and 53.1 +/- 3.4 ppm [part per million], while the mean values of lead, cadmium and Arsenic residues in poultry meat [cuts] were 4.15 +/- 1.15 ppm, 0.31 +/- 0.58 ppm and 47.6 +/- 0.15 ppm respectively. Also the mean values of pb, cd and As in examined beef livers were 3.95 +/- 1.15 ppm, 1.16 +/- 0.16 ppm and 43.5 +/- 3.22 ppm respectively. As well as the mean values of pb, cd and As examined beef kidney were 2.7 +/- 1.15 ppm, 0.64 +/- 0.09 ppm and 43.7 +/- 0.15 ppm respectively. While the mean values of pb, cd and As in examined poultry kidney were 4.1 +/- 1.53 ppm, 0.41 +/- 0.1 ppm and 37.9 +/- 1.14 ppm respectively. The public health significance and the prophylactic measures to avoid such residues were discussed.

Methicillin-Resistant Staphylococcus aureus

isolation and purification

Isolation and screening of methicillin-resistant Staphylococcus aureus from health care workers in Libyan hospitals.
Ahmed, M.O.; Elramalli, A.K.; Amri, S.G.; Abuzweda, A.R.; Abouzeed, Y.M.
E-mail:a.mo@live.com
University of Tripoli - Faculty of Veterinary Medicine - Department of Microbiology and Parasitology
Keywords: Health Personnel; Mass Screening; Hospitals; Drug Resistance, Microbial
Abstract: This is the largest Libyan study to date to investigate the prevalence and antimicrobial susceptibility of methicillin-resistant Staphylococcus aureus [MRSA] among health care workers in Tripoli, Libya. A total of 569 doctors and nurses from 4 main hospitals were screened for MRSA with specimens collected from the anterior nares. Isolates from 109 of the 569 subjects [19%] were confirmed as MRSA by polymerase chain reaction assay; the majority [98/109] were from a general hospital. Antimicrobial resistance patterns tested by disk diffusion were as follows: erythromycin [74%], ciprofloxacin [77%], clindamycin [20%], trimethoprim/sulfamethoxazole [50%], quinuprisin/dalfopristin [19%], vancomycin [12%] and mupirocin [5%]. Eighteen isolates exhibited macrolide-lincosamide-streptogramin B resistance [MLSB]: 6 were MLSBi and 12 were MLSBc. The results provide evidence that Libyan health care workers could serve as MRSA carriers and play a role in the dissemination of MRSA to the public and other workers.

Methyl Ethers

Biodegradation of MTBE by bacteria isolated from oil hydrocarbons-contaminated environments.
E-mail:lalevicb@yahoo.com
University of Belgrade - Faculty of agriculture
International Journal of Environmental Research 2012; 6 (1): 81-86 (41 ref.)
Keywords: Biodegradation, Environmental; Bacteria; Staphylococcus; Pseudomonas; Staphylococcus saprophyticus
Abstract: Methyl tertiary butyl ether [MTBE] belongs to the group of gasoline oxygenates and persistent environment contaminants, and shows potential for bio degradation in aerobic and anaerobic conditions, through application of pure microbial cultures. Presented research shows that indigenous bacterial isolates 6sy and 24p, selected from oil hydrocarbons-contaminated environments, were capable of utilizing MTBE as sole carbon and energy source. Based on 16S rDNA sequence analysis, bacterial isolates 6sy and 24p were identified as Staphylococcus saprophyticus subsp. saprophyticus and Pseudomonas sp., respectively. The MTBE biodegradation rate was affected by longevity of incubation period and initial MTBE concentration. After 3 weeks of incubation at 25°C in a dark, the removal rates of initial 25 and 125 ppm MTBE concentrations by Staphylococcus saprophyticus 6sy were found to be 97, and 63%, respectively, while efficiency of Pseudomonas sp. in degradation of indicated concentrations was 96, and 40%, respectively. Both bacterial isolates were able to grow in MTBE-containing growth medium. Highest growth rate of bacterial isolates was observed at the end of incubation period. The presented results indicated the potential of these bacterial isolates in bioremediation of MTBE-contaminated environments.
Microcystis

Cyanobacterium Microcystis aeruginosa bloom in Aras dam reservoir.

Mohebbi, F.; Azari, A. Mohsenpour; Heidari, M.; Asem, A.
E-mail:mohebi44@yahoo.com
Iranian Artemia Research Center


Keywords: Cyanobacteria; Eutrophication; Lakes; Fresh Water

Abstract: Occurrences of cyanobacterial bloom typically appear in eutrophic lakes which either have been affected by anthropogenic nutrient loading or are naturally rich in nutrients. Microcystis blooms have been reported all over the world in freshwater ecosystems mainly due to increased population which results in increased the waste water production. The aim of this study was to recognize the basic reasons of Microcystis aeruginosa bloom in Aras reservoir. Water temperature, pH, DO, EC, TN, N-NO\(_2\), N-NO\(_3\), P-Po\(_4\) chl a and the number of Microcystis colonies were determined. The effects of these parameters on the microcystis increased growth was examined. Though we could not strictly relate a few other factors to this phenomenon, higher water temperature, pH and DO in the sampling site i.e. 27° C, 9.16 and 17.2 mg/L respectively, surely favored the M.aeruginosa bloom. In brief, preventing or reducing the nutrients flow into the reservoir should be considered as a priority in order to reduce Microcystis scum forming colonies.

Motor Vehicles

An investigation on vehicle's fuel consumption and exhaust emissions in different driving conditions.

Fotouhi, A.; Montazeri, Gh.M.
E-mail:afotouhi@iust.ac.ir
Iran University of Science and Technology - Systems Simulation and Control Laboratory - Department of Mechanical Engineering

International Journal of Environmental Research 2012; 6 (1): 61-70 (22 ref.)

Keywords: Vehicle Emissions; Automobile Driving; Gasoline

Abstract: In this paper, vehicle's fuel consumption and exhaust emissions are investigated in different driving conditions based on driving segments clustering. Driving data collection is performed using global positioning systems in real traffic conditions. The driving data is clustered into five groups using k-means clustering technique. Vehicle's fuel consumption and exhaust emissions [i.e. HC, NO\(_x\) and CO] are investigated in different driving conditions using computer simulations. The relationship between driving features and vehicle's fuel consumption and exhaust emissions is also presented. According to the simulation results, vehicle's fuel consumption decreases as average velocity increases from very congested traffic condition to freeway traffic condition. The most HC is produced is low speeds. The results also demonstrate that high accelerations and decelerations cause high amount of NO\(_x\). About the CO emission, a moderate driving in which the velocity and accelerations are not very high or very low, leads to the least amount of CO.

Muscle, Skeletal

Effect of green tea on aged rat skeletal muscle: a light and electron microscopic study.

El Gamal, Dalia Abdo; Ahmed, Salwa Fares
E-mail:delgamal1974@yahoo.com
Assiut University - Faculty of Medicine - Department of Histology

Egyptian Journal of Histology [The] 2012; 35 (2); 304-314 (39 ref.)

Keywords: Aged; Muscle, Skeletal-ultrastructure; Microscopy, Electron-methods; Plant Extracts-therapeutic use; Camellia sinensis; Treatment Outcome; Rats

Abstract: Age-related sarcopenia represents a powerful risk factor for the loss of independence and physical disability in the elderly. Green tea contains a series of polyphenols called catechins and has been applied for disease prevention and treatment. To determine the effects of the intake of green tea on age-related changes in skeletal muscle. Thirty female albino rats were divided into three equal groups: group I [control adults] included 6-month-old rats, group II [aged] included 18-month-old rats, and group III [green tea treated] included 12-month-old rats that received green tea at a dose of 300mg/kg body weight in 1.5ml distilled water orally daily by a gastric tube for 6 months. Quadriceps muscle was dissected bilaterally and prepared for light and electron microscopical examination. Morphometric and statistical studies of the mean cross-sectional area of myofibers were carried out in the three studied groups. With increasing age, there were focal degeneration and atrophy, and significant decrease in the mean cross-sectional area of myofibers. The connective tissue framework showed increased collagen fiber deposition and deficient...
reticular fibers. Ultrathin sections showed areas of myofibrillar loss and mitochondria with destroyed cristae. Dense shrunken nuclei of satellite cells were observed. After treatment with green tea, normal-appearing myofibers, except for centrally located nuclei, were observed. The mean cross-sectional area of myofibers increased significantly compared with the aged group. Collagen and reticular fibers were relatively similar to those of the control. Proliferation of satellite cells was observed with restoration of normal myofiber ultrastructure. Good regenerative outcome was observed in aged skeletal muscle after the intake of green tea.

**Mycobacterium avium Complex**

**Isolation and purification**

Isolation and identification of Mycobacterium avium complex and other nontuberculosis mycobacteria from drinking-water in Basra governorate, Iraq.

Al Sulami, A.A.; Al Taee, A.M.R.; Wida'a, Q.H.

E-mail: Aminabdulah@yahoo.com

University of Basra - College of Education - Department of Biology


**Keywords:** Water Microbiology; Microbial Sensitivity Tests; Mycobacterium avium Complex-drug effects; Nontuberculous Mycobacteria-isolation and purification; Nontuberculous Mycobacteria-drug effects

**Abstract:** This study aimed to determine the occurrence of Mycobacterium avium complex and other nontuberculous mycobacteria in drinking-water in Basra governorate, Iraq and their susceptibility to several antibiotics and the effect of 0.5 mg/L of chlorine on their survival. A total of 404 samples of drinking-water were collected from 33 different districts of the governorate from November 2006 to August 2007. Filtered samples were incubated for 7 days or less in a monophasic-biphasic culture setup of tuberculosis broth and Lowenstein-jensen agar. The 252 isolates were identified as M avium complex [21], M. marinum [15], M. kansasii [30], M. simiae [20], M. szulgai [19], M. xenopi [16], M. malmoense [11], M. fortuitum [37], M. chelonae [50] and M. abscessus [33]. Isolates were tested for antibiotic susceptibility as well as their ability to tolerate chlorine at a concentration of 0.5 mg/L. The presence of these pathogenic bacteria in drinking-water renders the water unfit for human consumption.

**Mycobacterium tuberculosis**


Azfar, Shah Farhan; Islam, Najmul

E-mail: shahtafhanazfar@gmail.com

Firoz Specialist Hospital


**Keywords:** Reactive Oxygen Species; Tumor Necrosis Factor-alpha; Monocytes; Lupus Erythematosus, Systemic; Glutathione; Electrophoresis, Polyacrylamide Gel; Enzyme-Linked Immunosorbent Assay; Cell Culture Techniques; Fever; Arthritis; Exanthema

**Abstract:** The etiology and pathogenesis of systemic lupus erythematosus remains unknown, evidence exists for the involvement of mycobacterial antigen. This study is aimed to determine the effect of Mycobacterium tuberculosis on clinical course of SLE patients and the role of ROS and TNF-alpha in the pathogenesis of tuberculosis associated SLE patients. This study was done on 100 patients divided into SLE group [n=30] TB group [n=30], SLE-TB group [n=30] and control group [n=10]. All patients underwent clinical, biochemical and immunological evaluation by employing techniques such as SDS-PAGE, direct binding and competition ELISA, PBMC and cell culture. Fever, arthritis, skin rash, photosensitivity were more common in both SLE and SLE-TB group. Reduced glutathione showed amelioration of ROS and TNF-alpha, induced action, which in turn, subsequently suppressed the immune-bindings observed in monocytes of TB and SLE patients cultured without glutathione. Data shows that SLE patients are more susceptible to developing Mycobacterium tuberculosis, as ROS and TNF-alpha in SLE patients could activate the replication of mycobacterial Ag85B [30 kDa] after bacilli infection.
Mycotoxins

isolation and purification

Fungal populations and mycotoxins of wheat grains imported to Egypt.
Afifi, M.M.; Abdel Mallek, A.Y.; El Shanawany, A.A.; Khattab, S.M.R.
Al-Azhar University - Faculty of Science - Department of Botany and Microbiology
Assiut University Bulletin For Environmental Researches 2012; 15 (1): 31-52 (84 ref.)

Keywords: Triticum; Incidence

Abstract: The fungal populations and mycotoxins were evaluated on 38 wheat grain samples imported to Egypt from different countries. The incidences, isolation frequencies and relative densities of both storage and field fungi were determined. 61 species and one unidentified species in addition to 3 species varieties appertaining to 21 genera were isolated on glucose-Czapek's agar medium [CZ], glucose-Czapek's agar containing 6% NaCl [CZ-NaCl] and malt agar medium [MA]. The most predominant mycobiota were, Aspergilus species [43.4%] followed by Eurotium species [13.7%], Rhizopus [13.2%], and Alternaria species [7.7%] of the total isolates. The most common species which contaminated samples were A. flavus [18.2%] followed by A. flavus var. columnaris [12.7%], Alternaria alternate [9.3%], and Eurotium amstelodami [3.8%] of the total isolates. Statistical analysis revealed a high significant correlation between, fungal total count, number of genera, and number of species on different media. Meanwhile, the mean number of genera and species on MA and CZ were significantly increased than CZ-NaCl. Evaluation of naturally occurance of mycotoxins in wheat grain, showed 10.5% of samples containing sterigmatocystin. The most predominant mycotoxigenic species were A. flavus var. columnaris and A. flavus. Nevertheless, the ability of Aspergillus of section Flavi to produce mycotoxins [aflatoxins B[1], B[2], G[1] and G[2] and sterigmatocystin] was 35.4% of isolates. These hazardous compounds are known to decrease the food quality and can cause acute of chronic intoxication to humans and animals.

Myocardial Infarction

etiology

Evaluation of risk factors in acute myocardial infarction patients admitted to the coronary care unit, Tripoli Medical Centre, Libya.
Abduelkarem, A.R.; El Shareif, H.J.; Sharif, S.I.
E-mail:kareml961@hotmail.com
Ajman University of Science and Technology Network - College of Pharmacy and Health Sciences - Department of Clinical Pharmacy and Pharmacy Practice

Keywords: Risk Factors; Acute Disease; Coronary Care Units; Myocardial Infarction-prevention and control; Myocardial Infarction-mortality

Abstract: The aim of this study was to provide an overview of the risk factors for acute myocardial infarction in patients attending Tripoli Medical Centre, Libya. Records were reviewed for 622 patients with a mean age of 58.3 [SD 12.9] years. Diabetes mellitus [48.2%], hypertension [35.7%] and smoking [50.6%] were among the risk factors reported. There were 110 patients [17.7%] who died during hospitalization, mainly suffering cardiogenic shock [48.0%]. The rate of use of thrombolytic therapy was low in patients who were female [40.4% versus 58.4% for males], older age [31.6% for those > 85 years versus 63.3% for patients < 55 years], diabetics [45.3% versus 62.0% for non-diabetic patients] and hypertensives [47.3% versus 57.8% for non-hypertensive patients]. Prevention strategies should be implemented in order to improve the long-term prognosis and decrease overall morbidity and mortality from coronary artery disease in Libyan patients.

Myocardial Ischemia

therapy

In vivo and in vitro studies on the antioxidant activity of sea cucumber aqueous extract against isoproterenol-induced myocardial injury in a rat model.
Ezz, Magda K.; Atef, Azza A.; Esmat, Amr Y.
Ain Shams University - Faculty of Science - Department of Biochemistry

Keywords: Sea Cucumbers-drug effects; Antioxidants; Myocardial Ischemia-chemically induced; Isoproterenol-pharmacology; Rats; Myocardium-pathology; Histology; Treatment Outcome
Abstract: The present study was undertaken to evaluate the cardioprotective activity of the aqueous extract of sea cucumber body wall against isoproterenol-induced cardiac injury in rats. Isoproterenol a synthetic catecholamine and beta-adrenergic agonist, which causes severe oxidative stress-induced myocardial injury. HPLC analysis of the sea cucumber aqueous extract revealed the presence of some active phenolic components with antioxidant activity, such as pyrogallol, rutin, chlorogenic acid, ascorbic acid, catechin, coumaric acid, cinnamic acid, and ellagic acid. Subchronic oral administration of sea cucumber extract [14.4mg/Kg b.w.] to normal rats thrice weekly for 8 consecutive weeks did not exert any toxic side effects whereas enhanced the cardiac reduced glutathione level and catalase activity, and in contrast reduced serum low density lipoprotein-cholesterol level. On the other hand, pretreatment of rats with the sea cucumber extract for 8 weeks before being intoxicated with 2 subcutaneous injections of isoproterenol normalized serum levels of total CK, CK-MB activity, total cholesterol, triglycerides and high-density lipoprotein-cholesterol, as well as cardiac glutathione peroxidase and catalase activities. In vitro antioxidant studies on the sea cucumber extract have shown a moderate scavenging activity for NO radical and iron chelating activity, as well as a weak inhibition of lipid peroxidation. In addition, histopathological examination of H and E stained myocardium sections of the left ventricle showed that pretreatment of isoproterenol-intoxicated rats with sea cucumber extract caused a substantial attenuation in the degenerative cellular changes induced by isoproterenol.

Nanotechnology

Nanotechnology.
Omar, Sahar M.M.
E-mail: saharhistology@yahoo.com
Ain Shams University - Faculty of Medicine - Department of Histology
Keywords: Microchemistry; Nanostructures; Nanomedicine; Review Literature as Topics
Abstract: Nanotechnology means technological developments on a nanometer scale, usually 0.1-100nm. The application of nanotechnology in medicine offers impressive solutions for various life-threatening diseases. nanoparticle -carrying drugs can 'target' the drug to the parts of the body where it is needed, can escape uptake by the immune system and can cross biological barriers. Hence, providing reduced drug side effects and improved drug efficacy. With the advances in the field of nanotechnology, manufacture of nanorobot is expected to be created in the next 10 years. this automatic molecular machine can swim in human blood, can view full cellular details, can monitor levels of different compounds, and can store that information. This device can also be used to deliver drugs or perform wireless intracellular and intranuclear surgery. Nanotissue samples can be taken as well. Nanomedicine can hopefully conquer human disease, illhealth, and aging.

Neuroschistosomiasis

diagnosis

Schistosomiasis of the spinal cord: report of 5 cases from Sudan.
Salim, A.D.; Arbab, M.A.; El Hassan, L.A.; El Hassan, A.M.
Shaab and Ibn Khuldoun Hospitals - Neurosurgery Department
Keywords: Neuroschistosomiasis-pathology; Neuroschistosomiasis-surgery; Neuroschistosomiasis-drug therapy; Spinal Cord-pathology; Spinal Cord-parasitology
Abstract: Schistosomiasis of the spinal cord is an uncommon but potentially curable form of schistosomiasis, if diagnosed and managed early. The spinal cord is more frequently affected in Schistosoma mansoni or S. haematobium infections. This paper describes the clinical manifestations, diagnosis and management of schistosomiasis of the spinal cord in 5 patients attending Shaab and Ibn Khuldoun Hospitals, Khartoum from 1997 to 2007. There were 4 males and 1 female aged 9-45 years. They presented with symptoms and signs due to cord compression at the lower thoracic and lumbar vertebrae. Imaging studies revealed intramedullary masses compressing the cord. Biopsy showed ova of 5. mansoni with surrounding inflammatory reaction. The cord showed demyelination near the ova and an associated inflammatory reaction. Patients responded well to surgical decompression and treatment with praziquantel and oral steroids.
Nigella sativa toxicity

The possible toxic effect of different doses of Nigella sativa oil on the histological structure of the liver and renal cortex of adult male albino rats.

Zaghlol, Dorreia Abd Allah; Kamel, Esam Salah; Mohamed, Doha Saber; Abbas, Naglaa Hamam
Assiut University - Faculty of Medicine - Department of Anatomy

Keywords: Plant Oils-toxicity; Liver-pathology; Adrenal Cortex-pathology; Histology; Liver-ultrastructure; Adrenal Cortex-ultrastructure; Microscopy, Electron-methods; Rats; Male

Abstract: Nigella sativa seeds are commonly known as black seed or black cumin. It has been used for thousands of years as a spice and food preservative and also as a protective and curative remedy for numerous disorders. Our research aimed to study the possible toxic effect of different doses of N. sativa oil on the liver and kidney. Twenty-one adult male albino rats were used and divided equally into three groups. The first group was the control group. The second and third groups received the oil in two gradually increasing doses of 15 and 25 ml/kg, respectively, for 1 month. The animals were then sacrificed and samples of liver and kidney were taken and prepared for histological examination. In the kidney of group II there was epithelial shedding and necrosis of some cells of the proximal and distal convoluted tubules, but there was no effect on renal glomeruli. In contrast, in group III there was glomerular injury in the form of degeneration of the tuft of capillaries, ill-defined basement membrane, and destruction of endothelial cells, in addition to tubular necrosis. In group II there was minimal effect on the liver in the form of perivascular cellular infiltration; in group III was seen a markedly vacuolated foamy cytoplasm of hepatocytes, with dilated sinusoids and perivascular cellular infiltration. In conclusion, large doses of N. sativa oil have toxic effects on the histological structure of the kidney and to a lesser degree on the liver. Therefore, Nigella oil should be used in proper doses, and further studies on the effect of large doses of oil are recommended.

Nose injuries

A novel V- silicone vestibular stent: preventing vestibular stenosis and preserving nasal valves.

Al Bassam, Wameedh; Bhargava, Deepa; Al Abri, Rashid

E-mail: d.wameedh@yahoo.com
Sultan Qaboos University Hospital - Department of ENT

Oman Medical Journal 2012; 27 (1): 60-62 (8 ref.)

Keywords: Stents; Silicones; Constriction, Pathologic

Abstract: This report presents a novel style of placing nasal stents. Patients undergoing surgical procedures in the region of nasal vestibule and nasal valves are at risk of developing vestibular stenosis and lifelong problems with the external and internal nasal valves; sequelae of the repair. The objective of the report is to demonstrate a simple and successful method of an inverted VStent placement to prevent potential complication of vestibular stenosis and nasal valve compromise later in life. Following a fall on a sharp edge of a metallic bed, a sixteen month old child with a deep lacerated nasal wound extending from the columellar base toward the tip of the nose underwent surgical exploration and repair of the nasal vestibule and nasal cavity. A soft silicone stent fashioned as inverted V was placed bilaterally. The child made a remarkable recovery with no evidence of vestibular stenosis or nasal valve abnormalities. In patients with nasal trauma involving the nasal vestibule and internal and external nasal valves stent placement avoids sequelae, adhesions, contractures, synchia vestibular stenosis and fibrosis involving these anatomical structures. The advantages of the described V- stents over the traditional readymade ridged nasal stents, tubing's and composite aural grafts are: a] technical simplicity of use, b] safety, c] less morbidity, d] more comfortable, and e] economical. To our knowledge, this is the first report of such a stent for prevention of vestibular stenosis and preserving nasal valves.

Obesity, Abdominal

Trends in waist circumference and central obesity in adults, northern Iran.

Veghari, Gholamreza; Sedaghat, Mehdi; Banihashem, Samieh; Moharloei, Pooneh; Angizeh, Abdolhamid; Tazik, Ebrahim; Moghaddami, Abbas

E-mail: grveghari@yahoo.com
Golestan University of Medical Sciences - School of Medicine - Golestan Cardiovascular Research Center


Keywords: Waist Circumference; Adult; Cross-Sectional Studies; Urban Population; Rural Population
Abstract: The main aim of this study is to determine the central obesity trends during the period from 2006 to 2010 among 15-65 years old people in Northern Iran. This was a population-based cross-sectional study conducted on 6466 subjects who had been chosen by a multi stage cluster random sampling within five steps. The subjects were randomly chosen from 325 clusters and each cluster included 20 cases. Central obesity was defined as waist circumference ≥102 cm and ≥88 cm in men and women, respectively. Compared to 2010, the mean waist circumference in 2006 changed from 87.2 cm to 88.1 cm in men \( p=0.237 \), and from 90.3 cm to 88.6 cm in women \( p=0.045 \). The comparison between 2006 and 2010 revealed that the prevalence of central obesity slightly decreased, 6.8% and 2.4% in urban women and men, respectively. Generally, the mean of waist circumference significantly decreased in urban women \( \text{by 0.069 cm in each year; } p=0.020 \); however, the decrease of waist circumference in urban men was not significant \( 0.006 \text{ cm decrease each year; } p=0.915 \). The prevalence of central obesity declined among both males and females in the urban area; however, there was an attenuated increasing trend in the rural area. The disparity of trends between the two regions should be considered for further study.

Oceanography

Lessons from multi-decadal oceanographic monitoring at an estuarine ecosystem in Argentina.

Arias, A.H.; Piccolo, M.C.; Spetter, C.V.; Freije, R.H.; Marcovechio, J.E.
E-mail: arias@criba.edu.ar
Argentine Institute of Oceanography [IAO]
Keywords: Ecosystem; Phytoplankton; Zooplankton; Crustacea; Fisheries; Temperature; Hydrogen-Ion Concentration; Salinity; Oxygen
Abstract: Both climate change and anthropogenic impact are creating a dynamic of continuous changes in ecosystems. While the expected consequences of these changes are global, the occurrence of extreme events and specific environmental problems are usually local or regional phenomenon. In particular, the coastal ecosystems are among the first vulnerable areas to show those changes; in spite of this, are the least studied. The Bahia Blanca estuary, Argentina, is located at 38° 40' S and 62° 09' W with an area of 2300 km\(^2\). Along the northern shore of the estuary it is found the most important deepwater harbor of the country, where most of the agricultural and industrial products are exported. For the first time, based on multi decadal oceanographic monitoring and meteorological data of this ecosystem, a co-relational analysis approach was outlined considering several documented changes at various trophic levels; namely, phytoplankton and zooplankton assemblages, commercial crustaceans and fisheries. As results, several novel emerging hypotheses regarding cause-and-effect relationships were formulated. These unprecedented findings represent substantial information for the focus of the future ecosystem management and research, revealing gaps in the present knowledge of the coastal ecosystem which can be extrapolated to other worldwide coastal systems.

Ocimum basilicum

Gene expression and activity of phenyl alanine amonia-lyase and essential oil composition of Ocimum basilicum L at different growth stages.

Ziaei, Mahboobeh; Sharifi, Mozafar; Behmanesh, Mehrdad; Razavi, Khadijeh
Tarbiat Modares University - Faculty of Biological Sciences - Department of Plant Biology
Keywords: Gene Expression; Phenylalanine Ammonia-Lyase; Oils, Volatile; Anisoles; Seedling; Reverse Transcriptase Polymerase Chain Reaction; Gas Chromatography-Mass Spectrometry; Spectrophotometry
Abstract: Phenylalanine amonia-lyase [PAL] is one of the most important enzymes that plays a key role in regulation of phenylpropanoid production in plants. It catalyzes the first step of the phenylpropanoid pathway in which L-phenylalanine is deaminated to trans-cinnamic acid. This step is significant for metabolic engineering and hyper-expression of the major phenylpropanoid, methyl chavicol. We followed gene expression and activity of PAL in Ocimum basilicum L. at different stages of growth including seedling, beginning and middle of growth phase, budding stage and flowering, and their correlation with final concentration of phenylpropanoid compounds. The level of gene expression was monitored by semi quantitative RT-PCR and phenylpropanoid compounds were identified by gas chromatography/mass spectrometry [GC/MS]. PAL activity was assayed using spectrophotometer. The results indicated that the level of gene expression and activity of PAL enzyme are altered during the plant development, where the highest expression and activity \( 0.851 \text{ [micromol cinnamic acid/mg/min] } \) was achieved at budding stage. In this experiment, changes of methylchavicol content were correlated to the transcription and activity of PAL enzyme.
Ofloxacin

adverse effects

Effect of ofloxacin on the cartilage of the knee joint of juvenile rats.
Mohammed, Refaat S.; Sayed, Sayed A.; Zaghloul, Dorreia A.; Abdel Rhman, Al Sayed A.
Assiut University - Faculty of Medicine - Anatomy Department
Assiut Medical Journal 2012; 36 (1): 201-220 (42 ref.)
Keywords: Cartilage-pathology; Anti-Bacterial Agents; Histology; Knee Joint; Cartilage-ultrastructure; Microscopy, Electron
Abstract: Ofloxacin is one of fluoroquinolones derivatives, which has a broad spectrum bacterial activity. It is contraindicated in children and adolescents because of its potential chondotoxicity in juveniles. However, fluoroquinolones continue to be prescribed as a drug of choice for treatment of some life threatening diseases in pediatrics. This study was conducted to examine the effect of ofloxacin on cartilage of juvenile rats by light and electron microscopes. Twenty newborn albino rats were treated with an oral dose of 900 mg/kg/day of ofloxacin for 28 days. The animals were sacrificed after the completion of the administration and the knee joints were prepared for light and electron microscopic examination. Morphometric study and statistical analysis of the results were also performed. The lesions were demonstrated in the articular cartilage of all the animals. Fissures, chondrocyte clusters and wide area of matrix devoid of cells in the intermediate zone were observed. The surface of the premature articular cartilage of the femur was irregular. The matrix of the articular cartilage showed less staining with toluidine blue and masson trichrome. Electron microscopic results showed separation between chondrocyte cell membrane and the matrix. The chondrocytes were necrotic with pyknotic nuclei and vacuolation of their cytoplasm. There were electron dense aggregates on the cell membrane and inside the cells. The thickness of the premature articular cartilage and epiphyseal plate cartilage were significantly decreased. The numbers of chondrocytes of the premature articular cartilage and epiphyseal plate cartilage were significantly decreased. The numbers of chondrocytes of the premature articular cartilage and epiphyseal plate cartilage were significantly decreased.

Oral Health

Dietary patterns and oral health in schoolchildren from Damascus, Syrian Arab Republic.
Jaghasi, I.; Hatahet, W.; Dashash, M.
E-mail: mdashash@yahoo.com
University of Damascus - Faculty of Dentistry
Keywords: Diet; Students; Schools; Questionnaires; Periodontal Index; Dental Caries; Risk Factors
Abstract: This study investigated the association between dietary patterns and oral health in primary-school children from Damascus. A total of 504 children aged 6-12 years were enrolled and food frequency questionnaires were distributed to their guardians to evaluate food consumption. Dental health was evaluated by gingival index and presence of untreated dental caries. Consumption of food groups was lower than recommended frequencies, whereas consumption of sugars was high. High sugar consumption [OR 5.26], low consumption of dairy products [OR 2.45] and poor oral hygiene [OR 2.98] remained risk factors for dental caries in multiple regression analysis. Poor oral hygiene [OR 18.5], high consumption of sugars [OR 1.82] and low frequency of tooth brushing [OR 1.98] also remained as risk factors for gingivitis regardless of all confounders included in the analysis. Comprehensive educational programmes about dietary patterns and their relation to oral health should be provided for children and their guardians.

Orchiectomy

adverse effects

Effect of experimental orchiectomy on hippocampus of adult albino rat and the role of testosterone supplementation: a histological and immunohistochemical study.
Mohamed, Dalia A.; Elnegris, Heba M.
Zagazig University - Faculty of Medicine - Department of Histology and Cell Biology
Keywords: Hippocampus-pathology; Histology; Immunohistochemistry-methods; Testosterone-therapeutic use; Treatment Outcome; Rats; Male
Abstract: The brain is one of the target organs for the gonadal hormone ‘testosterone’. The hippocampus plays a crucial role in learning and memory. It is a sensitive region for the effect of testosterone and hence is vulnerable to gradual age-related decline of testosterone level in men. This work aimed to study the histological changes in rat hippocampus after experimentally induced orchiectomy and assess the possible beneficial role of testosterone
replacement. Thirty-five adult male albino rats were divided into control group [group I] and two experimental groups [groups II and III]. Rats in groups II and III were subjected to orchiectomy. The orchiectomized rats in group III were treated daily with testosterone propionate [0.5 mg/kg/day] and both groups were left alone for 30 days. At the end of the experiment, all rats were anaesthetized and their brains were removed and processed. Sections were stained by H and E and immunohistochemically for Bax, BcIe, and glial fibrillary acidic proteins [GFAP]. Further, the serum level of testosterone was measured. The results were statistically analysed. Examination of the hippocampus of orchiectomized rats showed decreased thickness of the pyramidal layer, which contained many apoptotic cells. Minute haemorrhage, cellular infiltration and dilated capillaries were also seen. Immunohistochemically, intense Bax and GFAP with minimal BcI2 reactions were detected. The hippocampi of orchiectomized rats treated with testosterone were less affected. The pyramidal cell layer thickness was relatively normal. Few nerve cells with dark cytoplasm appeared among the normal ones. Further, minimal Bax and GFAP with moderate BcI2 reaction were detected. Statistically, there was a significant decrease in the level of testosterone in group II compared with group I. The results demonstrated that decrease in the level of testosterone had deleterious histological effects on rat hippocampi. Testosterone replacement ameliorated these histological changes after orchiectomy.

**Orthodontic Wires**

**Evaluation and Comparision of load deflection characteristics of superelastic nickel titanium orthodontic arch wires.**

Ebadifar, A.; Moradinejad, M.; Sadmejad, S.K.H.
Shahid Beheshti University of Medical Sciences - Dental School - Department of Orthodontics

*Journal of Dental School - Shahid Beheshti University of Medical Sciences* 2012; 29 (4): 219-229 (16 ref.)

**Keywords:** Nickel; Titanium

**Abstract:** Ni-Ti alloys are widely used in orthodontics. The aim of this study was to evaluate and compare the load-deflection properties of Ni-Ti wires. In this experimental study, 65 Ni-Ti round wire [0.014 inch] from 13 different brands were subjected to a 3-bracket bending test at 37°C using an upper central bracket attached to rod in a manner the distance between the midpoint of brackets was 15.5mm. For each wire, the average force was determined at 1, 1.5, 2 and 2.5 deflections in unloading area. Then, SEM equipped with EDX system was used to assess element composition of each brand of wire. The drawing graphs had the overall shape of superelastic graphs; however, the amount of force applied by different wires at different deflections were significantly different, so 13 wires was divided to 4 categories according to their force delivery: high force [Orthoforce], moderate force [Proflex, ORG, Ortho technology IMD, GAC and Force I], Low force [Smart' Nitanium' Nitinol SE, SE NITI, Rematitan Lite] and very low force [Imagination]. Additionally it was revealed that wires belong to one manufactory doesn't act similarly. The maximum and minimum Coefficient of Vriation belonged to Ortho Force and ORG, respectively. In element analysis, the ratio of Ni/Ti was not similar in different wire brands. It seemed likely that wires with higher Ti atomic percentage show lower load-deflection rate. It is revealed by this study that although studied wires almost showed superelastic graphs, the slope of the graph showed significant difference among the wires. So in this regard, the manufacturers' propagations are not reliable completely. The general recommendation is application of caution and precision in wire selection and attention to study results, element analysis and amount of crowding.

**Oryza sativa**

**Improving rice [Oryza sativa L.] drought tolerance by suppressing a NF-YA transcription factor.**

Najafabadi, Masood Soltani
E-mail:masoodsoltani@yahoo.com
Max-Planck Institute of Molecular Plant Physiology

*IJB - Iranian Journal of Biotechnology* 2012; 10 (1): 40-48 (50 ref.)

**Keywords:** Droughts; CCAAT-Binding Factor; Transcription Factors; DNA, Bacterial

**Abstract:** The response to drought stress is a complicated process involving stress sensing, intracellular signal transduction, and the execution of a cellular response. Transcription factors play important roles in the signaling pathways including abiotic stress. In the present study a rice NF-YA transcription factor gene was partially characterized following dehydration. Disrupting the gene via a T-DNA insertion resulted in drought tolerant plants and a high rate of recovery after water re-supply. It was demonstrated that the improved drought tolerance of the mutant is primarily due to non-stomatal mechanisms such as free radical scavenging, which might be related to changes in metabolism of carbohydrates.
Osteoarthritis, Knee

drug therapy

Abdel Hamid, Mohamed M.; Habib, Fawzia S.; Abdel Raheem, Rafat El Sayed
Assiut University - Faculty of Medicine - Department of Orthopedic

Assiut Medical Journal 2012; 36 (1): 85-96 (33 ref.)

Keywords: Ketorolac Tromethamine-therapeutic use; Anti-Inflammatory Agents, Non-Steroidal; Administration, Topical; Treatment Outcome

Abstract: The non-steroidal anti-inflammatory drugs [NSAIDs] are used as a classic treatment for painful rheumatic disorders of the knee such as osteoarthritis and rheumatoid arthritis. Ketorolac tromethamine [KT] is considered as a member of NSAIDs. It is a non-selective cyclooxygenase COX inhibitor that is used in treatment of musculoskeletal and joint disorders. Because KT appears to be associated with a higher incidence of adverse effects mainly irritation to the stomach, change in kidney and liver functions, its use is restricted for the treatment of patients for whom other NSAIDs have been ineffective. The main problems associated with the frequent administration of KT could be overcome by alternative routes of administration. This could be achieved by avoiding the contact between the drug and the stomach through formulating the drug in topical formulations and this was the aim of this work. Seventy osteoarthritis patients were selected and were classified into three groups, KT group [24 patients], piroxicam group [23 patients] and placebo group [23 patients]. Efficacy assessments were done by using the Western Ontario and McMasters Individual Osteoarthritis Index [WOMAC-OA] and the WOMAC Composite Index [WOMAC-CI] for pain, stiffness, and physical functions. Tolerability assessments were done by recording any adverse effects at each visit. All adverse effects or unexpected events were recorded in the case record forms. During the study, 8 patients were lost to follow up 2 from piroxicam group, 3 from KT group and 3 from placebo group. The obtained results indicated that, there was no significant difference in efficacy between KT gel and piroxicam gel [p>0.05] in treatment symptoms of osteoarthritis patients. While there was significant difference between either KT gel or piroxicam gel and placebo gel [p<0.05]. No adverse effects were recorded in all groups within the duration of study except two patients in of KT group and one patient in placebo group showed mild skin irritation [erythema] . The clinical evaluation revealed that, therapy with topical KT in carbopol 934 gel was successful to a great extent and produced high efficacy and safety in improving patients symptoms of osteoarthritis of the knee.

Osteoporosis

etiology

The effects of different nutritional supplements on experimentally induced osteoporosis in male albino rats: a scanning electron microscopic study.
El Morsy, Ahmed Said; Beshir, Samia Riad; Farrag, Kawther Abd El Raheem; Mohamed, Mohamed Saber; Hamam, Ghada Galal
Ain Shams University - Faculty of Medicine - Department of Histology


Keywords: Immobilization; Osteoporosis-drug therapy; Calcium-therapeutic use; Potassium-therapeutic use; Vitamin D-therapeutic use; Rats; Male; Femur-ultrastructure; Microscopy, Electron

Abstract: Osteoporosis is one of the major health problems afflicting our modern world, especially disuse osteoporosis. Reduction of mechanical stresses on bone could lead to osteoporosis. To study the role of Ca and vitamins D and K on the prevention of immobilization osteoporosis. The study included 30 adult male albino rats, They were divided into three groups. Group I [the control group] and group II were immobilized by casting their right lower limb for 4 weeks. Group III [the immobilization group that concomitantly received a dietary supplement] was further subdivided into four subgroups; subgroup IIIa was given Ca citrate, subgroup IIIb was given vitamin D [alfacalcidol] , subgroup IIIc was given Ca and vitamin D, and subgroup IIIId was given vitamin K during the same period of immobilization. The distal ends of the femur of the immobilized limb were taken, processed, and examined using scanning electron microscopy. Morphometric studies were carried out. The results showed significant thinning of both compact and cancellous bone on immobilization. Multiple cavities and cracks and widening of the Haversian canal were detected in the compact bone. Thin irregular spike-like bone trabeculae and fracture were also seen in the cancellous bone trabeculae. Administration of either Ca [subgroup IIIa] or vitamin D [subgroup IIIb] with immobilization did not improve most of the previous results. Combined administration of both Ca and vitamin D [subgroup IIIc] improved cortical bone thickness but not the thickness of cancellous bone. Administration of vitamin K [subgroup IIIId] with immobilization resulted in extensive branching and anastomosing bone trabeculae in the metaphysis. For the period of this experiment, vitamin K proved to be more effective as a protective agent compared with combined Ca and vitamin D administration in cases of immobilization osteoporosis.
**Ovariectomy**

**adverse effects**

A comparative study between the effects of dietary soya and estrogen replacement therapy on the lung of ovariectomized albino rats: histological and immunohistochemical study.

Abdel Fattah, Lamiaa Ibrahim
E-mail: lamiaafattah@ymail.com
Cairo University - Faculty of Medicine - Department of Histology


**Keywords:** Lung-pathology; Immunohistochemistry; Soybean Oil-adverse effects; Estrogen Replacement Therapy-adverse effects; Comparative Study; Rats; Female

**Abstract:** Soy bean phytoestrogens have estrogenic properties and have been reported to be safe on female reproductive tissue. The present work aimed at comparing the effects of soya and estrogen in the lung of ovariectomized rats and demonstrating whether dietary soya could substitute estrogen replacement therapy. Thirty-nine adult female albino rats were divided into four groups. Group I [control] included nine rats. Group II included 10 rats ovariectomized for 6 months. Groups III and IV: each included 10 rats ovariectomized for 6 months and received estrogen replacement [group III] or soy bean [group IV]. Lung sections were subjected to H and E, Masson’s trichrome stains, and immunohistomchemical staining of alpha smooth muscle actin [alpha SMA]. The mean smooth muscle thickness, area of collagen deposition, and area percent of alpha SMA were assessed. In group II, thick interalveolar septa with condensed collagen fibers, thickened bronchiolar smooth muscles, and cellular infiltration were detected. Positive alpha SMA immunoreactivity was noted in the thickened interalveolar septa. The mean smooth muscle thickness, collagen deposition, and area percent of alpha SMA immunoreactivity showed a significant increase in group II versus other groups, and there was significant decrease in groups III and IV versus group II. In groups III and IV, cellular infiltration and extravasated red blood cells were noted. Otherwise, they were comparable to the control group. It could be concluded that both soya and estrogen led to improved changes in the lung of ovariectomized rats almost to the same extent. Thus, soya might be recommended as a safe therapeutic substitute to estrogen, which has been reported to have side effects on female reproductive tissue.

**Pancreatic Neoplasms**

A systematic review of environmental risk factors for pancreatic cancer.

Nikfam, S.; Pourshams, A.

Tehran University of Medical Sciences - Digestive Disease Research Institute

*Govaresh* 2012; 16 (4): 258-264 (69 ref.)

**Keywords:** Environment; Risk Factors; Smoking; Coffee; Ethanol; Water; Diet; Meat; Vegetables; Dietary Sucrose; Vitamin E; Flavonoids; Methionine; Vitamin B 6; Folic Acid; Iron; Magnesium; Vitamin D

**Abstract:** More than 250,000 people die annually of pancreatic cancer, worldwide. The highest incidence and mortality rates of pancreatic cancer are reported in developed countries. In developing countries the rate have been stabilizing over the past two decades but in countries which rates have been low for decades is now increasing. Recognizing pancreatic cancer’s risk factors and its prevention are important roles in reducing pancreatic cancer mortality. Risk factors for pancreatic cancer are not well recognized. The aim of the study is to review the environmental risk factors of pancreas cancer. We performed a systematic review of the published literature to identify all studies that provided environmental risk factors in association with pancreatic cancer .we conducted MEDLINE search limited to last 5 years up to June 2011, for all relevant case-control, meta analysis, systematic review and cohort studies. Citations were limited to those published in the English language. Review and comment articles have been excluded. Sixty six independent studies met the predefined inclusion criteria. Seven studies out of 15 found positive association between cigarette smoking and pancreatic cancer. Five articles out of 10 reviewed articles found high alcohol intake as a risk factor for pancreas cancer and the other 5 articles found dose related association with pancreas cancer. Coffee: according to 2 reviewed studies coffee not only does not have a substantial impact on pancreatic cancer risk but also coffee drinking has been associated with a reduced risk of pancreatic cancer in men. Frequent intakes of red meat and well-cooked meat and Vitamin D deficiency have positive association with pancreatic cancer risk. Cigarette smoking is the most consistent risk factor for pancreas cancer in relevant studies about pancreas cancer risk factors.

**diagnosis**

Sneaky pancreatic head mass.

Prathvi, Shetty; Leo, F. Tauro; Jnaneshwari, Jayaram
E-mail: pratviz@gmail.com
Father Muller Medical Collage and Hospital - Department of Surgery

*Oman Medical Journal* 2012; 27 (1): 70-71 (7 ref.)
Keywords: Lipoma-diagnosis; Pancreas; Tomography, X-Ray Computed; Dyspepsia; Gastritis

Abstract: A 60 yrs old male presented to the Father Muller Medical College and Hospital, India, with dyspeptic symptoms. On physical examination, epigastric tenderness was present and ultrasound revealed an ill defined homogeneous hyper echoic lesion in the head of pancreas. Hemogram, serum amylase, serum lipase and liver function tests were all normal. Contrast-enhanced CT showed a homogeneous focal mass measuring about 5x6 cm in the pancreatic head. [Figs, la and b]. The mass was isodense with fat tissue, with interlobular septa, and without central or peripheral contrast. Upper Gl endoscopy revealed mild antral gastritis. The patient improved with antacids.

Pancreatitis, Acute Necrotizing

immunology

Therapy with recombinant interleukin-22 attenuates the development of acute pancreatitis in rats.

El Shemi, Adel Galal A.; Basalamah, Mohammed A.

Assiut University - Faculty of Medicine - Department of Pharmacology

Assiut Medical Journal 2012; 36 (1): 189-200 (47 ref.)

Keywords: Interleukins-therapeutic use; Rats; Male; alpha-Amylase-blood; Anti-Inflammatory Agents

Abstract: Acute pancreatitis [AP], especially its sever form, is a potential serious human disease with a limited specific therapy. Here, we assessed the therapeutic efficacy of interleukin-22 [IL-22], a newly emerged cytokine with unique biological activities, in the treatment of a rat model of severe AP induced by caerulein. For disease induction, the animals were intraperitoneally [i.p.] injected with nine doses of caerulein [50 micro g/kg/dose] at 1-h intervals. Recombinant rat IL-22 [rIL-22] was given [4 micro g/rat/dose; i.p.] after the 1[st], 5[th], and 9[th] caerulein injection. Twelve hours after the last caerulein injection, the animals were euthanized under anesthesia and their blood specimens and pancreases were collected and examined. Serum levels of pancreatic alpha-amylase and lipase, pancreatic weight/body weight ratio, histopathological feature of induced pancreatic injury, intrapancreatic expression of cyclooxygenase-2 [COX-2] and myeloperoxidase [MPO; an index of neutrophils infiltration], and concentrations of pro-inflammatory prostaglandin E2 [PGE2]; monocyte chemotactic protein-1 [MCP-1]; and interleukin-1 beta [IL-1beta] in the serum and pancreatic tissues were collectively analyzed as diagnostic parameters of the induced AP. Results showed that therapy with rIL-22 significantly repressed caerulein-induced severe injury and edema in the pancreatic tissues. Administration of rIL-22 significantly reduced caerulein-evoked substantial hyperamylasemia and hyperlipasemia, intrapancreatic over-expression of COX-2 and MPO, and the production of proinflammatory mediators [PGE2, MCP-1 and IL-1beta] in the pancreatic tissues and systemic circulation. These biochemical observations were also supported by the histopathological findings. In conclusion, these results indicate the favorable attenuating effect of IL-22 against the development of AP by acting as an anti-inflammatory agent.

Pancytopenia

etiology

Etiological profile of pancytopenia in adults in Marrakesh, Morocco.

Nafil, H.; Tazi, I.; Sifsalam, M.; Bouchtia, M.; Mahmal, L.

E-mail:solhatim@hotmail.com

Kadi Ayyad University - Mohammed IV University Hospital - Department of Hematology


Keywords: Pancytopenia-diagnosis; Pancytopenia-blood; Bone Marrow Examination; Anemia, Megaloblastic-epidemiology; Anemia, Aplastic-epidemiology; Leukemia-epidemiology

Abstract: This retrospective study evaluated the frequency of different causes of pancytopenia in all adult patients with pancytopenia presenting to the Department of Haematology of Mohamed VI Hospital, Marrakesh from 1 January 2008 to 31 December 2010. A total of 118 cases of pancytopenia were found [average of 39 cases per year]. The mean age of patients was 52 years [range 18-82 years] and 52.5% were male. The main clinical signs were pallor [100%], asthenia [100%] and fever [30.5%]. Mean haemoglobin was 6.5 g/dL [range 2.9-9.2 g/dL], mean white blood cell count was 2360/mm[3] [range 840-3360/mm[3]] and platelet count 66 000/mm[3] [range 3000-123 000/mm[3]]. Bone marrow aspiration was performed in 112 patients; megaloblastosis was found in 32.2% and marrow blasts in 23.7%. Anaemia due to vitamin B12 deficiency [32.2%], acute leukaemia [23.7%] and aplastic anaemia [15.2%] were the main causes of pancytopenia. Given the incidence of acute leukaemia among our cases, patients presenting with pancytopenia require urgent diagnosis and treatment.
Parasites
parasitology

Parasitism on cabbage aphid, brevicotyne brassicae [linnaeus] [homoptera: aphididae] associated with canola plants in Assiut.
EMbarak, M.Z.; Abou El Saad, Aiman K.; Salem, A.A.A.
Plant Protection Res. Institute
Assiut University Bulletin For Environmental Researches 2012; 15 (1): 105-114 (27 ref.)
Keywords: Plants-parasitology; Fatty acids, Monounsaturates; Seasons
Abstract: Thirteen cultivars of canola were subjected to evaluate the percentage of parasitism on cabbage aphid, Brevicoryne brassicae L. infesting canola plants in the field and laboratory during 2011 season in Assiut Governorate. The rate of parasitism in the field was [7.13%] for all cultivars. The rate of parasitism of the aphid collected from the field and reared in the laboratory was 2.67% times higher than the rate of parasitism in the filed at the end of season regardless the canola cultivars. The highest rates of parasitism were recorded with the early ripening cultivars, while the lowest ones were realized with the late ripening cultivars. In the field, the rate of parasitism increased progressively during the third week of February to a peak level [parasitism 43.15%] in the second week of March. Whereas in the laboratory, the highest rate of parasitism [53.06%] was achieved during the last week of February and then the parasitism started to decrease gradually during March. Two primary parasitoids species [Diaeretiella rapae McIntosh and Pranecans Mackauer, Aphidiidae] and two hyperparasitoids species [Alloxystra sp., Cynipidae and Chalcids sp., Chalcididae] were associated with cabbage aphids in canola fields. D. rapae consider the most important primary parasitoids on B. brassicae which represented about 93.93% of the total primary parasitoids in canola field. While, Alloxystra sp. was the most hyperparasitoid represent 81.67% of the total of the secondary parasitoid. However, the primary parasitoids recorded the most percentage [71.94%] comparison with the percentage of secondary parasitoids [28.06%] from the total parasitoids for primary and secondary parasitoids.

Parturition

Birthing in the Arab region: translating research into practice.
Khashotian, T. Kabakian; El Kak, F.; Shaybouh, R.
E-mail:fk01@aub.edu.lb
American University of Beirut - Faculty of Health Sciences - Department of Health Behavior and Education
Keywords: Research; Reproductive Health; Health Policy; Health Priorities
Abstract: The Choices and Challenges in Changing Childbirth research network is a regional collaboration among 4 countries in the Arab region, namely Egypt, Lebanon, Palestine and Syrian Arab Republic, providing evidence of childbirth practices and identifying areas amenable to change. Studies that have been conducted in the region pinpoint problems in the quality of maternity services and a lack of women's involvement in the process of maternity care. The network aims to change childbirth practices by selecting research areas most likely to influence practices, by supporting the process of obtaining regionally relevant evidence of a high standard and by assigning importance to dissemination and networking activities. This paper draws on the experience of the network in selecting strategies to approach difficult challenges and discusses the barriers facing this process.

Patient Readmission

Study of the relation between quality of inpatient care and early readmission for diabetic patients at a hospital in the Eastern province of Saudi Arabia.
Mokhtar, S.A.; El Mahalli, A.A.; Al Mulla, S.; Al Hussaini, R.
E-mail:aelmahalli90@gmail.com
University of Alexandria - High Institute of Public Health - Department of Biostatistics
Keywords: Inpatients; Hospitalization; Quality Indicators, Health Care; Diabetes Mellitus; Case-Control Studies; Retrospective Studies
Abstract: Readmission of diabetic patients after discharge from hospital has potential value as a quality of care indicator. This retrospective cohort and case-control study aimed to determine the readmission rate for diabetic patients within 28 days after discharge and the association between quality of inpatient care and unplanned readmission. An audit of records was conducted in a hospital in the Eastern province of Saudi Arabia during 2000-2008. The rate of unplanned readmission of patients originally admitted with diabetes mellitus [n = 1125] was 5.2%. Comparison of data from readmitted patients [n = 62] and a sample of non readmitted patients [n = 62] showed that adherence by health care providers to American Diabetes Association guidelines for admission work-up [OR 0.91, 95%
CI: 0.85-0.99] and readiness for discharge criteria [OR 0.89, 95% CI: 0.84-0.95] were significantly more likely to decrease the risk of readmission within 28 days.

**Patient Safety**

Assessment of patient safety culture among health-care providers at a teaching hospital in Cairo, Egypt.

Aboul Fotouh, A.M.; Ismail, N.A.; Ez Elarab, H.S.; Wassif, G.O.
E-mail: hsezelarab@yahoo.com
Ain Shams University - Faculty of Medicine - Department of Community Medicine
Keywords: Health Personnel; Culture; Hospitals, Teaching; Cross-Sectional Studies; Questionnaires
Abstract: A previous study in Cairo, Egypt highlighted the need to improve the patient safety culture among health-care providers at Ain Shams University hospitals. This descriptive cross-sectional study assessed health-care providers' perceptions of patient safety culture within the organization and determined factors that played a role in patient safety culture. A representative sample of 510 physicians, nurses, pharmacists, technicians and labourers in different departments answered an Arabic version of the Agency of Healthcare Research and Quality hospital survey for patient safety culture. The highest mean composite positive score among the 12 dimensions was for the organizational learning for continuous improvement [78.2%], followed by teamwork [58.1%]. The lowest mean score was for the dimension of non-punitive response to error [19.5%]. Patient safety culture still has many areas for improvement that need continuous evaluation and monitoring to attain a safe environment both for patients and health-care providers.

Peritoneal Fibrosis
diagnosis

Report of a documented case of encapsulating peritoneal sclerosis in Iran.

Keshvari, A.; Najafi, I.; Vakili, S. Tabap Taba; NouriTaromlo, M.K.
Tehran University of Medical Sciences - Imam Khomeini Hospital - Department of Surgery
Govaresh 2012; 16 (4): 277-281 (17 ref.)
Keywords: Intestinal Obstruction; Peritonitis; Tomography, X-Ray Computed; Peritoneal Dialysis; Splenomegaly; Ascites
Abstract: Encapsulating peritoneal sclerosis [EPS] is a rare, acquired condition that has been described interchangeably with peritoneal encapsulation [PE] as well as abdominal cocoon. EPS causes complications for peritoneal dialysis [PD] patients. In EPS, the small intestine is covered by a fibrotic and inflammatory peritoneal capsule that either partially or completely encases the bowel. For EPS, there is no agreement in the literature as to whether the treatment of choice should be surgery or conservative therapy. However in the obstructive phase the treatment of choice is surgery due to the impossibility of conservative treatment. Here, we report the case of a 64-year-old woman who presented with several episodes of intestinal obstruction and peritonitis. Computed tomography [CT] of the abdomen did not show significant characteristic features of EPS. Exploratory laparotomy was performed, freeing the small bowel of adhesions and encapsulation. For EPS, adequate clinical knowledge and a high degree of suspicion are crucial for a correct diagnosis and appropriate management.

Pesticide Residues
analysis

Effect of different traditional cooking styles on pesticides residues in fresh tilapia nilotica and clarias lazer fish in Garbia markets.

Eid, Amal M.; Salem, Amani, M.
Animal health Research Institute
Keywords: Fishes; Tilapia; Cooking-methods; Risk Assessment
Abstract: Thirty fish samples were analyzed to determine the levels of organochlorine [OCP] and organophosphorous [OPP] pesticide residues in Tilapia nilotica [TN] and Clarias lazer [CL] [15 of each], collected from fish markers in Gharbia, Egypt, before and after different cooking techniques. The results showed that the mean values and the percentage of alpha HCH, gamma-HCH, Heptachlor, endosulfan and Endrin were 9.65 +/- 2.7 [20%], 10.60 [6.66%], 11.30 [6.66%], 20.49 [6.66%] and 21.74 +/- 6.72 [40%], respectively in [TN] samples, while for [CL]
samples the mean values of alpha-HCH was 3.34 +/- 1.8 [26.66%] which significantly lower than that in [TN] [P<0.001], for gamma-HCH was 9.77 +/- 4.5 [26.66%] and for Endrin the mean value was 31.5 +/- 3.36 [26.66%] which significantly higher than that in [TN] [P<0.001]. The value of Primiphos methyle [OPP] in a [TN] fish was 2321.97 ng g [-1] [6.66%] which significantly decreased to 55.64% [97.65] and 0 [100%] by frying and grilling and in a [CL] fish which was 792.68 ng g[-1] [6.66%] was decreased to 32.34 [95.8%] by frying and to 0 [100%] by boiling while Prothiofos [OPP] evaluated in one [CL] samples by 74.96 [6.66%] and totally disappeared after frying and boiling. The levels of OC residues were significantly decreased in TN fish after frying by 85, 79 52and 100%, respectively. moreover, in [CL] samples the level decreased in percentage of 100, 54 and 83, respectively by frying and 100, 50 and 100, respectively by boiling. Cooking of raw fish contaminated with pesticides residues can therefore be expected to reduce the consumption exposure risk to human health.

Pharmacoepidemiology

methods

Pharmacoepidemiology: regulatory basis, methodological approaches and scope.
Ahid, S.; Belaguide, K.; Cherrah, Y.
E-mail:samir.ahid@um5s.net.ma
Faculty of Medicine and Pharmacy - Pharmacology and Toxicology Laboratory
Keywords: Pharmacoepidemiology-legislation and jurisprudence; Pharmacoepidemiology-history; Epidemiologic Methods
Abstract: Pharmacoepidemiology is a discipline that studies the use of drugs and evaluation of their beneficial or adverse effects on large populations. It requires compliance with laws and maintaining a regulatory approach in order to ensure confidentiality and protection of personal data. It also requires good knowledge of drugs and diseases and the use of the different available data sources. Pharmacoepidemiology incorporates epidemiological methods [cohort, case-control and cross-sectional studies] where the exposure is drug intake. These methods must be applied at the conception of the pharmacoepidemiological study in order to minimize the effect of bias which can lead to false conclusions. This paper reviews the regulatory basis, methodological approaches and scope of pharmacoepidemiology.

Phenol

Adsorption isotherm modeling of phenol onto natural soils-applicability of various isotherm models.
Subramanyam, B.; Ashutosh, D.
E-mail:subramanyam@civil.sastra.edu
SASTRA University - School of Civil Engineering
Keywords: Adsorption; Soil
Abstract: Liquid-phases adsorption equilibrium of phenol onto two naturally available soils namely Kalathur soil [Kr] and Adhanur soil [Ar] were studied. The experimental data were analyzed using fourteen isotherm models, ranging from single-parametric model to multi-parametric models [up to 5 parameters] of the system. Results show that in general the accuracy of models to fit experimental data improves with the degree of freedom. To understand the mechanism involved with different types of sorbate-sorbent system as well as to find out the best fitting isotherm model, the correlation coefficients, and average percentage error and student t-test were carried out. Temkin isotherm model, Langmuir-Freundlich isotherm model and Fritz-Schlunder model as well as Baudu model were found to be the best fit models amongst the two-parametric models, three parametric models and four parametric isotherms modeling, respectively. This study brings out the need of simultaneous solution of multi-parametric equations [using relevant softwares, MATLAB, in present case] than solution of their linearized forms, which is mostly followed by contemporary investigators.
Phenols

adverse effects

Effect of bisphenol A on the myocardium of adult male albino rats and the possible role of lycopene: a histological and biochemical study.
El Haleem, Manal Reda; Abass, Marwa A.
E-mail: manal.reda2010@gmail.com
Zagazig University - Faculty of Medicine - Department of Histology and Cell Biology
Keywords: Myocardium-pathology; Histology; Immunohistochemistry-methods; Protective Agents; Carotenoids-therapeutic use; Antioxidants; Treatment Outcome; Rats; Male
Abstract: Despite the wide use of bisphenol A [BPA] in plastic and epoxy resin industries, its side effects have been a subject of controversy. Lycopene [a natural carotenoid] has a protective role in many cardiovascular diseases. This work aimed to study the biochemical and structural changes induced by BPA in the myocardium of adult rats and evaluate whether coadministration of lycopene could alter these effects. Twenty adult male albino rats were divided into four equal groups. Group I was the control. Group II received lycopene [4mg/kg body weight/day orally] for 8 weeks. Group III was given BPA [50mg/kg body weight/day orally] for 8 weeks. Group IV was given both BPA and lycopene in the same previous dose and for the same duration. At the end of the experiment, rats were anesthetized, and their hearts were taken and prepared for histological and biochemical studies. Area percentages of the collagen content and positive immune reaction for vimentin were morphometrically and statistically analyzed. Examination of group III revealed that some myocytes had a deeply acidophilic cytoplasm and were devoid of nuclei. Some myocytes appeared with pale vacuolated cytoplasm, and some had focal loss of myofibrils. Their sarcoplasm contained many distorted mitochondria and dilated T-tubules. Their nuclei were variable in shape. They were peripherally located, or deeply indented, or heterochromatic. Many interstitial cells, inflammatory cells, congested blood capillaries, and areas of edema were seen. A significant increase in collagen fibers and in the area percentage of positive immune reaction for vimentin compared with the control group was observed. Examination of group IV showed that the cardiac muscle cells had a normal architecture except for a few distorted muscle fibers and many congested blood capillaries. There was a significant decrease in the area percentage of positive immune reaction for vimentin in group IV compared with group III. The current study revealed that some myocytes had a deeply acidophilic cytoplasm and were devoid of nuclei. Some myocytes appeared with pale vacuolated cytoplasm, and some had focal loss of myofibrils. Their sarcoplasm contained many distorted mitochondria and dilated T-tubules. Their nuclei were variable in shape. They were peripherally located, or deeply indented, or heterochromatic. Many interstitial cells, inflammatory cells, congested blood capillaries, and areas of edema were seen. A significant increase in collagen fibers and in the area percentage of positive immune reaction for vimentin compared with the control group was observed. Examination of group IV showed that the cardiac muscle cells had a normal architecture except for a few distorted muscle fibers and many congested blood capillaries. There was a significant decrease in the area percentage of positive immune reaction for vimentin in group IV compared with group III. The current study revealed significant increase in serum malondialdehyde and catalase showed significant decrease in group III compared with the control group. In contrast, in group IV, malondialdehyde showed significant decrease, and tissue reduced glutathione and catalase showed significant increase, compared with group III. Long-term exposure to BPA could induce structural and biochemical changes in rat cardiac muscle. This could be partially minimized by concomitant administration of lycopene.

Phosphorus

Distribution and fractions of phosphorus and nitrogen in surface sediments from Dianchi lake, China.
Li, H.; Wang, Y.; Shi, L.Q.; Mi, J.; Song, D.; Pan, X. J.
Kunming University of Science and Technology - Faculty of Environment Science and Engineering
International Journal of Environmental Research 2012; 6 (1): 195-208 (42 ref.)
Keywords: Nitrogen; Geologic Sediments; Lakes; Biological Availability
Abstract: Dianchi Lake is one of the most three seriously eutrophic lakes in China. In the present study, the phosphorus [P] and nitrogen [N] fractions in 37 surface sediments samples collected in the Dianchi Lake were investigated. The total phosphorus [TP] in sediments was divided into two parts: inorganic P [IP] and residual P [Res-P]. The results showed that the total phosphorus content in surface sediments ranged from 1465.27 to 3650.12 mg/kg, IP was the major component of TP and the Ca bound P was the main fraction of IP. The bio-available phosphorus [BAP] in Dianchi Lake was first estimated in this study. BAP ranged from 215.66 to 678.02 mg/kg and the mean concentration was 382.78 +/- 89.77 mg/kg for all 37 samples. The nitrogen fractions for the whole Dianchi Lake were firstly studied. It was shown that the sediment had been an important N nutrient source of the water, owing to the high content of transferable nitrogen forms in the sediment.

Phytoplankton

The influence of land based activities on the phytoplankton communities of Shimoni-Vanga system, Kenya.
Kiteresi, L.I.; Okuku, E.O.; Mwangi, S.N.; Ohowa, B.; Wanjeri, V.O.; Okumu, S.; Mkono, M.
Kenya Marine and Fisheries Research Institute
International Journal of Environmental Research 2012; 6 (1): 151-162 (33 ref.)
Keywords: Ecology; Water; Diatoms; Dinoflagellida; Food
Abstract: Phytoplankton communities play a significant role in the oceanic biological pump by forming the base of the trophic structure. Increase in nutrients loading affects spatial and temporal distribution of phytoplankton. This study examined the phytoplankton community structure and ecological indices in relation to nutrients dynamics in both estuarine and oceanic areas of Ramisi-Vanga systems along the Kenyan coast. Surface water samples were collected and analysed for nutrients [PO[4][3]-P, NO[3] -N and N[4+]N] and phytoplankton abundance and community structure. This study reported very diverse phytoplankton community structure consisting of 88 taxa that were dominated by Chaetoceros sp., Coscinodiscus sp., Nitzschia sp., Pseudo-nitzschia sp., Alexandrium sp., Prorocentrum sp. and Procentrum sp. that are among the potentially harmful algae. Diatoms were the most abundant taxa in Ramisi-Vanga system. Phytoplankton abundance was found to be higher in the estuarine systems [1182.06 +/- 149.14 cells/L] as compared to the oceanic systems [551.99 +/- 166.70 cells/L] with high abundance observed in May for oceanic and estuarine systems. Shannon Weiner's species diversity index was greater than 2 in both oceanic and estuarine systems. Phytoplankton species' abundance, composition and diversity were found to be influenced by the availability of NH/-N, NO[3]-N and PO[4][3]-P. Phytoplankton cell density was below 4000 cells/L thus, this study has classified Ramisi-Vanga system as an oligotrophic system implying that the current level of land based activities are not having significant impacts on the phytoplankton communities.

Kim, D.K.; Jeong, K.S.; McKay, R.I.B.; Chon, T.S.; Joo, G. J.
Seoul National University - School of Computer Science and Engineering
Keywords: Biomass; Neural Networks (Computer); Algorithms; Ecology; Chlorophyll; Rivers
Abstract: In the regulated Nakdong River, algal proliferations are annually observed in some seasons, with cyanobacteria [Microcystis aeruginosa] appearing in summer and diatom blooms [Stephanodiscus hantzschii] in winter. This study aims to develop two ecological models forecasting future chlorophyll a at two time-steps [one-week and one-year forecasts], using recurrent neural networks tuned by genetic algorithm [GA-RNN]. A moving average [MA] method pre-processes the data for both short- and long-term forecasting to evaluate the effect of noise downscaling on model predictability and to estimate its usefulness and trend prediction for management purposes. Twenty-five methods pre-processes the data for both short- and long-term forecasting to evaluate the effect of noise downscaling on model predictability and to estimate its usefulness and trend prediction for management purposes. Twenty-five methods pre-processes the data for both short- and long-term forecasting to evaluate the effect of noise downscaling on model predictability and to estimate its usefulness and trend prediction for management purposes.
Abstract: In the current study, the efficiency of starch and Plantago ovata extract as coagulant aids is compared in water turbidity removal. The coagulant is ferric chloride and the experiments are run in two ranges of pH 7 and 8. The achieved results of turbidity removal in different turbidity levels of 100, 50 and 20 NTU caused by different concentrations of starch and P. ovata as coagulant aids besides ferric chloride as the main coagulant are compared. According to the achieved results, the use of P. ovata or starch as the coagulant aid may play a key role in reducing the amount of FeCl₃ as the main coagulant and consequently decreasing the generated sludge. Furthermore, the remarkable turbidity removal efficiency gained when these coagulant aids are used in comparison with the case when no coagulant aid is introduced is also of interest. Generally, the both coagulant aids seem to be more efficient in pH value of 7 rather than 8. Although both coagulant aids used in this study manifested acceptable turbidity removal efficiencies, P. ovata showed higher capabilities of removal in different turbidity levels and pH values in comparison with starch.

Platelet Aggregation Inhibitors

[Approach to antiplatelet and anticoagulant therapy before endoscopic procedures].
Shirzad, S.; Taher, M.; Daryani, N.; Ebrahimi
Tehran University of Medical Sciences - Tehran Heart Center - Fellow of Cardiovascular Govaresh 2012; 16 (4): 228-237 (34 ref.)
Keywords: Anticoagulants; Endoscopy; Gastrointestinal; Gastrointestinal Hemorrhage
Abstract: The use of anticoagulant and antiplatelet agents has become more prevalent during the past decades. These drugs may potentially cause gastrointestinal [GI] bleeding. Thus, there is an increasing need for GI endoscopy in patients who take these medications. In patients who take anticoagulant and antiplatelet agents, the appropriate conditions under which endoscopic procedures should be performed remain unclear. In this manuscript, we reviewed studies regarding this context in an attempt to present a practical guideline for management these patients.

Polycyclic Hydrocarbons, Aromatic

Heavy metals and PAH assessment based on mussel caging in the north coast of Tunisia [Mediterranean Sea].
Mzoughi, N.; Chouba, L.
E-mail: nadia.mzoughi@instm.rnrt.tn
National Institute of Science and Technology of the sea
International Journal of Environmental Research 2012; 6 (1): 109-118 (45 ref.)
Keywords: Metals, Heavy; Mediterranean Sea; Mytilus; Bivalvia; Mercury; Lead; Cadmium; Copper; Iron; Zinc
Abstract: In the framework of the Mytilos project [Interreg IIIB Medocc], international research cruises were carried out in 2006 in order to evaluate the level of Heavy metals and polycyclic aromatic hydrocarbons [PAH] along the coast of the western basin of the Mediterranean Sea. Caged mussels [Mytilus galloprovincialis] were placed in situ at six sites in the North coast of Tunisia. Results showed total PAH levels were in the range 45.6-241.6 ng/g dry weight [dw]. The ranges of trace metals concentrations expressed in ug/gdw are: Hg [0.1-0.2], Pb [0.4-0.7], Cd [0.9-2.9], Cu [2.9-3.9], Fe [117-248] and Zn [250-426]. Higher concentrations were observed at Rades, La Galite and Tabarka which can be attributed to the industrial activities implanted in the coast of Algeria and in the city of Rades. Concentrations of PAH, Cd, Pb, Fe and Zn are generally different from initial concentrations [before caging], depending on the adaptability of transplanted mussels to be used as bio-indicator of contaminants. Yet bio-monitoring using mussels give information on compound bioavailability which depends on their ability to accumulate contaminants in its tissue.

Postmenopause

Postmenopausal symptoms among Egyptian geripausal women.
Sweed, H.S.; Elawam, A.E.; Nabeel, A.M.; Mortagy, A.K.
E-mail: halasweed@yahoo.co.uk
Ain Shams University - Faculty of Medicine - Geriatrics and Gerontology Department
Keywords: Signs and Symptoms; Prevalence; Cross-Sectional Studies
Abstract: Increases in life expectancies mean that women are spending longer periods of their life in a hypo-oestrogenic state. A cross-sectional study was designed to assess the prevalence of postmenopausal symptoms among elderly Egyptian women in the geripausal phase. A sample of 400 community-dwelling elderly women aged > 65 years were recruited from 6 geriatric social clubs in Cairo. A full personal and medical history was taken from all participants. The menopause rating scale was applied to all participants after translation and linguistic validation in the Arabic language. The most prevalent postmenopausal symptoms were joint pain [90.3%], followed by sleep problems [84.0%] and physical and mental exhaustion [80.0%]. A statistically significant positive correlation was found between total menopause rating scale score and age, duration of menopause and number of chronic diseases but not with age of menopause.
Pre-Eclampsia

The effect of short duration sperm exposure on development of preeclampsia in primigravid women.
Sadat, Z.; Kalahroudi, M. Abedzadeh; Saberi, F.
Kashan University of Medical Sciences - School of Nursing and Midwifery - Trauma Research Center

Keywords: Spermatozoa; Gravidity; Pregnancy; Case-Control Studies

Abstract: Preeclampsia is one of the most serious complications, and affecting about 3% of pregnancies. The aim of this study was to estimate the impact short duration of exposure to sperm on development of preeclampsia. The duration of sperm exposure with the biological father [cohabitation without barrier methods] <3, <6 months were evaluated among 120 primigravid women with preeclampsia and 120 women without preeclampsia in a case-control study. The short duration of exposure to sperm was more common in women with preeclampsia compared with controls [29.2 versus 14.2 for <3 months, adjOR 2.6 [95% CI=1.32-5.13] and [45 versus 29.2 for <6 months, adjOR 2.4 [95% CI=1.35-4.32]. Regardless of the contraceptive method, short duration of cohabitation was more common in preeclamptic group [14.2 versus 5.8 for <3 months, adjOR 3.38 [95% CI=1.28-8.92] and [29.7 versus 13.3 for <6 months, adjOR 2.64 [95% CI=1.24-5.79]. It was concluded that short duration of exposure to sperm was more common in women with pree-clampsia compared with controls.

Primary Health Care

Primary health care: what is it and what is it not? Views of teaching faculty at an undergraduate medical college in Pakistan.
Abbas, S.M.; Alam, A.Y.; Malik, M.R.
E-mail:taureanvibes@hotmail.com
Shifa College of Medicine - Department of Community Health Sciences

Keywords: Faculty; Schools, Medical; Questionnaires; Knowledge; Cross-Sectional Studies; Physicians

Abstract: Over 30 years after the Alma-Ata declaration on primary health care in 1978 there are still misconceptions about the basic concept of primary health care. This study aimed to investigate the knowledge and opinions about various aspects of primary health care and its appropriate implementation among the teaching faculty at Shifa College of Medicine in Islamabad, Pakistan. A structured questionnaire was answered by 70 physicians present at the end of the month seminar. Two-thirds of the doctors [67.1%] believed that primary health care involved only basic health care for common illnesses. Few respondents suggested that community-oriented programmes [4.3%, maternal and child health [2.9%], screening [1.0%] or treatment of noncommunicable diseases [2.9%] should be components of primary care. The concepts to primary health care as defined at Alma-Ata in 1978 were not well understood by teaching faculty from the basic and clinical health sciences in this medical college.

Probiotics

Suitability of MRS-bile agar for the selective enumeration of mixed probiotic bacteria in presence of mesophilic lactic acid cultures and yoghurt bacteria.
Sohrabvandi, Sarah; Mortazavian, Amir Mohammad; Dolatkhah Nejad, Mohammad Reza; Monfared, Ayad Bahadori Shahid Beheshti University of Medical Sciences - Faculty of Nutrition Sciences and Food Technology - National Nutrition and Food Technology Research Institute

Keywords: Bacteria; Agar; Bile; Lactic Acid; Yogurt; Lactobacillus acidophilus; Bifidobacterium; Lactococcus lactis; Streptococcus thermophilus; Lactobacillus delbrueckii; Bile Acids and Salts

Abstract: Measuring the viability of probiotic microorganisms in food products using plate count methodology is a common practice due to the simplicity [ease of performance], inexpensive and routine testing characters of this method. In present study, the suitability of de man rogosa and sharpe agar [MRS] bile agar medium for the selective enumeration of mixed probiotic bacteria [Lactobacillus acidophilus LA-5, L. casei 431 and Bifidobacterium lactis BB-12] in presence of mesophilic lactic cultures [Lactococcus lactis ssp. lactis and Lactococcus lactis ssp. Cremoris] and yoghurt bacteria [Streptococcus thermophilus and Lactobacillus delbrueckii ssp. Bulgaricus] was investigated. Yoghurt bacteria did not grow neither in presence of 0.15% nor 0.30% of bile salts, as was expected. Mesophilic lactic starters could grow at both concentrations of bile salts at all incubation temperatures except 37°C. According to these results, MRS-bile agar [0.15 bile salts] could be successfully used for selective enumeration of mixed probiotic cultures in presence of mesophilic culture and/or yoghurt bacteria when plates were incubated at 37°C for 72 h.
**Prostatic Neoplasms**

**genetics**

**Cytoplasmic expression of P63 in neoplastic and non neoplastic prostatic tissue.**
Nassar, Mahmood A.; El Ghorori, Rabab M.H.; Kutb, Muna A.M.
Assiut University - Faculty of Medicine - Department of Pathology

**Keywords:** Membrane Proteins; Immunohistochemistry; Hospitals, University

**Abstract:** P63 gene, is one of tumor suppressor genes. In normal and benign prostatic glands, it is found only in basal cells, so p63 helps to differentiate prostate cancer from benign mimicker, as it is expressed mainly in the nuclei of cells of normal and benign lesions. We studied the cytoplasmic mislocalization of p63 in different prostatic lesions as it may have a role in prostatic oncogenesis. Groups of 34 malignant, 26 suspicious and 12 benign prostatic tissue cases were retrieved from pathology department in Assiut university hospital and from other private laboratories. All specimens were immunostained for p63 and p504s. P504s was used to confirm diagnosis of malignancy. Prostatic acinar adenocarcinoma cases compared with normal prostatic tissues and benign prostatic lesions, showed statistically highly significant cytoplasmic staining for p63 [p=0.00002]. The intensity of cytoplasmic expression has high significant correlation with Gleason's score [p=0.000]. Additionally cytoplasmic expression was present in 8/10 high grade prostatic intraepithelial neoplasia [HGPIN] foci within the malignant specimen, with faint intensity. Cytoplasmic staining for p63 was also detected in benign glands within or near malignant foci in 42/44 of malignant cases. The aberrant cytoplasmic p63 expression in malignant foci, PIN and normal benign looking glands within malignant cases and its absence in normal and benign prostatic lesions emphasized the oncogenic role of aberrant genetic expression. Also its expression in benign glands surrounding malignancy may be used as an indicator for nearby malignant lesions or premalignant changes.

**Psychomotor Agitation**

**drug therapy**

**Midazolam versus ketamine in the management of emergence agitation in children undergoing lower abdominal and limb surgeries.**
Khalili, Gholam Reza; Sajedi, Parvin; Danesh, Hamideh
Isfahan University of Medical Sciences - Anesthesiology and Critical Care Research Center - Department ofAnesthesiology

**Keywords:** Midazolam-therapeutic use; Ketamine-therapeutic use; Disease Management; Child; Abdomen-surgery; Extremities-surgery; Premedication; Prospective Studies

**Abstract:** Emergence agitation [EA] is a post-anesthetic problem which interferes with a child's recovery and presents a challenge in terms of assessment and management. In this study, we compared the effects of midazolam and ketamine as premedication in the management of EA in children aged 1-6 years. In this prospective, randomized clinical trial study, 58 children aged 1-6 years who were undergoing general anesthesia for elective surgery in Alzahra Hospital in Isfahan during 2008 until 2009. The patients were randomly assigned to receive 0.1 mg/kg midazolam [28] or 0.5 mg/kg ketamine [29] by IV route in the premedication room. All patients received a standardized anesthetic regimen and isoflurane was used for the maintenance of anesthesia. The incidence and severity of agitation [agitation score], severity of pain [pain score], anesthesia, recovery and extubation durations were recorded postoperatively. The prevalence of agitation in midazolam [21.4%] was lower than ketamine group [34.5%, P<0.05]. In addition, the duration of agitation in ketamine group [21 +/- 16.67 min] was significantly higher than midazolam group [6.83 +/- 6.55 min], [P<0.05]. However, no significant differences were seen in agitation score, pain score, anesthesia, recovery or extubation durations in the two groups [P>0.05]. The study showed that midazolam could reduce the frequency of agitation better than ketamine but both drugs were able to reduce the severity of agitation after short-time surgeries in young children.
Pulmonary Fibrosis chemically induced

Evaluation of the beneficial efficacy of curcumin on experimental lung fibrosis of adult male albino rats: a light and electron microscopic study.
Mansou, Magda A.; Seleem, Hanan S.
Menoufiya University - Faculty of Medicine - Department of Histology

Keywords: Pulmonary Fibrosis-pathology; Pulmonary Fibrosis-ultrastructure; Microscopy; Electron; Protective Agents; Curcumin-therapeutic use; Treatment Outcome; Rats; Male
Abstract: Idiopathic pulmonary fibrosis is one of the major types of potentially lethal lung diseases. Curcumin, a natural phenolic compound of Curcuma longa Linn, has anti-inflammatory and antioxidant activity. It is a potent inhibitor of reactive oxygen-generating enzymes. The objective of this study was to evaluate the beneficial efficacy on curcumin on experimental lung fibrosis induced by carbon tetrachloride [CCI[4]] on adult male albino rats. A total of 32 adult male albino rats were divided into four groups. Group I [four rats] was the control group. Group II [eight rats] was further subdivided into two equal subgroups; subgroup IIA was given corn oil [1 mg/kg orally] and subgroup IIB was given curcumin [100mg/kg orally, daily]. Group III [10 rats] was given CCI[4] [1ml/kg twice a week by intraperitoneal route] and group IV [10 rats] was given curcumin 1 week before and concomitantly with CCI[4] injection. Half of the rats of each group were sacrificed after 2 weeks [subgroup A, for short-term study] and the other half were sacrificed after 5 weeks [subgroup B, for long-term study] Lung tissues were processed for light microscope [L/M] and electron microscope [E/M] studies. Moreover, morphometric study was carried out. Subgroup IIIA [short-term study] showed a nonsignificant increase in the mean area percentage of collagen fibers and a nonsignificant decrease in the number of type II pneumocytes. Lung sections revealed local areas of interstitial inflammatory reaction, intra-alveolar hemorrhage, edema, and congestion of pulmonary vessels. Subgroup IIIB [long-term study] revealed a highly significant increase in the mean area percentage of collagen fibers and a significant decrease in the number of type II pneumocytes. Lung sections showed diffuse interstitial inflammatory reaction, foci of necrotic alveolar walls, and diffuse interstitial accumulation of collagen. E/M examination revealed degenerative changes and necrosis of type I and II pneumocytes. The alveolar macrophages showed signs of activation. For 2 weeks the curcumin-supplemented group [subgroup VIA] showed an improvement in their histological findings, as revealed by the significant increase in the number of type II pneumocytes that appeared activated. Type I pneumocytes appeared healthy. After 5 weeks [subgroup VIB], there was more improvement as revealed by the highly significant decrease in the mean are percentage of collagen fibers, highly significant increase in the number of type II pneumocytes, and very minimal inflammatory reaction. Curcumin has an ameliorating effect against lung damage induced by CCI[4]. Thus, this study introduces curcumin as one of the natural herbal remedies that could act as a potential preventive agent against interstitial pulmonary fibrosis. Addition of this compound to the food of those individuals who are vulnerable to interstitial pulmonary fibrosis is recommended.

Pyrazoles

Orthodontic tooth movement and root resorption after different doses of celecoxib drug treatment in rats.
Hashemi, S.M.; Otoofi, A.; Badiee, M.R.; Abdolazimi, Z.; Younesian, F.

Keywords: Sulfonamides; Tooth Movement; Root Resorption; Orthodontics; Rats
Abstract: Non- Steroidal Anti Inflammatory [NSAIDs] medications used for treatment of pain related to orthodontic treatment could slow down tooth movements. Selective cyclooxygenase- 2 inhibitors are alternatives to conventional non steroidal drugs. The aim of this study was to compare three different doses of Celecoxib on orthodontic tooth movement and root resorption in Rats. Forty male Rats randomly divided into the following groups; D [the application of orthodontic appliance with taking medications]; E [without any intervention] and experimental groups included A [received 25 mg/kg], B [received 50 mg/kg] and C [received 100 mg/kg] dose of Celecoxib. NITi coil spring was ligated between the right side maxillary incisor and 1[st] molar. The animals were sacrificed after two weeks and distance between 2 teeth was measured with Caliper. After preparation of histological sections, amount of root resorption, numbers and maximum depth of resorption lacunae in mesial root surfaces of molar was measured. Data were analyzed with ANOVA, LSD and Tukey HSD. The maximum tooth movement was found in group A [0.8537 mm], D, C, B and E respectively. Statistical analysis did not show any significant difference between the different doses of Celecoxib drug in tooth movement. The usage of Celecoxib [particularly in higher doses; 100 mg/kg] decreased the number of resorption lacunae in mesial root of first maxillary molar [P< 0.05]. 100 mg/kg dose of celecoxib was found to be optimum for the lowest effect on tooth movement and the most protection against root resorption.
Quality of Health Care

Conference on Quality of Healthcare in Hospitals [Stakeholders' Perspective].
Perdes, Mohammad Saber
Ministry of Public Health
Keywords: Hospitals; Quality Indicators, Health Care; Quality Assurance, Health Care

Rabbits

growth and development

Influences of breed, sex and sodium butyrate supplementation on the performance, carcass traits and mortality of fattening rabbits.
Abdel Aziz, A.; El Khoiya, S.A.; El Shiekh, A.I.; Mahrous, U.E.
Damhoun University - Faculty of Veterinary Medicine - Animal Hub and Wealth Development
Keywords: Obesity-diet therapy; Butyric Acid; Sex Factors; Breeding; Mortality; Body Weight; Weight Gain
Abstract: Twenty four New Zealand White rabbits [12 does and 12 bucks] and twenty four Flanders [12 does and 12 bucks] rabbits, allotted into two feeding regimes [6 for each breed, 3 males and 3 females] first one feed commercial ration and the second one fed commercial diet supplemented by sodium butyrate [300 g/ton]. The obtained results showed that at end of 8[th] week experimental period New Zealand white rabbits were heavier body weight than Flanders rabbits [1934.55 +/- 39.05 vs. 1802.5 +/- 30.99 g]; significantly high body weight gain [136.1 +/- 3.5 vs. 126.8 +/- 1.8 g/week] and better feed conversion ratio during all weeks of experiment from first week [3.07 +/- 0.16 vs. 3.12 +/- 0.10] till the 8[th] week of experiment [5.54 +/- 0.16 vs. 5.76 +/- 0.07] with significantly high dressing percentages [0.54 +/- 0.01 vs. 0.52 +/- 0.01]. Moreover, hindquarter and gastrointestinal tract percentages were significantly high in New Zealand White than Flanders rabbits. In general females rabbits [at the same age] were lower body weight than males from 1[st] week of experiment [1042.9 +/- 39.9 vs. 1074 +/- 32.9g] till the end of experiment [1833.64 +/- 37.69 vs. 1903.41 +/- 36.93 g]; gained less during all weeks of experiment except during 8[th] week [132.1 +/- 2.3 vs. 130.9 +/- 3.4 g/week], with lower dressing percentage [0.52 +/- 0.01 vs. 0.53 +/- 0.01]. Addition of 300g sodium butyrate/ton of rabbit increased the body weight of rabbits at the end of experimental period [1882.71 +/- 37.69 vs. 1851.5 +/- 49.82 g]; improve body weight gain 2[nd], and 8[th] week of experiment and significantly improve feed conversion ratio during all weeks of the experiment from 1[st] week [2.85 +/- 0.07 vs. 3.30 +/- 0.15] till the 8[th] week of the experiment [5.51 +/- 0.12 vs. 5.77 +/- 0.12]. Also, dressing percentage was higher in Sodium butyrate fed groups than those of the control one [0.53 +/- 0.01 vs. 0.52 +/- 0.01] and the most important results of feeding sodium butyrate is the reducing of the mortality percentage in rabbits during the 8 week period experiment to zero percentage as compared with 16% in the control group.

Reagent Kits, Diagnostic

supply and distribution

Availability and suitability of rapid diagnostic kits for screening donated blood in Afghanistan.
Mansoor, Ghulam Farooq; Rahmani, Ahmad Masoud; Scott, Paul T.; Peel, Sheila A.; Rentas, Francisco J.; Todd, Catherine S.
E-mail:farooqmansoor@gmail.com
Health Protection and Research Organization
Keywords: Blood Donors-supply and distribution; Blood Transfusion-standards; Diagnostic Techniques and Procedures; Cross-Sectional Studies; Questionnaires; Sensitivity and Specificity
Abstract: As health infrastructure is being rebuilt in Afghanistan, military, public, and private facilities offer donor blood collection/ transfusion services. This study aims to measure availability and type of blood screening test kits in the military, public and private facilities in Afghanistan. This national cross-sectional assessment targeted all facilities providing donor blood collection/transfusion services across all sectors. Descriptive statistics were generated with screening test availability compared by setting [urban vs. rural], province/region, and facility type [private vs public] using Chi-square test. A total of 243 facilities were assessed, with all 34 provinces represented with urban settings containing 63% of the facilities. Screening rapid tests were widely present for most pathogens, including HIV [87.7% of facilities], hepatitis B surface antigen [HB[s]Ag] [93.8%], hepatitis [HCV] antibody [90.5%], and syphilis [70.0%]. Private facilities were less likely to have syphilis tests available [51.4% vs. 84.1% [public], p<0.01]. Nineteen percent of facilities use the WHO evaluated test kit for HIV, 2.1% for HB[s]Ag, and none for HCV Ab. Of sites with available test
kits, 7.5% of HIV, 0.9% of HB[s]Ag, 2.3% of HCV, and 6.5% of syphilis tests were expired at time of assessment. For expired tests, private facilities were more likely to have expired HIV and syphilis tests \(p=0.07\) and \(p=0.02\), respectively] than other facility types. Blood collection/transfusion is a multisectoral service in Afghanistan, with substantial differences in test availability and type between sectors. Mechanisms are needed that ensure availability of quality test kits at all levels where blood collection/transfusion is performed. Test kits that have been evaluated by the WHO should be used for blood screening in all facility types.

**Referral and Consultation**

Relationship between consultation length and rational prescribing of drugs in Gorgan city, Islamic Republic of Iran.
Khori, V.; Changizi, S.; Biuckians, E.; Keshtkar, A.; Alizadeh, A.M.; Mohaghgheghi, A.M.; Rabie, M.R.
**Keywords:** Time; Drug Prescriptions; General Practitioners; Patients

**Abstract:** Doctors with longer consultation times tend to diagnose illnesses more precisely, prescribe fewer drugs and present better health advice to their patients. The aim of this study was to measure the average consultation time of general practitioners in Gorgan, Islamic Republic of Iran and to investigate the factors affecting consultation length, especially in relation to rational prescribing of drugs. Data were collected on 620 patient consultations with 62 randomly selected general practitioners. Mean consultation length was 6.9 \[SD 2.6\] minutes. Patient factors that were significantly associated with a longer mean duration of consultation time were: higher number of health problems, older age and fewer items of previously used drugs. Physician factors that were significantly associated with a longer mean consultation time were: younger age, higher numbers of items prescribed and injectable drugs prescribed, frequency of interruptions and higher workload.

**Rehabilitation**

Association of cardiac rehabilitation with improvement in high sensitive C-reactive protein post-myocardial infarction.
Aminlari, A.; Shooshtari, M. Jazayeri; Bakhshandeh, A.R.
**E-mail:** alibahal5134@gmail.com
**Shiraz University of Medical Sciences - Department of Physical Medicine and Rehabilitation**
**IRCMJ - Iranian Red Crescent Medical Journal** 2012; 14 (1): 49-50 (9 ref.)
**Keywords:** C-Reactive Protein; Myocardial Infarction; Prospective Studies; Exercise; Behavior Therapy

**Reperfusion Injury**

pathology

The effect of pentoxifyllin in a rat model of renal ischemic reperfusion injury, light, transmission, and scanning electron microscopic study.
Hafez, Manal Shaaban
**E-mail:** dr.manalsh@yahoo.com
Ain Shams University - Faculty of Medicine - Department of Histology
**Keywords:** Kidney-pathology; Ischemia; Histology; Microscopy, Electron, Scanning-methods; Pentoxifylline-therapeutic use; Protective Agents; Treatment Outcome; Rats; Male

**Abstract:** Renal ischemic/ reperfusion injury remains a major problem in renal transplantation and anesthesia. Pentoxifylline (PTX) is commonly used to treat peripheral vascular and cerebrovascular diseases. The aim of the work was to demonstrate the histological effect of ischemia reperfusion on the kidney and to detect the possible protective role of PTX. Adult male rats were divided into three groups. Group I was the control group, in group II, renal ischemia was induced for 30min, followed by reperfusion for 24h, and in group III, the animals received PTX 4mg/rat/day intraperitoneally for 3 days, and then an ischemia-reperfusion procedure was carried out. At the end of the experiment, the kidneys were dissected and processed for light, transmission, and scanning electron microscopic study. Group II showed focal affection of the kidney whereas some of the glomeruli appeared small and atrophic. The epithelium of proximal convoluted tubules showed vacuolation of the cytoplasm with a detached apical part and their lumena contained cellular debris. The distal convoluted tubules showed loss of the supranuclear cytoplasm of their lining cells. In the medulla, the collecting tubules were dilated and contained casts in their lumena. Transmission electron microscopy revealed disruption of the glomerular basement membrane. Proximal convoluted tubules and distal convoluted tubules showed cytoplasmic vacuolation, degenerated mitochondria, and destroyed brush borders. Scanning electron microscopy revealed glomeruli with an absence of their covering podocytes and destruction of their
glomerular capillaries. The collecting tubules showed complete flattening of their lining cells. In group III, the kidney relatively retained their histological architecture. There was a significant decrease in the mean glomerular surface area in groups II and III in comparison with the control group. However, group III showed a significant increase in comparison with group II. The present study concluded that PTX could protect and reduce the severity of renal ischemic reperfusion injury.

Reproduction

Effect of ginger and L-carnitine on some reproductive parameters of male rats.
Ghoneim, Hanan A.; El Far, A.H.; El Nasharty, M.A.; Abo Ghanema, I.I.
Damanhour University - Faculty of Veterinary Medicine - Biochemistry Department
Keywords: Carnitine; Vitamin B Complex-therapeutic use; Ginger; Spermatogenesis; Antioxidants; GonadalSteroid Hormones; Rats; Male
Abstract: This study was performed to evaluate the effect of ginger and L-carnitine on the effect of ginger and L-carnitine on reproductive performance of male rats including semen evaluation [count, motility and viability of sperm], male sex hormones [Testosterone, FSH and LH] and testicular antioxidant system [reduced glutathione, catalase, and superoxide dismutase and total antioxidant capacity]. The study was carried out on sixty mature male albino rats divided into four groups [fifteen rats each]. One group received physiological saline and kept as a control, while rats of the other three groups received ginger [100mg/kg/day], L-carnitine [150mg/kg/day] and combination of both ginger [100mg/kg/day] and L-carnitine [150mg/kg/day] respectively by stomach tube daily for one month. After the end of treatment period, rats were sacrificed with evaluation of semen and determination of antioxidant enzymes and sex hormones. Results showed that the three previous treatments improve sperm parameters, antioxidant enzymes and testosterone hormone with more favorable and pronounced effects in the group that received combination of both ginger and L-carnitine. Therefore, this study recommends that administration of a combination of ginger and L-carnitine may be beneficial for improving male sexual performance.

Reproductive Behavior

Reproductive behaviour of mothers of children with beta-thalassaemia major.
Habibzadeh, F.; Yadollahie, M.; Roshanipoor, M.; Hayshcnus, M.
E-mail: farrokh.habibzadeh@gmail.com
National Iranian Oil Company Health Organization - Medical Education and Research Centre
Keywords: beta-Thalassemia; Mothers; Questionnaires; Cross-Sectional Studies; Genetic Counseling
Abstract: Thalassaemia is the most common monogenic autosomal hereditary disease worldwide. This questionnaire-based cross-sectional study looked at the reproductive behaviour of 156 mothers of children affected with beta-thalassaemia major [Cooley anaemia] in Fars province, southern Islamic Republic of Iran. Regardless of the number of affected children, the parents of children with Cooley anaemia had an average of 3 unaffected children, the same as the average forthe provincial population. The findings indicate that reproductive compensation occurs in families with a child with Cooley anaemia in this province. Genetic counselling, either before marriage or after the birth of the first affected child, had a significant effect on lowering the number of children born.

Research Support as Topic

Appraisal of the research grant schemes of the World Health Organization Regional Office for the Eastern Mediterranean: the way forward.
Shideed, O.; Al Gasseer, N.
World Health Organization - Research Policy and Cooperation Unit
Keywords: Research Personnel; Research; World Health Organization; Public Health; Health Priorities
Abstract: One way that the World Health Organization Regional Office for the Eastern Mediterranean [EMRO] promotes the important area of health research is by providing research grants within the Region. A desk review of 2 of the EMRO-supported research grant schemes was done to assess: the selection process of the research proposals, the priority areas, country data and information on the principal investigator. The 2 schemes were: EMRO grant for Research in Priority Areas of Public Health, started in 2002, and the EMRO and Organization of Islamic Conference Standing Committee for Science and Technological Cooperation Grant for Research in Applied Biotechnology and Genomics in Health, started in 2004. The paper proposes the following recommendations to enhance benefit from the
grant process: create a critical mass of researchers through joint collaboration in proposals and mentoring; instigate a more rigorous process to disseminate the call for proposals more widely and effectively; and include relevant stakeholders in the identification of priority areas for research and overall monitoring of the process.

**Restless Legs Syndrome**

**drug therapy**

**The effect of selenium administration on restless leg syndrome treatment.**

Rahimdel, A.G.; Ayatollahi, P.; Zeinali, A.; Mehrabanian, N.; Mellat Ardekani, A.

Yazd University of Medical Science - Shahid Sadooghi Hospital - Department of Neurology


**Keywords:** Selenium-therapeutic use; Questionnaires; Placebos

**Abstract:** Restless leg syndrome [RLS] is defined as an uncomfortable feeling in the limbs which is prominently sensed in legs. Dopamine system involvement is considered as the base of RLS's etiology. Because of safety, anti-oxidant and dopaminergic promoting action of selenium, this study aims to investigate the effect of selenium on restless leg syndrome treatment. Sixty patients with primary RLS were enrolled in this clinical trial [Irct2011103015943n1]. It was based on 3 periods of drug prescription with one month wash out period. As placebo, 50 and 200 microg of selenium were administered in each separated month. The diagnosis was based on criteria published by IRLSG [International RLS Study Group]. The questionnaire included 10 questions while each question's rating was between 0 and 4. Points between 1 and 10 were considered mild, 11 to 20 as moderate, 21 to 30 as severe and 31 to 40 as very severe. After end of each month of drug consumption, questionnaires were completed and each subject was asked to report the severity of disease and side effects of the drugs. At least 10 declines in scale were considered as appropriate responses. Improvement [decline ILS score >10] was significantly higher in selenium [50 and 200 microg] than placebo group. Selenium prescription in daily recommended dose of 50 ug instead of a dopamine agonist would be an alternative treatment in improvement of RLS symptoms.

**RNA-Binding Proteins**

**Identification of RNA-binding sites in artemin based on docking energy landscapes and molecular dynamics simulation.**

Rasti, Behnam; Shahangian, Seyyedeh Shirin; Taghdir, Majid; Hasannia, Sadegh; Sajedi, Reza Hasan

University of Guilan - Faculty of Science - Department of Biology


**Keywords:** Iron-Binding Proteins; Arthropod Proteins; Molecular Dynamics Simulation; Artemia

**Abstract:** There are questions concerning the functions of artemin, an abundant stress protein found in Artemia during embryo development. It has been reported that artemin binds RNA at high temperatures in vitro, suggesting an RNA protective role. In this study, we investigated the possibility of the presence of RNA-binding sites and their structural properties in artemin, using docking energy landscapes and molecular dynamics simulation. Analysis of docking energy landscapes revealed sites in artemin with the potential of binding RNAs. We found a good agreement between RNA-binding sites of artemin and RNA-interacting sites of a specific group of RNA-binding proteins called PUF, as regards to the type of their interactions with RNA molecules. Furthermore, the results from molecular dynamics simulation showed that firstly, the presence of RNA molecule and its interaction with artemin cause significant decrease in the secondary structure content of artemin; secondly, RNA-binding sites are mostly located in the low flexible regions. Finally, it seems that these binding sites are distributed in such a way that leads RNA molecule into the interior of the protein, strengthening the previous suggestion for RNA-pro-tecting role of artemin.

**Salmonella Infections**

**epidemiology**

**Serological investigation of salmonellosis among some wild birds and human contacts.**

Samaha, H.A.; Haggag, Y.N.; Nossair, M.A.; Hashim, A.A.

Alexandria University - Faculty of Veterinary Medicine - Department of Animal Hygiene and Zoonoses


**Keywords:** Salmonella Infections-classification; Serotyping; Seasons; Birds; Humans

**Abstract:** A total of 311 serum samples were collected from wild birds and their human contacts [211 from wild birds including gray heron, wild ducks, wild fowl, wild quail and wild captive birds and 100 from their human contacts]. All collected samples were subjected of serological response to Salmonella Typhimurium [ST] and Salmonella Enteritidis
by using the Widal and Felix test kits [ST antigen TMH code 63542] and [SE antigen ENH code 63272] supplied by Bio-Rad Laboratories. It was found that the overall percentage of Salmonella antibodies of wild birds was 13.7% [8.5 and 5.2% for ST and SE respectively]. On the other side, the overall seropositive percentage of human salmonellosis in examined serum samples of the human contacts was 10% and SE was most prevalent serotype affecting human contacts with wild birds. The effect of some epidemiological factors including sex and seasons of the year on the occurrence of salmonellosis in both wild birds and their human contacts were studied. The obtained results clarified that salmonellosis incidence was increased in males than in females with highest seasonal incidence occurring in winter season in both wild birds and human. The public health importance of Salmonellosis was discussed.

Salmonella typhimurium

Molecular characterization of a Salmonella typhimurium isolate from Caspian pony. 
Salehi, Taghi Zahraei; Gharagozlou, Mohammad Javad; Shams, Nemat; Madadgar, Omid; Fasaei, Bahar Nayeri; Yahyareyat, Ramak
E-mail:tsalehi@ut.ac.ir
University of Tehran - Faculty of Veterinary Medicine - Department of Microbiology

Keywords: Horses-microbiology; Typhoid Fever; Salmonella Infections; Multiplex Polymerase Chain Reaction; Electrophoresis, Gel, Pulsed-Field; Transportation; DNA Primers; DNA; Microbial Sensitivity Tests

Abstract: Typhoid disease or salmonellosis is a common sickness in horses. In several epidemiological studies in hospitalized horses, several serotypes of Salmonella often are predominant in nosocomial infections. Transportation, overcrowding, dehydration, oral antimicrobial therapy and infections are the risk factors which may activate latent or subclinical salmonellosis. In this study, the occurrence of typhoid due to Salmonella serogroup B was considered in a Caspian ponies flock kept in a husbandry center of ponies around Tehran. During transportation of 19 ponies, two pregnant ponies aborted and four cases died because of acute septicemia. Pathological and bacteriological follow up showed salmonellosis. A multiplex poly-merase chain reaction [m-PCR] assay was used for detection and identification of Salmonella to confirm pathological and bacteriological studies. Salmonella typhimurium was isolated from bone marrow, mesenteric lymph nodes, liver and intestinal contents of died pony. Salmonella was not isolated from stools of other ponies. Pulsed Field Gel Electrophoresis [PFGE] and antibiotic susceptibility test were also performed. PFGE pattern was similar to the other collected isolates which have existed since more than 30 years ago in Iran. Because of importance of salmonellosis in ponies, using rapid methods are recommended to confirm the presence of Salmonella. Results showed that m-PCR permit to evaluate samples more rapidly than other methods and also can detect multiple genes simultaneously like virulence factors which declare virulence of the isolates and have surveillance significances.

Scenedesmus

growth and development

Effect of molybdenum, vitamin [C] and vitamin [B[1]] on the growth criteria, photosynthetic pigments and metabolic activities of stressed-scenedesmus obliquus cultures. 
Desouky, S.A.; Usama, M.A.; Ahmed, W.A.
Al-Azhar University - Faculty of Science - Botany and Microbiology Department

Keywords: Scenedesmus-metabolism; Scenedesmus-drug effects; Molybdenum-adverse effects; Ascorbic Acid-therapeutic use; Thiamine-therapeutic use; Amino Acids; Carbohydrates; Proline

Abstract: The growth criteria [cell count and dry weight] and total photosynthetic pigments, total carbohydrates, total proteins, free amino acids and praline of stressed- Scenedesmus obliquus cultures were significantly increased up to the level 3 ppm of MoCl[2] of that the control cultures, there above the values all these parameters were significantly decreased. When treated stressed Scenedesmus obliquus cultures with 200 ppm of either ascorbic acid or thiamine were both supplemented of them separately, the growth criteria, total photosynthetic pigments, total proteins, free amino acids and praline of stressed-Scenedesmus obliquus cultures were significantly increased, as comparison with that the control cultures. Conversely, the total carbohydrate contents significantly decreased, when the algal cultures subjected to various levels [1.5, 3 and 4.5 ppm] of MoCl[2] and treated with 200 of either ascorbic acid or thiamine.
Selenoproteins

**Analysis of conserved structural features of selenoprotein K.**

Al Rifai, Mariam F.; Moustafa, Mohamed E.
Beirut Arab University - Faculty of Sciences - Department of Biological and Environmental Sciences


**Keywords:** Computational Biology; Physicochemical Phenomena; Polymerase Chain Reaction-methods

**Abstract:** Selenium plays important roles in human health and these roles may be exerted through its presence in selenoproteins. Among the 25 selenoproteins in human is selenoprotein K [SelK] whose exact function is still unclear. Here, we investigated the conserved structural features of SelK using bioinformatics as an approach to understand the function and regulation of SelK in mammals. Our data showed that mammalian SelK sequences have more than 90% identity relative to the human SelK. Using RT-PCR assays, we found that SelK is expressed in various rat organs including liver, tests, brain, skeletal muscles, kidneys, spleen, lungs and heart. The selenocysteine [Sec] residue in animal SelK is located three amino acid residues from the C-terminal end of the protein. This Sec residue [U] occurs in a conserved GGUGR sequence in animal SelK. We also found SelK Cys homologues occurring in plants that contain cysteine residues in a conserved GGSCG sequence at the C-terminal end of the protein. Sequences of SelK in various mammals were found to have disordered region that contains conserved sequences of Src homology 3 [SH3] binding motifs, preceeded by a potential serine phosphorylation site at position 58. These SH3 binding motifs may be involved in binding of SelK to protein partners containing SH3 binding domains. In conclusion, the conserved GGUGR sequence in animal SelK may be involved in the role of SELK in redox homeostasis. SelK may be involved in protein-protein interactions through its SH3 binding motifs in mammals and this role may be regulated by phosphorylation of the serine residue at position 58.

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Serotonin Uptake Inhibitors

**Effect of selective serotonin re-uptake inhibitor [sertraline] on some reproductive aspects of mature male rats and plasma trace elements concentration.**

Nemetallah, B.R.; Zakaria, A.D.; Hedaya, S.A.; Farag, S.
Alexandria university - Faculty of Veterinary Medicine - Department of Physiology

**Alexandria Journal of Veterinary Science** 2012; 35 (1): 185-196 (40 ref.)

**Keywords:** Reproduction; Rats; Male; Testis-pathology; Histology; Sperm Count; Sperm Motility; Testosterone; Zinc-blood; Copper-blood

**Abstract:** Administration of selective serotonin reuptake inhibitors [SSRI] interferes with male reproduction and trace element concentrations. The mechanism of action of antiserotonin [sertraline] is presumed to be linked to its ability to inhibit the neuronal reuptake of serotonin. The aim of the present study is to evaluate the effects of sertraline on reproductive system of mature male rats and on some plasma trace element concentrations. Twenty mature male rats were divided into 2 equal groups [10 rats/group], one group was administrated with sertraline [10mg/kg.b.w.]via stomach tube for 70 days while the other group administrated 1ml saline and considered as control groups. Results showed that seminal vesicles were significantly [P<0.05] decreased in weight. Also, sertraline resulted in significant [P<0.05] decrease of sperm motility [30%] compared to [70%] in control group. Histological sections prepared from sertraline treated rats showed degenerative and necrotic changes with few spermatocytic giant cells. Seminal vesicles were activated in sertraline treated rats and increased eosinophilic secretions. Plasma concentration of testosterone was significantly [P<0.05] decreased in sertraline treated rats as compared to its level in control rats. Moreover plasma concentration of iron in sertraline treated rats showed significant [P<0.05] decrease compared to control group, while plasma concentration of copper in sertraline treated rats showed significant [P<0.05] increase, but was concluded that serotonin inhibitor adversely affect the reproductive aspects of male rats and induced alteration in some plasma trace element concentration.

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Sewage

**Comparative study on startup performance of UAHR and UASB reactors in anaerobic treatment of distillery spentwash.**

Selvamurugan, M.; Doraisamy, P.; Maheswari, M.; Nandakumar, N.B.
E-mail: muruganens@gmail.com
Tamil Nadu Agricultural University - Department of Environmental Sciences

**International Journal of Environmental Research** 2012; 6 (1): 235-244 (28 ref.)
Keywords: Biofuels; Methane; Hydrogen-Ion Concentration; Electric Conductivity; Biological Oxygen Demand Analysis

Abstract: In this paper, startup performance of Upflow Anaerobic Hybrid Reactor and Upflow Anaerobic Sludge Blanket reactors in anaerobic treatment of distillery spentwash has been studied under identical conditions of operation. Various effluent characteristics like pH, Electrical Conductivity, Chemical Oxygen Demand, Biochemical Oxygen Demand and Total Solids and other process parameters like biogas production and methane per cent in biogas were studied until the attainment of steady state. The startup of the reactors has been completed and steady state condition attained on 25[th] day of reactor operation in UAHR and 34[th] day in UASB reactor. The treated effluent characteristics of both reactors were fairly steady after attaining the steady state condition. The pH of treated effluent during steady state condition was almost neutral for both reactors even though the influent had an acidic pH. The maximum COD, BOD and TS removal efficiencies were as high as 79.60%, 87.39% and 69.96% in UAHR as compared with UASB of 72.98%, 81.34% and 66.23%, respectively during the steady state period. The maximum volumetric gas production of 149 L nr 3 produced more in UAHR than in UASB reactor during steady state condition. The population of total anaerobic bacteria and methanogenic bacteria also more as that of the other parameters in UAHR than in UASB reactor and it were 55.2 x 10[3] ml[-1] and 40.0 x 10[2] ml[-1] respectively in UAHR. It is found that from an overall assessment the UAHR has proved superior in its performance compared to the UASB reactor during the startup process.

Direct treatment of settled sewage by DHS reactors with different sizes of sponge support media.
Uemura, S.H.; Suzuki, S.; Maruyama, Y.; Harada, H.
E-mail:uemura@wangan.c.kisarazu.ac.jp
Kisarazu National College of Technology - Department of Environmental Engineering
Keywords: Portiera; Polyurethanes

Abstract: The down-flow hanging sponge [DHS] reactor, which was developed for post-treatment of effluent from up-flow anaerobic sludge blanket [UASB] process treating sewage, uses polyurethane sponge as media to retain biomass. Wastewater is trickled from the top of the reactor and purified by microorganisms retained both inside and outside of the sponge media as the wastewater flows vertically down through the reactor. Three DHS reactors employing different sizes of sponge media with the same total sponge volume were used for the direct treatment of settled sewage. All the reactors exhibited excellent performance in removal of COD, ammonium nitrogen, and fecal coliform at a fixed hydraulic retention time of 2.0 h based on the sponge volume. It was shown that smaller sponge media produced better removal efficiencies for all the parameters listed above. The most reasonable explanation for this might be that smaller sponge media allows better oxygen uptake in the stream flowing down through the reactors.

Shiga-Toxigenic Escherichia coli

isolation and purification

Characterization of Egyptian-field shiga-toxigenic Escherichia-coli strains infecting sheep and man.
Zidan, S.A.; El Sify, A.
Menofia University - Faculty of Veterinary Medicine, Sadat branch - Department of Animal Hygiene and Zoonoses
Keywords: Sheep; Human; Feces-microbiology; Genotype; Serotyping-classificatin

Abstract: Shiga-toxigenic Escherichia coli [STEC] strains cause severe gastrointestinal and systematic diseases in humans that result from the consumption of food and water contaminated with faeces of infected animals and/or individuals. In Egypt STEC cause several diseases in farm animals and man. Fecal cultures were performed on Trypticase Soya Broth and sorbitol MacConkey agar supplemented with cefixime and tellurite supplements which were Biochemically identified as Escherichia coli. Further identifications were performed including Vero cells cytotoxicity assay and PCR for specific VT1/VT2 genes. Vero cells cytotoxicity assay was performed on 51 suspected colonies obtained from 423 faecal samples collected from sheep [214] and stool samples of human [209] revealed that 22 of E. coli isolates were STEC. By PCR, 22 [100%] of the 22 strains were confirmed to be STEC whereas 14 strains [63.63%] were positive for the VT2 gene, 6 [27.27%] were positive for the VT1 gene and 2 [9.09%] isolates were positive for both genes. In comparison to Vero cells cytotoxicity, the sensitivity of PCR were 100%. The most common serogroups of STEC in sheep and man were O157 [31.82%], O103 [13.63%], O20 [13.63%] and O111 [9.09%]. The incidence of STEC was higher in Diarrheic individuals than in apparently healthy individuals, which mean that STEC are an important cause of diarrhea in man and sheep. In conclusion the ovine species constitute an important reservoir of STEC infection to man and PCR reaction is the most rapid, sensitive and efficient approach for detection of STEC.

Prevalence and characteristics of verotoxigenic E.coli in bovine and human intestine.
Torkey, H.A.; Khalil, S.A.; Abdel Alim, Naglaa R.
Keywords: Prevalence; Feces-microbiology; Cattle; Intestines; Humans
Abstract: In this study, the prevalence and characterizes of verotoxigenic E. coli was investigated in 140 cattle faecal samples from military farms. Also, 100 human stool samples from governmental hospital in Alex, through the period from January to August 2010, the sample were examined in laboratory of Department of Microbiology, Fac. Of Vet. Med., Alex. Bacteriological examination were done to detect the E. coli verocytotoxin production identified by duplex-PCR. This analysis revealed that the prevalence of VTEC was 62.5% in cattle and 57.14% in human samples. The organism could be isolated at a higher prevalence [66.66%] from healthy calves than from diarrheic ones [50%] indicating the reservoir status of cattle. In human, the prevalence in diarrhoeic children was higher [66.66%] than non diarrheic ones [50%]. In conclusion, the prevalence of VTEC in cattle and human was high, indicating the public health importance of organism.

Sirolimus

therapeutic use

Reduction of left ventricular hypertrophy by sirolimus in kidney transplant recipients: a nonrandomized clinical trial.
Sedghipour, Mohsen; Tabatabaei, Seyyed Abdul Hossein; Sadadi, Fereshteh; Hedayat, Dariush Kamal; Nikdoost, Farahnaz; Sate, Hossein; Yekta, Batoom Ghorbani
E-mail:mohsen.sedghipour@yahoo.com
Tehran University of Medical Sciences - Shariati Hospital - Department of Heart
Tehran University Medical Journal [TUMJ] 2012; 69 (11): 718-724 (22 ref.)
Keywords: Hypertrophy, Left Ventricular-drug therapy; Kidney Transplantation; Calcineurin-antagonists and inhibitors; Immunosuppressive Agents; Prospective Studies; Cohort Studies
Abstract: Persistence of left ventricular hypertrophy [LVH] in renal transplant recipients is associated with unfavorable outcomes. Calcineurin-inhibitor [CNI] nephrotoxicity is a major cause of morbidity and mortality after kidney transplantation. In this study we compared sirolimus [SRL] with calcineurin-inhibitor as primary immunosuppressants for the attenuation of left ventricular hypertrophy in renal transplantation recipients. In this prospective cohort study done in Shariati Hospital in 2010, we evaluated the effects of sirolimus and CNI on LVH of 55 renal transplant recipients. The cases [19] received sirolimus while the controls [36] received CNI while being matched for age and duration of transplantation. Data regarding blood pressure [BP], hemoglobin, serum creatinine, uric acid and lipid concentrations were assessed and changes in left ventricular [LV] mass were evaluated by echocardiography over a one-year follow-up. Left ventricular mass significantly decreased [P=0.0001] in the SRL group but blood pressure did not differ between the two groups. LV mass and LV mass index both decreased significantly [P<0.05] but the difference was not associated with changes in BP. The difference in interventricular septal thickness at end diastole [IVSD] and posterior wall diameter [PWD] were significant [P<0.05] in the SRL group but the difference in end diastolic diameter [EDD] was not significant. Conversion from CNI to SRL-based immunosuppressive therapy in RTRs is safe and SRL may decrease LVH. SRL seems to be safe and improve renal function without cardiac compromise in kidney transplant recipients.

Skin Diseases

epidemiology

Pattern of dermatoses in Iraqi children.
Al Mendalawi, M.D.; Ibrahim, J.G.
E-mail:madalmendalawi@yahoo.com
Baghdad University - Al Kindy College of Medicine - Department of Paediatrics
Keywords: Hospitals, Teaching; Cross-Sectional Studies; Skin Diseases, Infectious-epidemiology; Skin Diseases, Eczematous-epidemiology; Pigmentation Disorders-epidemiology
Abstract: The prevalence of paediatric dermatoses has risen in Iraq from 33.5% in 1987 to 40.9% in 2010. The objective of this study was to document the pattern of dermatoses in Iraqi children attending the outpatient clinic of a teaching hospital in Baghdad, Iraq. We conducted a cross-sectional study of 663 children under the age of 12 years who attended fordermatological consultation during 2008. The study showed that the prevailing dermatoses were as follow: infectious [32.3%, eczematous [20.8%], pigmented [17.8%], papulosquamous [14.2%, drug-induced [4.5%], nutritional deficiency [1.8%] and miscellaneous [8.6%]. The studied patterns of dermatoses were similar to that reported in other developing countries.
Survey of skin disorders in newborns: clinical observation in an Egyptian medical centre nursery.
El Moneim, A.A.; El Dawela, R.E.
E-mail:abeeraaa6@gmx.de
University of Sohag - Sohag Faculty of Medicine - Department of Paediatrics
Keywords: Mongolion Spot-epidemiology; Skin Abnormalities-epidemiology; Prospective Studies; Cohort Studies; Nevus, Pigmented-epidemiology
Abstract: The frequency of neonatal skin disorders has not been well studied in Egypt. Our aim was to address patterns of dermatological changes in a sample of Egyptian newborns. In a descriptive prospective cohort study 600 newborns in Sohag University hospital nursery were dermatologically examined within the first 5 days of birth. Skin disorders were detected in 240 neonates [40.0%]. Birthmarks were found in 100 neonates [16.7%], mainly melanocytic type [mongolian spots in 11.7% and congenital melanocytic naevi in 2.7%]. Fungal skin infections, including oral moniliasis, fungal infection in the napkin area or candidal intertrigo, were detected in 13.3% and bacterial infections in 1.3% of neonates. Comparisons with other studies worldwide indicated a higher rate of fungal infections and lower rate of birthmarks in our study. Routine neonatal dermatological evaluation is recommended, especially in view of the high rate of fungal skin infections.

etiology

Jessner lymphocytic infiltrate presenting on a cutaneous leishmaniasis scar: case report.
Sadeghian, G.; Ziae, H.
E-mail:Sadeghian@sdlrc.mui.ac.ir
Isfahan University of Medical Sciences - Skin Disease and Leishmaniasis Research Centre
Keywords: Lymphocytes; Skin Diseases-diagnosis; Erythema-diagnosis; Erythema-etiology; Cicatrix; Leishmaniasis, Cutaneous; Erythema-pathology; Skin Diseases-pathology

Skin Transplantation

Preparation of an acellular dermal matrix using the freeze-thawing technique with and without gamma irradiation.
Abdel Tawab, Salwa Mohamed; Kousha, Faten Sobhy; Abdel Aziz, Abdel Aziz Hanfy; Moussa, Manal Hassan; Elsebay, Sara Abdel Gawad
Ain Shams University - Faculty of Medicine - Department of Histology
Keywords: Tissue Expansion; Gamma Rays; Laminin; Skin-pathology; Histology; Immunohistochemistry; Human
Abstract: An acellular dermal matrix [ADM] is a dermal substitute in which the skin is treated to remove epithelial and dermal cellular components. To compare the histological and immunohistochemical structures of ADMs prepared using the freeze-thawing technique with or without gamma irradiation. Twenty-one human skin specimens were used and divided into three equal groups: group I [control group], group II, in which skin specimens were subjected to three repeated freeze-thawing cycles, and group III, in which skin specimens were subjected to three repeated freeze-thawing cycles and subsequent exposure to 5000 rad gamma irradiation. Skin specimens from the previous groups were examined histologically and immunohistochemically for laminin. A morphometric study was carried out for the determination of the number of cells per high-power field [hpf] in both the papillary and the reticular dermis. Both methods of ADM preparation resulted in extensive extraction of cellular components with preservation of the basic dermal architecture as there was a highly significant decrease in the number of cells/hpf in both the papillary and the reticular dermis. Both methods of ADM preparation resulted in extensive extraction of cellular components with preservation of the basic dermal architecture as there was a highly significant decrease in the number of cells/hpf in both the papillary and the reticular dermis. Both methods of ADM preparation resulted in extensive extraction of cellular components with preservation of the basic dermal architecture as there was a highly significant decrease in the number of cells/hpf in both the papillary and the reticular dermis. Both methods of ADM preparation resulted in extensive extraction of cellular components with preservation of the basic dermal architecture as there was a highly significant decrease in the number of cells/hpf in both the papillary and the reticular dermis. Both methods of ADM preparation resulted in extensive extraction of cellular components with preservation of the basic dermal architecture as there was a highly significant decrease in the number of cells/hpf in both the papillary and the reticular dermis. A combination of irradiation and a freeze-thawing technique is recommended in the preparation of ADM for efficient decellularization.

Smoking

Smoking habits and attitudes among university students in Palestine: a cross-sectional study.
Musmar, S.G.
E-mail:smusmar@najah.edu
An Najah National University - Faculty of Medicine - Department of Medicine and Society
Keywords: Attitude; Students; Universities; Cross-Sectional Studies; Questionnaires; Sex Distribution
Abstract: Information about the rate of smoking and factors associated with initiating and maintaining the behaviour is scarce in Palestine. The aim of this study was to explore the rate of and attitudes towards smoking among An-Najah National University students. During spring 2010, a questionnaire adopted from the Global Health Professionals Survey and the Global Youth Tobacco Survey was administered to 954 randomly selected full-time students. Overall 34.7% of the study sample were cigarette or waterpipe smokers, and this rate was higher among males than females [52.7% versus 16.5%]. In logistic regression analysis, sex [male], type of college [humanities], older age and higher family income were predictors of current smoking status. Smokers had more negative attitudes to banning smoking in public areas on campus and to education about the harmful effects of smoking. Antismoking programmes with special attention to males and students in humanities are badly needed.

Soil

An investigation on As, Cd, Mo and Cu contents of soils surrounding the Meyduk tailings dam.
Kargar, M.; Khorasani, N.A.; Karami, M.; Rafiee, G.H.; Naseh, R.
E-mail: Kargar.maryam@gmail.com
University of Tehran - Faculty of Natural Resources - Department of Environment
International Journal of Environmental Research 2012; 6 (1): 173-184 (52 ref.)
Keywords: Arsenic; Cadmium; Copper; Dust
Abstract: The contents of As, Cd, Cu and Mo were determined in soil surrounding Meyduk tailings dam based on 21 surface soil samples. Assessment of toxic element pollution in studied soil samples needs knowledge of preanthropogenic metal concentration to act as a reference against which measured values could be compared. Estimating the background values was executed by sampling rocks adjacent to soil sampling stations. Various indices including enrichment factor [EF], pollution load index [PLI], modified contamination degree [mCd] and geoaccumulation index [Igeo] were used for determining the contamination level of soil in the vicinity of tailings impoundment under the effect of the tailings dust. Anthropogenic pollution was diagnosed from natural one by sequential extraction done by Tessier et al method and calculating pollution intensity index [Ipol]. The results indicate a significant upward enrichment in northeastern and southwestern surface soil around the tailings dam for Cd and Cu. The dominant wind direction demonstrated that only the contamination of southwestern soil around the tailings dam would be attributed to tailings dust while the dispersive dusts scattered after the mine explosions generally affected the northeastern part.

Evaluation of anthropogenic impacts on soil and regolith materials based on BCR sequential extraction analysis.
Kalhori, A. Alimohammad; Jafari, H.R.; Yavari, A.R.; Prohic, E.; Koky,a T. Ahmadzadeh
E-mail: aramkalhori@ut.ac.ir
University of Tehran - Graduate Faculty of Environment - Department of Environmental Management and Planning
Keywords: Metals; Heavy; Lead; Copper; Zinc; Chromium; Manganese; Iron
Abstract: This study was conducted in Assaluyeh region, southwest of Iran to show utilization and efficiency of sequential extraction analysis in environmental impact studies using soil and related regolith materials as sample media. In order to investigate distribution of heavy metals, optimized BCR [Community Bureau of Reference] sequential extraction analysis method was used. In this case eight representative samples which state all types of different regolith materials in the area were investigated. Total concentration and chemical partitioning of a number of elements [Pb, Cu, Zn, Cr, Mn and Fe] were studied to cover all spectral from typical anthropogenic elements, lead and copper, elements of assumed mixed origin, chromium and zinc, to mostly lithogenic elements, iron and manganese. Results stated that the concentrations of each chemical phase extracted from samples are below the total concentration of each element. The results could be used to establish best media indicators for environmental studies with dependence on type of elements determined in regolith material. Using sequential extraction analysis, the association of particular elements with geochemical phases in soils and related materials was investigated as well as the importance of particular phases in the scavenging of heavy metals. Results showed that the organic and sulphide phase was less important in scavenging mechanism -in spite of industrial and petrochemical activities in the study area- than exchangeable and carbonate fraction, which showed to be most important phase with respect to metal scavenging capacity.

chemistry

The effect of biosurfactant [rhamnolipid] on contaminated soil by petroleum hydrocarbons from oil spills in El-zawia city - Libya.
Elouzi, Abdurrahim A.; Bashir, Rehad; Sandouk, Ryma; Elgamode, Bassam
E-mail: abdurrahim68@hotmail.com
Tripoli University - Faculty of Pharmacy - Department of Pharmaceutical Sciences
Assiut University Bulletin For Environmental Researches 2012; 15 (1): 17-29 (29 ref.)
Keywords: Petroleum Pollution; Glycolipids-therapeutic use; Protective Agents
Abstract: The petroleum contaminations are identified as challenges for environments and human health, where petroleum products have caused serious problems in the contamination of the soil and groundwater. Recently many
technologies have been put into use to clean such pollution. In this study, the biosurfactant has been used for washing contaminated soil to enhance biodegradation of the contaminants. The amount of contamination of soil was assessed by using Adenosine Tri-Phosphate [ATP] bioluminescence technique. The soil was treated with different concentrations of the Tri-Phosphate [ATP] bioluminescence technique. The soil was treated with different concentrations of the Rhamnolipid solutions [0.5, 1, and 2%] for different incubation time and finally the effect of the biosurfactant [Rhamnolipid] in enhancing degradation of contaminated hydrocarbon soil was conducted by using gas chromatograph technique [GC] before and after treatment. The measurement of ATP showed an increase in the growth of the microorganism in the presence of different concentrations of rhamnolipid while a decrease in the control. The GC analysis confirmed that rhamnolipid enhanced the degradation of a major portion of sorbed hydrocarbon from contaminated soil relative to treatment without rhamnolipid. 1% and 2% rhamnolipd were the most effective concentration in hydrocarbon biodegradation.

**Stomach Neoplasms**

**microbiology**

**Evaluation of specific biochemical indicators of Helicobactepylori-associated gastric cancer in Egypt.**

Anwar, M.M.; Youssef, A.I.; Sheta, M.I.; Zaki, A.; Bernaba, N.R.; El Toukhi, M.A.

E-mail: medhatanwar@gmail.com

University of Alexandria - Medical Research Institute - Department of Experimental and Clinical Surgery


**Keywords:** Stomach Neoplasms-blood; Helicobacter pylori; Gastrins-blood; Cadherins-blood; Stomach Neoplasms-diagnosis; Gastritis-microbiology; Sensitivity and Specificity

**Abstract:** The aim of the study was to assess the accuracy of some specific biochemical indicators in discriminating between Helicobacter pylori-associated gastritis and H. pylori-associated stomach cancer [serum gastrin level, serum soluable E-cadherin and tissue COX-2 activity, as well as serodiagnostics markers for H. pylori infection] in order to find a simple diagnostic test that can reasonably predict the development of gastric cancer. The study participants comprised 20 patients with gastric carcinoma, 20 patients with positive H. pylori-associated gastritis and 20 individuals as the control group. Standard procedures and quality control measures were followed. Using cut-off values and ROC analysis to assess the diagnostic abilities of the biochemical indicators, E-cadherin showed the highest sensitivity [100%]. We suggest that close follow-up together with periodic endoscopic examination for all patients with persistent H. pylori infection and serum soluble E-cadherin level above 5 microg/mL is essential.

**Streptomycin**

**isolation and purification**

**Antifungal activities of some streptomyces strains-isolated from Rhisospheres of wild olea Europae and Juniper procera Trees.**

Al Zahrani, S.H.M.; Al Zahrani, K.K.H.

Faculty of Science College for Girls - Department of Biology

Assiut University Bulletin For Environmental Researches 2012; 15 (1): 1-13 (39 ref.)

**Keywords:** Olea; Juniperu; Antifungal Agents; Soil-analysis

**Abstract:** In the present study, 191 isolates of Streptomyces sp. were isolated from soil samples of the rhizospheres of Olea europae and Juniper procera trees from forests in Al-Baha region, Saudi Arabia. The isolates were grown on solid starch-casein medium and tested for their antifungal activities against some fungi. 88% of the isolates showed antifungal activity against seven fungi, Aspergillus ochraceus, A. nidulans, Circinella mucoroides, A. awamori, A. terreus, Pencillium griseofulvum and A. niger. All isolates were able to completely inhibit the growth of A. ochraceus and A. niger. Starch -casein was the best medium for producing the highest antifungal activity against most of tested fungi. The inhibition of growth of the tested fungi was increased by increasing the concentration of Streptomyces filtrate [grown on broth starch-casein medium].
Students, Dental

Dentistry students' reasons for choosing dentistry as a career in Damascus University.
Mashlah, A.M.
Damascus University - Faculty of Dental Medicine - Oral Medicine Department

Abstract: This cross-sectional questionnaire survey assessed the motives for choosing dentistry as a profession among dentistry students at Damascus University, Syrian Arab Republic. A total of 408 undergraduate students [233 males and 175 females] aged 18-23 years were selected randomly from students in the second, third and fourth years of dentistry study. They completed a questionnaire that enquired about their reasons for studying dentistry as well as their sociodemographic characteristics. The number of admissions in females had increased over the 3 years. Most parents of the students were university-educated. The main motivation for choosing dentistry was as a means to achieve personal goals, including getting a good job abroad, having financial independence, and attaining a good reputation. There were significant differences between the sexes with regard to the reasons for choosing dentistry.

Tamoxifen

adverse effects

Amelioration of tamoxifen-induced oxidative stress in rats.
El Deib, Kamal Maamoun
E-mail: dr_kamal_eldeib@hotmail.com
National Organization for Drug Control and Research [NODCAR] - Molecular Drug Evaluation

Abstract: This study was conducted to investigate the ameliorative effect of silymarin on the oxidative stress induced by tamoxifen [TAM} in female albino rats. Adult female albino rats [180-220g] were divided into four groups [n=8] treated as follows: [1] control group rats was treated with 0.5% carboxy methyl cellulose in distilled water by oral route. [2] Tamoxifen group: rats received tamoxifen orally in a dose of 20mg/kg/day for 14 days. [3] Silymarin [SLM] group: rats received orally 100 mg/kg/day of silymarin for 14 days and [4] TAM/SLM group: rats received orally 100 mg/kg/day of silymarin and 20 mg/kg/day of tamoxifen for 14 days. The rats were sacrificed 24 hr after the end of treatment. The results revealed that tamoxifen induced marked increase in relative liver weight and serum levels of ALT. AST and decrease in serum albumin level which were normalized by silymarin administration. Pretreatment with silymarin significantly attenuated tamoxifen-induced increases in malondialdehyde [MDA] in the liver homogenate. The results revealed that the activities of lysosomal enzymes acid phosphate [ACP], beta -N-acetyl glucosaminidase [beta - NAG] and beta - galactosidase [beta -GAL] were significantly decreased in TAM-treated animals while concomitant treatment by silymarin caused marked decrease in the activities of the three enzymes [P<0.05]. TAM significantly decreased reduced glutathione [GSH] and glutathione reductase [GR] levels in the liver homogenate, while concomitant treatment with silymarin blunted the decreased levels of GSH and GR [P<0.05]. Our results revealed the potential antioxidant and hepatoprotective effect of silymarin against TAM-induced hepatotoxicity. So, it may be worthy to consider the beneficial use of silymarin as supplement with tamoxifen therapy.

Thoracic Surgery

Reasons for cancellation of elective cardiac surgery at Prince Sultan cardiac centre, Saudi Arabia.
Sultan, Nabeel; Abdul Rashid; Abbas, Syed M.
E-mail:nabillion74@yahoo.com
Leicester Royal InfirmarydLeicester
Journal of the Saudi Heart Association 2012; 24 (1): 29-34 (30 ref.)

Abstract: The cancellation of surgery is a significant drain on health resources. However, a persistent problem in most hospitals is short notice cancellation of scheduled operations, even upto the day of surgery. In some cases, patients have been prepared for surgery, and the staff is assembled and expecting to operate. In UK 8% of scheduled elective operations are cancelled within 24 hours of surgery. The reasons include cancellation by the patient, cancellation for poorly optimized medical conditions, or cancellations due to poor organization. Many of these are difficult to quantify. However, one relatively easily measured factor is the possibility that some operating lists were predictably overbooked. An operating list may over-run because of delayed starts, slow turnover, unanticipated surgical/anaesthetic problems or staff shortages. Many of these are difficult to quantify. Prince Sultan Cardiac center is
one of the largest referral centers in the Middle East and there is no published data on the reasons for cancellation of specifically cardiac procedures. However, an audit was performed to assess the reasons for the cancellation of the cases on the day of surgery in cardiac theatres. According to one of the studies published in an Australian journal the percentage of cancelled cardiothoracic cases was determined to be 15.8%. Total number of cardiac surgical patients including pediatric and adult during a period from June 2008 to May 2009 were 2191. Out of those, 1681 cases were done during the study period, 510 [23.27%] cases were cancelled during the study period. The operation theatre was functional for 331 days during the study period. Cancellations done by the surgeons were 34% while the patient's related cancellations were 32%. The administrative issues contributed to 34% in overall cancellation and anaesthetist-related cancellation were 0%. We estimated 22% of the elective operations which were cancelled on the day of surgery were potentially avoidable. There is still a need to do further research to look for the identifiable reasons and strategic measures to eliminate the reasons for cancellation on the day of surgery.

**Tissue Expansion**

**Endoscopic versus open tissue-expander placement.**

El Sonbaty, Mostafa; Masoud, Karim; Saad, Wael; Hussien, Assem; Sayed, Mahmoud
Assiut University - Faculty of Medicine - Plastic Surgery Department
Assiut Medical Journal 2012; 36 (1): 181-188 (18 ref.)

**Keywords:** Endoscopy; Follow-up Studies; Comparative Study; Length of Stay; Treatment Outcome; Reconstructive Surgical Procedures

**Abstract:** Tissue expansion is one of the reconstructive surgeon's alternatives in providing optimal tissue replacement when skin shortage is a major problem. Pre-designed plan about the criteria of tissue expansion should be implied before embarking on removal of a lesion. Endoscopic placement of tissue expanders has the benefit of reducing operative time, major complication rate, time to full expansion and length of hospital stay compared to the open technique for tissue expander placement. The study was conducted on fifty patients who require tissue expanders for correction of their defects. Open placement of tissue expander was done to half of them, while the other 25 patients underwent endoscopic placement of tissue expanders. Patients were vented from outpatient clinic of plastic surgery department of Assiut University Hospital starting from January 2008 to September 2011. The average operative time for placement of each expander was significantly reduced in the endoscopic group compared with the open group [p<0.01]. The major complication rate was also reduced in the endoscopically placed expander group [16 percent] compared with the open group [40.0 percent] [p<0.03]. Time to full expansion was reduced in the endoscopic group compared to those of the open group [p<0.01]. Duration of hospital stay was also significantly reduced in the endoscopic group [p < 0.000]. It was concluded that endoscopic placement of tissue expanders is a safe and effective method for tissue-expander reconstructions of large and difficult wounds.

**Titanium**

**Ecotoxicology of nano-TiO[2] - an evaluation of its toxicity to organisms of aquatic ecosystems.**

Clemente, Z.; Castro, V.L.; Jonsson, C.M.; Fraceto, L.F.
State University of Campinas - UNICAMP - Institute of Biology - Department of Biochemistry

**Keywords:** Ecotoxicology; Aquatic Organisms; Ecosystem; Nanoparticles; Nanotechnology

**Abstract:** The production and use of synthetic nanoparticles is growing rapidly, and therefore the presence of these materials in the environment seems inevitable. Titanium dioxide [TiO[2]] presents various possible uses in industry, cosmetics, and even in the treatment of contaminated environments. Studies about the potential ecotoxicological risks of TiO[2] nanoparticles [nano-TiO[2]] have been published but their results are still inconclusive. It should be noted that the properties of the diverse nano-TiO[2] must be considered in order to establish experimental models to study their toxicity to environmentally relevant species. Moreover, the lack of descriptions and characterization of nanoparticles, as well as differences in the experimental conditions employed, have been a compromising factor in the comparison of results obtained in various studies. Therefore, the purpose of this paper is to make a simple review of the principal properties of TiO[2], especially in nanoparticulate form, which should be considered in aquatic toxicology studies, and a compilation of the works that have been published on the subject.
**Tobacco Smoke Pollution**

**adverse effects**

Histological and immunohistochemical study on the effect of passive smoking on the skin of adult male albino rats and the possible protective role of nigella sativa oil.

Khalaf, Gehan; Mostafa, Hany K.K.

E-mail: dr_gehankhalaf@hotmail.com

Ain Shams University - Faculty of Medicine - Department of Histology

**Egyptian Journal of Histology [The] 2012; 35 (1): 87-94 (17 ref.)**

**Keywords:** Skin-pathology; Histology; Immunohistochemistry; Protective Agents; Nigella sativa; Plant Oils-therapeutic use; Treatment Outcome; Rats; Male

**Abstract:** Smoking is associated with many dermatological conditions, including poor wound healing and premature skin aging. Nigella sativa, commonly known as black seed or black cumin, is used in folk herbal medicine all over the world for the treatment and prevention of a number of diseases. The aim of the work is to investigate the effect of smoking on the histological structure of the skin and to evaluate the possible protective role of the nigella sativa oil [NSO]. Twenty adult male albino rats were divided into four equal groups: group I [the control group] was placed 10 min twice daily for 4 weeks in a chamber without cigarette smoke exposure and was given a single dose of saline, 10ml/kg BW [body weight] orally and daily, group II [the NSO group] was given a single dose of NSO, 10ml/kg BW orally and daily, group III [the passive smoking group] was exposed to both side stream and main stream smoke for 10min twice daily for 4 weeks, and group IV [the protected group] was exposed to both side stream and main stream smoke for 10min twice daily for 4 weeks simultaneously with a single dose of NSO, 10ml/kg BW orally and daily. Exposure of male albino rats to cigarette smoke for 4 weeks produced some histological changes in the skin in the form of a significant decrease in the thickness of the epidermis and flattening of the epidermal-dermal junction. There was also a significant decrease in the collagen fibers in the dermis and an apparent decrease in the cytokeratin intermediate filaments in the keratinocytes, whereas the histological structure of the skin in the animals that received black seeds oil concomitant with smoke exposure [group IV] was almost similar to that of the control. It was concluded that exposure to cigarette smoke produced some histological changes in the skin similar to that occurring in old age, and administration of black seed oil could protect against these changes in adult male albino rats.

**Tobacco Use Cessation**

The effects of simulated patient training on senior dental student's confidence and skills in delivering a tobacco cessation counseling program in school of dentistry, Shahid Beheshti university of medical sciences, 2010-2011.

Nouri, Z. Tabibzadeh; Atapour, S.; Ebn Ahmady, A.

Shahid Beheshti University of Medical Sciences - Dental School - Department of Periodontics

**Journal of Dental School - Shahid Beheshti University of Medical Sciences 2012; 29 (4): 290-298 (22 ref.)**

**Keywords:** Students, Dental; Patient Simulation; Confidentiality; Counseling; School Dentistry; Questionnaires

**Abstract:** Simulated patients are highly effective in the medical education and are potentially useful to present tobacco cessation counseling. Although, some studies have reported the advantages of this method in TCC, different aspects of it did not clarified yet. The present study assessed the effects of training by the standardized patients on the confidence and skills of dental students in Shahid Beheshti Medical Sciences University to provide TCC on 2010-2011. In this controlled non randomized trial, 28 students of semester 11 [controls] and 39 students of semester 12 [cases] were selected and their confidence and skills in providing TCC were determined using a questionnaire. Case students received training by means of standardized patients and TCC was presented according to WHO guidelines of 5A's and 5R's. Finally, confidence and TCC skills of the students were assessed using the same measures. The changes occurred in the confidence and TCC skills of both groups were statistically analyzed using student t and ANCOVA tests. The mean skills scores of the case participants were 5.10 and 13.05 before and after training while the values were 5.14 and 5.25 for the controls. Furthermore, the mean confidence scores were 43.19and 47.13 for the cases with the means of 43.75 and 43.32 for the control participants before and after the training. Significant differences were noted between two groups regarding the increased confidence [p<0.001] and skills scores [p<0.001] while ANCOVA test showed training via standardized patients significantly affected the final confidence and skills of the participants after adjustment for age, gender, marriage status and the primary confidence and skills [both: p<0.001]. According to the results, TCC training via standardized patients improved the dental students’ confidence and skills as compared to the control participants.
Tongue
growth and development

Some histological studies on the pre-and postnatal development of rabbit gustatory papillae by light and scanning microscopes.
Nour Eldin, A.; Elbashary, M.; El Sharaby, A.
Damanhour University - Faculty of Veterinary Medicine - Histology and Cytology Department


Keywords: Tongue-pathology; Tongue-ultrastructure; Histology; Microscopy, Electron, Scanning; Rabbits; Taste Buds

Abstract: The gustatory system allows animals to distinguish varieties of food and affects greatly the consumption of food, hence the health and growth of animals. In the current study the morphogenesis of gustatory papillae was investigated in rabbit during fetal and postnatal life by light and scanning electron microscopy. Tongues were obtained from rabbit fetuses starting from the embryonic day [E16] to [E30] and from newborns till maturity. At E16, the first primordial of vallate papillae were observed as epithelial thickenings at the root of the tongue. At E18, the first primordial of fungiform papillae were observed at the posterior margins of the tongue where the Ebner's gland was also observed. By E26, the primitive taste buds of foliate papillae were not found and this might be due to transient degeneration. Mature taste buds of the foliate papillae were then observed by the end of the first week. Meanwhile, mature fungiform papillae were observed at birth and the vallate papillae by the end of the second week while the foliate papillae reached their maturity by the end of the first month. It is concluded that the rudiments of rabbit gustatory papillae appeared at different stages of prenatal development where the vallate papillae appeared first followed by fungiform while foliate papillae were the last to appear. The development of fungiform and vallate papillae occurred mainly during the prenatal period while the development of foliate papillae occurred mainly after birth. The present findings were discussed with previous publications.

Tretinoin
therapeutic use

Therapeutic effects of all-trans retinoic acid on experimental autoimmune encephalomyelitis and its role in T-helper lymphocyte responses.
Froushani, Seyyed Meysam Abtahi; Delirezeh, Norouz; Hobbenaghi, Rahim; Mosayebi, Ghasem
E-mail: meysam.abtahi@yahoo.com
Urmia University - Faculty of Veterinary Medicine - Department of Microbiology


Keywords: Encephalomyelitis, Autoimmune, Experimental-drug therapy; T-Lymphocytes, Helper-Inducer-drug effects; Freund's Adjuvant; Mice; T-Lymphocytes, Regulatory; Interferon-gamma; Interleukin-10; Interleukin-17

Abstract: Recent studies have demonstrated an essential role for IL-17 in the pathogenesis of experimental autoimmune encephalomyelitis [EAE]. Furthermore, it has been shown that FoxP3+Treg cells play an important role in the suppression of auto inflammatory reactions. Although, previous studies have determined the immunomodulatory potentials of all-trans-retinoic acid [ATRA], but these immunomodulations have been mostly justified by alteration in Th1/Th2 cytokines. The present study was carried out to investigate the therapeutic effects of ATRA on EAE and its effects on T-helper cells responses. EAE was induced by MOG[35-55] peptide and complete Freund's adjuvant in female C57BL/6 mice. The mice were allocated to two therapeutic groups [n=7 per group]. Treatment with ATRA [500 microg/mouse; every other day] was initiated in treatment group on day 12 when they developed a disability score. EAE controls received vehicle alone with the same schedule. Signs of disease were recorded daily until day 33 when the mice were sacrificed. Splenocytes were tested for proliferation by MTT test, cytokine production by ELISA and FoxP3+[+] reg cell frequency by flowcytometry. ATRA significantly reduced the clinical signs of established EAE. Aside from decreasing lymphocytic proliferation [P<0.05], ATRA significantly inhibited the production of pro-inflammatory IL-17 [P<0.005] as well as IFN-gamma [P<0.0005] upon antigen-specific restimulation of splenocytes. FoxP3+[+]Treg cell frequency and IL-10 levels were not altered significantly. However, IFN-gamma to IL-10 and IL-17 to IL-10 ratios decreased significantly [P<0.0005]. Parallel to reducing autoreactive lymphocyte proliferation and cytokine production in favor of pro-inflammatory cytokines, all-trans-retinoic acid ameliorated established experimental autoimmune encephalomyelitis.
Tuberculosis

Common challenges in laboratory diagnosis and management of tuberculosis.
Bahadori, M.; Azizi, M.H.
Tehran University of Medical Sciences - Academy of Medical Sciences - Department of Pathology
IRCMJ - Iranian Red Crescent Medical Journal 2012; 14 (1): 3-9 (61 ref.)
Keywords: Disease Management; Clinical Laboratory Techniques; Tuberculin Test; Polymerase Chain Reaction; Mycobacterium tuberculosis
Abstract: The history of tuberculosis [TB] traces back to antiquity. Despite significant progress of various diagnostic methods and introduction of anti-tuberculosis drugs in past decades, TB is still a major worldwide health concern which leads annually to two million deaths, especially after the emergence of multidrug-resistant Mycobacterium TB and HIV co-infection. Presented here is a brief review of conventional and new TB diagnostic laboratory methods including their advantages and disadvantages as well as common challenges in diagnosis and management of TB.

economics

Costs associated with tuberculosis diagnosis and treatment in Yemen for patients and public health services.
Othman, G.Q.; Ibrahim, M.I.M.; Raja'a, Y.A.
E-mail: qamilqasem@yahoo.com
University Sains Malaysia - School of Pharmaceutical Sciences - Social and Administrative Pharmacy Discipline
Keywords: Tuberculosis-diagnosis; Tuberculosis-drug therapy; Community Health Services-economics; Costs and Cost Analysis; Prospective Studies
Abstract: This study determined the costs associated with tuberculosis [TB] diagnosis and treatment for the public health services and patients in Sana'a, Yemen. Data were collected prospectively from 320 pulmonary and extrapulmonary TB patients [160 each] who were followed until completion of treatment. Direct medical and nonmedical costs and indirect costs were calculated. The proportionate cost to the patients for pulmonary TB and extrapulmonary TB was 76.1% and 89.4% respectively of the total for treatment. The mean cost to patients for pulmonary and extrapulmonary TB treatment was US$ 108.4 and US$ 328.0 respectively. The mean cost per patient to the health services for pulmonary and extrapulmonary TB treatment was US$ 34.0 and US$ 38.8 respectively. For pulmonary and extrapulmonary TB, drug treatment represented 59.3% and 77.9% respectively of the total cost to the health services. The greatest proportionate cost to patients for pulmonary TB treatment was time away from work [67.5% of the total cost], and for extrapulmonary TB was laboratory and X-ray costs [55.5%] followed by transportation [28.6%].

epidemiology

Prevalence and risk factors of mycobacterium tuberculosis infection among prisoners in Kabul central prison [Puli Charkhi], Afghanistan.
Saeed, K.M. Islam; Fatmi, Z.; Rozi, S.H.
Ministry of Public Health - Afghan Public Health Institute
Keywords: Tuberculosis-etiology; Prevalence; Risk Factors; Prisoners; Cross-Sectional Studies; Questionnaires; Tuberculin Test
Abstract: Afghanistan has the second highest tuberculosis [TB] burden in the Eastern Mediterranean Region with 76,000 new cases and 20,000 deaths each year. Among the highest risk settings for TB acquisition and transmission are prisons. There is a paucity of data to inform evidence-based design of health policies to control TB in prisons. This study aimed to determine the prevalence and relevant risk factors of TB in Kabul Puli Charkhi Prison. A cross-sectional study was conducted in Kabul Central Prison from January to September 2006. Using a structured questionnaire and tuberculin skin test [PPD], a total of 250 prisoners were selected using a stratified random sampling technique. Those who were sentenced to death, had less than 3 months remaining of their sentence, had a previously confirmed case of TB, or were pregnant, were excluded. The prevalence of TB infection was 55.7% [132/237] among the prison population. Using comparison analysis of two outcome groups [positive and negative PPD], we found that age [odds ratio [OR] = 4.14], income [OR = 7.62], duration of incarceration [OR = 2.62], accommodation area [OR = 3.51], personal hygiene [OR = 15.13], content of food [OR = 5.58] and low-grade fever [OR = 3.25] were positively associated with TB infection. To control TB in this environment, attention should be given to high risk groups such as those in low socio-economic classes, the elderly, and low-weight individuals. Rebuilding of damaged prison facilities and better distribution of prisoners will prevent overcrowding and decrease the likelihood of TB transmission. Improving the quality of food and hygiene would also reduce the level of infection. Based on preliminary findings of this study, the National TB program has strengthened its existing activities in prisons and has made a commitment to establish a comprehensive TB centre.
prevention and control

Promoting public-private mix for TB-DOTS: a multi-country study from the WHO Eastern Mediterranean Region.
Haq, Z.; Khan, W.; Seita, A.
E-mail: dr_zaeem@hotmail.com
University of South Carolina - Arnold School of Public Health


Keywords: Public-Private Sector Partnership; Health Promotion; National Health Programs; World Health Organization

Abstract:
This study was carried out to document the implementation status of public-private mix (PPM) in 6 member countries of the World Health Organization Eastern Mediterranean Region, with a particular focus on advocacy, communication and social mobilization [ACSM] specific to PPM. Interviews and focus group discussions were held with staff of national tuberculosis control programmes and partners. Four PPM models were being practised. For all models, ACSM specific to PPM was at the elementary stage. Participants perceived that promoting private partners was difficult, specific policy guidelines were deficient and human resources and capacity for both initiatives were lacking across the region. Building ACSM capacity is required along with the development of guidelines and the implementation of country-specific communication plans to carry out local-level advocacy, strategic communication and effective social mobilization to maximize the benefits of PPM.

Tuberculosis, Pulmonary

Prevalence of multidrug-resistant and extensively drug-resistant tuberculosis in patients with pulmonary tuberculosis in zahedan, southeastern Iran.
Metanat, M.; Sharifi Mood, B.; Shahreki, S.H.; Dawoudi, S.H.
Zahedan University of Medical sciences - Research Center for Infectious Diseases


Keywords: Extensively Drug-Resistant Tuberculosis-epidemiology; Tuberculosis, Multidrug-Resistant-epidemiology; Prevalence; Mycobacterium tuberculosis; Isoniazid; Rifampin; Amikacin; Kanamycin; Capreomycin; Ciprofloxacin; Ofloxacin

Urethral Stricture

surgery

Outcome of reconstructing anterior urethral stricture.
Hassab El Nabey, Ahmed K.; El Gammal, Mohamed A.; Abdel Latif, Atef M.; Shalaby, Mohamed
Assiut University Hospital - Department of Urology

Assiut Medical Journal 2012; 36 (1): 129-138 (12 ref.)

Keywords: Reconstructive Surgical Procedures-methods; Follow-up Studies; Treatment Outcome

Abstract:
To evaluate the success of urethroplasty according to site, length and etiology of urethral stricture, previous attempts of management and the technique of repair according to different definitions of success in urethroplasty. Of 64 patients, 8 patients had stricture fossa navicularis [group 1], 15 patients had pendulous urethral stricture [Group 2] and 41 patients had bulbar urethral stricture [Group 3]. In group [1], 5 patients were managed by ventral longitudinal penile fasciocutaneous flap and 3 patients were managed by staged B.M.G urethroplasty, in group [2], 7 patients were managed by distal penile fasciocutaneous flap, 3 patients were managed by staged buccal mucosal graft urethroplasty and 5 patients were managed by combined penile skin flap with buccal mucosal graft an in group [3], 28 patients were managed by excision primary anastomosis and 13 patients were managed by augmented anastomotic urethroplasty. Within the follow-up period [mean 30.6 months], of 64 patients, 57 patients [89%] didn't need any additional surgical procedure and 52 patients [81.3%] didn't need even dilatation, the statistical difference between the two groups is nearly significant [P value 0.058].
Urinary Incontinence, Stress

surgery

Evaluation of the outcome of transobturator vaginal tape in management of stress incontinence in women.
Bahloul, Moustafa B.M.; Abdullah, Sayd A.H.; El Nashar, Ihab M.H.; Mohamed, Hazem S.E.
Assiut University - Faculty of Medicine - Department of Obstetrics and Gynecology

Keywords: Female; Suburethral Slings; Follow-up Studies; Treatment Outcome

Abstract: To evaluate the therapeutic results of a minimally invasive anti-incontinence operative procedure-the tension free vaginal tape [TVT]-obturator. With this prospective, observational, and consecutive patient series, TVT-obturator surgery was performed, according to de Leval [2003], on 44 patients with urodynamically proven stress urinary incontinence. Follow-up lasted 3-24 month. The demographic and therapeutic aspects of the patient group data were evaluated. The TVT-obturator required neither bladder catheterization nor intraoperative diagnostic cystoscopy. 4 patients [9.09%] with postoperative voiding difficulties had urethral bladder catheterization for 1-4 d; there were 4 cases [9.09%] of early therapeutic failure rate for the TVT-catheterization for 1-4 d; there were 4 cases [9.09%] of early therapeutic failure rate for the TVT-obturator, no postoperative field infections were noted. Use of the TVT-obturator, a novel midurethral sling, seems to reduce the incidence of some of the operative complications novel midurethral sling, seems to reduce the incidence of some of the operative complications associated with the TVT, primarily bladder penetration and postoperative outlet obstruction. The early therapeutic results and the cost-effectiveness of the TVT-obturator appear similar to those reported for common TVT surgery.

Violence

Nurses' attitudes and reactions to workplace violence in obstetrics and gynaecology departments in Cairo hospitals.
Samir, N.; Mohamed, R.; Moustafa, E.; Abou Saif, H.
E-mail: randam5174@yahoo.com
Ain Shams University - Faculty of Nursing - Maternal and Neonatal Nursing

Keywords: Workplace; Nurses; Attitude; Obstetrics and Gynecology Department, Hospital; Cross-Sectional Studies; Questionnaires

Abstract: This study aimed violence against obstetrics and gynaecology nurses and assess their reaction and cross-sectional study was conducted in 2009 among 416 randomly selected nurses in obstetrics and gynaecology departments in 8 hospitals in Cairo, Egypt. Data were collected using a self-completed questionnaire and Likert scale to record sociodemographic characteristics, exposure to workplace violence and nurses' reaction and attitude to it. The majority of nurses [86.1%] had been exposed to workplace violence. Patients' relatives were the greatest source of violence [38.5%] and psychological violence was the most common form [78.1%]. Carelessness [40.5%] and malpractice of nurses [35.8%] were reported as the usual causes of violence. For psychological and physical violence < 50% of the nurses used the formal system to report abuse. Most nurses [87.2%] considered workplace violence had a negative effect of on them. Guidelines for protection of nursing staff are needed.

Verbal and physical abuse against Jordanian nurses in the work environment.
Ahmed, A.S.
E-mail: Amal_abdmaqsoud@yahoo.com
Alexandria University - Faculty of Nursing - Medical Surgical Nursing Department

Keywords: Nurses; Workplace; Cross-Sectional Studies; Questionnaires; Risk Factors

Abstract: This descriptive cross-sectional study determined the prevalence and sources of verbal and physical workplace abuse in the last 6 months, the nurses' reactions to abuse, and their opinions about it. Data were collected by questionnaire from 447 nurses working in various departments in 3 hospitals in Amman. The prevalence of verbal and physical abuse was 37.1% and 18.3% respectively. Younger, less experienced nurses and those in emergency and intensive care departments experienced more abuse. Patients and their relatives were the usual abusers. Only 35.1% of the abused nurses reported it; of those that did not, 57.1% thought it was useless to do so, while 34.2% thought they could handle the incident without help. Over half of the abused nurses considered leaving nursing and felt their quality of work decreased because of the abuse. Negative societal image of nurses [64%] and poor support from hospital authorities [60%] were the factors the nurses believed most contributed to abuse.
Waste Disposal, Fluid

Biochemical kinetics of cross flow membrane bioreactor processes in the treatment of refinery wastewater.
Rahman, M.M.; Al Malack, M.H.
University of Western Sydney - School of Engineering
Keywords: Bioreactors; Sewage; Biological Oxygen Demand Analysis
Abstract: A lab-scale cross flow membrane bioreactor [CF-MBR] was operated to determine the biokinetic coefficients under MLSS concentrations of 5000 and 3000 mg/L. The investigation showed that the yield [Y], the endogenous decay coefficient [k[d], the maximum specific growth rate [micro[m]] and the saturation constant [K[s]] were 0.276 mg/mg, 0.07 /day, 0.653 /day, and 396.62 mg COD/L respectively for MLSS 5000 mg/L, and 0.222 mg/mg, 0.09 /day, 1.2 /day, and 659.45 mg COD/L for MLSS 3000 mg/L. The values of kinetic coefficients were within the normal range of the activated sludge process found in the literature, except the values of Y. However, value of Y increased with the increase of MLSS. Kinetic parameters determined from CF-MBR process were used to simulate the effluent COD. The simulation study showed good agreement between model prediction and experimental data. Sensitivity analysis was carried out to determine influence of biokinetic parameters on the effluent substrate concentration. From the analysis, it was evident that k[d] and K[s] were directly proportional to the effluent substrate concentration, while micro[m] was inversely proportional.

Water Pollutants, Chemical

Study on high-strength anaerobic landfill leachate treatability by membrane bioreactor coupled with reverse osmosis.
Mahmoudkhani, R.; Hassani, A.H.; Torabian, A.; Borghei, S.M.
E-mail: rmahmoudkhani@iautmu.ac.ir
Islamic Azad University - Science and Research Branch - Department of Environmental and Energy
Keywords: Bioreactors; Osmosis; Biological Oxygen Demand Analysis
Abstract: One of the most important concerns in Tehran municipal landfill is the production of leachate and its potential for water resources pollution, this study was undertaken to examine feasibility of biological and physico/chemical treating of high-strength landfill leachate that was collected from Tehran municipal landfill. Average COD of the leachate in aerobic submerged membrane bioreactor is 68000 mg/L. The reactor with a working volume of 175 L, having membrane module [Hollow fiber] with pore size of 0.1 microm coupled with reverse osmosis with pore size of 0.001 micron was used in this study. The dissolved oxygen [DO] concentration was maintained at 3.2 mg/L and solid retention times [SRTs] and hydraulic retention times [HRT] were controlled at 55 and 15 days respectively, the average Membrane Bioreactor effluent COD was 1733 mg/L with average removal efficiency of 97.46%. The average NH4 -N removal efficiencies was 99%. On the other hand, an almost complete nitrification was achieved during this period. PO4[P] concentration in the effluent was low and its average removal efficiency was as high as 90%; especially during the operation period. The averages reverse osmosis [RO] effluent COD was 335 mg/L with average removal efficiency of 99.33%. The use of Membrane technologies, more especially reverse osmosis offers the best solution of achieving full purification with average COD removal efficiency of 99% and solving the problem of water resources pollution.

Treatment of landfill leachate by fenton process with nano sized zero valent iron particles.
Shafieiyoun, S.; Ebadi, T.; Nikazar, M.
E-mail: saeedshf@gmail.com
Amirkabir University of Technology [AUT] - Civil and Environmental Engineering Department
Keywords: Hydrogen Peroxide; Iron; Biological Oxygen Demand Analysis; Waste Management
Abstract: Leachate treatment from municipal landfills has been always a major anxiety in waste management due to its high level of various contaminations. In this paper the effect of Nanosized Zero Valent Iron particles [NZVI] in Fenton process for the treatment of high COD strength landfill leachate was scrutinized. The results corroborated this procedure was fast and efficient. In fact, about 87% of initial COD [38 g/L] was reduced in an hour. The various operation conditions such as pH, initial H[2]O[2] concentration, H[2]O[2]/Fe molar ratio and temperature in a batch reactor were investigated. The optimum condition was obtained at pH value of 2, temperature of 40°C and H[2]O[2] to Fe molar ratio equal to 39 by using only 0.07 M of NZVI. In such conditions, 0.08 M H[2] O[2] for the removal of 1 g/L of COD was needed. Furthermore, hydrogen peroxide consumption after Fenton process was evaluated and it was found that it had a direct relationship with COD removal efficiency.
Workplace psychology

Join, A.; Saeed, K.; Arnaout, S.; Kortum, E.
E-mail: Aditya.Jain@nottingham.ac.uk
Nottingham University Business School
Keywords: Occupational Health; Risk Assessment; World Health Organization; Questionnaires
Abstract: Psychosocial risks are widely recognised as major challenges to occupational health and safety. The risk management approach, which starts with an assessment of the risk that they pose, is acknowledged as the most effective way of preventing and managing psychosocial risks at the workplace. This paper presents the findings and action taken following a risk assessment of psychosocial risks, at the World health Organization Regional Office for the Eastern Mediterranean [EMRO] and country offices, carried out on behalf of the Committee on Health and Safety in the Workplace in EMRO. The findings show that psychosocial risks pose a threat to the mental well-being of staff. Management and co-worker support, rewards, possibilities for development, and trust mitigate the negative impact of psychosocial risks. The results of this risk assessment are being used to develop interventions aimed at enhancing the sense of well-being of staff, initially through actions at the employee level.

Zinc blood

Concentrations of serum zinc, hemoglobin and ferritin among pregnant women and their effects on birth outcomes in Kashan, Iran.
Samimi, Mansoureh; Asemi, Zatollah; Taghizadeh, Mohsen; Azarbad, Zohreh; Rahimi Foroushani, Abbas; Sarahroodi, Shadi
Kashan University of Medical Sciences - School of Medicine - Department of Gynecology and Obstetrics
Oman Medical Journal 2012; 27 (1): 40-45 (39 ref.)
Keywords: Hemoglobins; Ferritins-blood; Pregnancy; Birth Weight; Body Height; Head; Infant, Newborn; Cross-Sectional Studies; Infant, Low Birth Weight
Abstract: Zinc and Iron are essential micronutrients in fetus growth and development. The aim of this study was to assess the relationship of maternal serum Zinc, Hemoglobin and Ferritin levels with their newborns weight, height and head circumference. This cross sectional-analytical study carried out among pregnant women referred to Naghavi Polyclinic, Kashan, Iran from November 2009 to October 2010. One hundred and twenty-nine pregnant women in the third trimester were selected and anthropometric factors of their newborns [weight, height and head circumference] and their relation to serum Zn, Hemoglobin and Ferritin concentrations were assessed. Serum Hemoglobin deficiency [<11 g/dl], serum Ferritin deficiency [<12 microg/L] and serum Zn deficiency [<66 microg/dl] were present in 11 [85%], 9 [7%] and 9 [7%] women, respectively. The proportion of newborns with birth weight of 2500-2999 g was greater among mothers with lower Hemoglobin [<11 g/dl] compared to mothers with normal Hemoglobin [>=11 g/dl;p=0.04] Multiple regression analysis showed that among biochemical characteristics of pregnant women, serum Hemoglobin levels were positively correlated with low birth weight [beta=0.26; p=0.04]. But serum Zn and Ferritin levels were not significantly associated with weight, height and head circumference. Low maternal serum hemoglobin levels are associated with low birth weight and does not have any association with birth height or head circumference; but there was no significant association between maternal serum zinc and Ferritin levels with weight, height and head circumference.

Zoonoses transmission

Using some recent techniques in diagnosis of some zoonotic bacterial diseases transmitted through milk.
Samaha, H.A.; Haggag, Y.N.; Nossair, M.A.; Mohammad, Hend S.
Alexandria University - Faculty of Veterinary Medicine - Department of Animal Hygiene and Zoonoses
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**Keywords:** Milk-microbiology; Zoonoses-microbiology; Diagnostic Techniques and Procedures; Cheese-microbiology; Yogurt-microbiology; Escherichia coli-isolation and purification; Salmonella-isolation and purification; Electrophoresis, Agar Gel-methods

**Abstract:** A total of 200 different samples [100 raw milk, 50 Kareish cheese and 50 yogurts] were collected from dairy shops, street venders and supermarkets from different localities in Alexandria Province to be investigated for presence of bacterial pathogens and to evaluate plasmid profiling as a tool for detection of bacteria transmitted through milk. The results of bacteriological examination firstly revealed that the rates of isolation of E. coli were 18, 26 and 18% from raw milk, kariesh cheese and yoghurt samples, respectively; secondly, results revealed that the rates of isolation of Salmonella species were 5, 6 and 2% from raw milk, kariesh cheese and yoghurt samples, respectively and finally they clarified that the rates of isolation of Staph. aureus were 44, 34 and 18% from raw milk, kariesh cheese and yoghurt samples, respectively. Serological identification of E. coli and Salmonella spp. was carried out. The public health significance of isolated bacteria and the diagnostic value of plasmid were discussed.
Appendix I

Author Index
Abai, M.R.
LEISHMANIA INFANTUM (isolation and purification)

Abass, Marwa A.
PHENOLS (adverse effects)

Abazid, N.
LEISHMANIASIS, CUTANEOUS

Abbas, Naglaa Hamam
NIGELLA SATIVA (toxicity)

Abbas, S.M.
PRIMARY HEALTH CARE

Abbas, Syed M.
THORACIC SURGERY

Abbasnejad, Mehdi
ASCORBIC ACID

Abdallah, Abdel Karim H.
COLORECTAL NEOPLASMS (diagnosis)

Abdallah, Maha A.
HYPERPROLACTINEMIA (chemically induced)

Abdel Alim, Naglaa R.
SHIGA-TOXIGENIC ESCHERICHIA COLI (isolation and purification)

Abdel Aziz, A.
RABBITS (growth and development)

Abdel Aziz, Abdel Aziz Hanfy
SKIN TRANSPLANTATION

Abdel Aziz, Dalia Hussein
AMIODARONE (toxicity)

Abdel Aziz, Hoda A.
DIABETES, GESTATIONAL (physipathology)

Abdel Aziz, Lamia M.
BONE NEOPLASMS (diagnosis)

Abdel Fatah, Noha R.M.
METALS, HEAVY (analysis)

Abdel Fattah, Lamiaa I.
ENDOMETRIUM (pathology)

Abdel Fattah, Lamiaa Ibrahim
OVARIECTOMY (adverse effects)

Abdel Hafeez, Heba A.
CORONARY ARTERY DISEASE

Abdel Haleem, Manal Reda
INTERFERON-ALPHA (adverse effects)

Abdel Halim, Shawkia S.
INSULIN RESISTANCE (physiology)

Abdel Hamed, Mohamed A.
EPILEPSY (epidemiology)

Abdel Hamid, H.S.
CHICKENS (immunology)
CHICKENS (growth and development)

Abdel Hamid, Hatem S.
INFLUENZA IN BIRDS (epidemiology)

Abdel Hamid, Mohamed M.
OSTEOARTHRITIS, KNEE (drug therapy)

Abdel Kadder, H.A.
BRUCELLOSIS (blood)

Abdel Kader, Abdelrahman M.M.
HYSTEROSCOPY (utilization)

Abdel Khalek, Ekram M.
CEREBRAL PALSY (etiology)

Abdel Latif, Atef M.
URETHRAL STRicture (surgery)

Abdel Latif, Nassar Ayoub
ACETAMINOPHEN (toxicity)

Abdel Mallek, A.Y.
MYCOTOXINS (isolation and purification)

Abdel Raheem, Rafat El Sayed
OSTEOARTHRITIS, KNEE (drug therapy)

Abdel Rasol, Reda
EPILEPSY (epidemiology)

Abdel Rhman, Al Sayed A.
OFLOXACIN (adverse effects)

Abdel Salam, Doaa M.
CEREBRAL PALSY (etiology)

Abdel Samad, Abeer A.
DOXORUBICIN (toxicity)

Abdel Tawab, Salwa Mohamed
SKIN TRANSPLANTATION

Abdelghani, A.
ISONIAZID (adverse effects)

Abdelrahman, S.H.
COMMUNICABLE DISEASES

Abdolazimi, Z.
PYRAZOLES

Abdolbaghi, Mahboubeh Haji
HIV-1 (drug effects)

Abduelkarem, A.R.
MYOCARDIAL INFARCTION (etiology)

Abdul Latif, Mohammed
ECTROMELIA (diagnosis)

Abdul Rashid
THORACIC SURGERY

Abdulla, Eiman
LUPUS ERYTHEMATOSUS, SYSTEMIC
Abdullah, S. Assiri
ACUTE CORONARY SYNDROME (blood)

Abdullah, Sayd A.H.
URINARY INCONTINENCE, STRESS (surgery)

Abdulsalam, H.
HEARING LOSS (epidemiology)

Abdwani, Reem
LUPUS ERYTHEMATOSUS, SYSTEMIC

Abnet, Christian C.
ESOPHAGEAL NEOPLASMS

Abo El Hagag, Noha A.
BREAST NEOPLASMS

Abo Elfetoh, Noha M.
EPILEPSY (epidemiology)

Abo Elnor, Asmaa S.
INTESTINE, SMALL (growth and development)

Abo Ghanema, I.
INTESTINE, SMALL (growth and development)

Abo Ghanema, I.I.
REPRODUCTION (drug effects)

Abo Golayel, Mohamed Kamel
MESENCHYMAL STEM CELLS (drug effects)

Abou El Saad, Aiman K.
PARASITES (parasitology)

Abou Elghait, Amal T.
DIABETES, GESTATIONAL (physipathology)

Abou Saif, H.
VIOLENCE

Aboul Fotouh, A.M.
PATIENT SAFETY

Abouzeed, Y.M.
METHICILLIN-RESISTANT STAPHYLOCOCCUS AUREUS (isolation and purification)

Aboyjei, Abiodun P.
BACTERIURIJA (epidemiology)

Abu Hindi, W.
DEPRESSION (diagnosis)

Abu Moghtli, F.A.
HEALTH STATUS

Abuosa, Ahmed
ACUTE CORONARY SYNDROME (mortality)

Abuzweda, A.R.
METHICILLIN-RESISTANT STAPHYLOCOCCUS AUREUS (isolation and purification)

Achour, N.
EMERGENCY SERVICE, HOSPITAL (utilization)

Adl, M.
BIOFUELS

Afifi, M.M.
MYCOTOXINS (isolation and purification)

Afifi, Noha M.
GLUTAMIC ACID (toxicity)

Ahag, S.
COLITIS, UCERATIVE (epidemiology)

Aghaipour, Khosrow
CLOSTRIDIUM PERFRINGENS

Aghdami, Nasser
BONE MARROW TRANSPLANTATION

Aghdasi, Mahnaz
ARABIDOPSIS

Ahid, S.
PHARMACOEPIDEMIOLOGY (methods)

Ahmad, A.Z.
HEMORRHAGIC FEVER, CRIMEAN (epidemiology)

Ahmadi, Hossein
BONE MARROW TRANSPLANTATION

Ahmadian, M.
CORAL REEFS

Ahmady, M.
HEARING LOSS (epidemiology)

Ahmed, A.S.
VIOLENCE

Ahmed, Asfhaq
ECTROMELIA (diagnosis)

Ahmed, F.
INFLUENZA, HUMAN (epidemiology)

Ahmed, H.A.
CHICKENS (growth and development)

Ahmed, H.S.
COMMUNICABLE DISEASES

Ahmed, M.O.
METHICILLIN-RESISTANT STAPHYLOCOCCUS AUREUS (isolation and purification)

Ahmed, Mohamed Abd Elrahman
MESENCHYMAL STEM CELLS (drug effects) GLUCOCORTICOID (immunology)

Ahmed, Salwa Fares
MUSCLE, SKELETAL (pathology)

Ahmed, W.A.
SCENEDESMUS (growth and development)

Aimechi, S.
LIVER DISEASES (ultrasonography)
Al Shawwa, Lana A.  
EDUCATION, MEDICAL

Al Shboul, M.  
ABNORMALITIES, MULTIPLE (diagnosis)

Al Shereef, Hala K.  
CORONARY ARTERY DISEASE

Al Sheyab, N.A.  
ASTHMA

Al Somaie, M.  
DIET

Al Sulami, A.A.  
MYCOBACTERIUM AVIUM COMPLEX (isolation and purification)

Al Taee, A.M.R.  
MYCOBACTERIUM AVIUM COMPLEX (isolation and purification)

Al Thanoon, Zeina A.  
METABOLIC SYNDROME X

Al Wehady, A.  
BREAST FEEDING

Al Zahrani, Ahmed  
AORTIC COARCTATION (diagnosis)

Al Zahrani, Atif  
AORTIC COARCTATION (diagnosis)

Al Zahrani, K.K.H.  
STREPTOMYCIN (isolation and purification)

Al Zahrani, S.H.M.  
STREPTOMYCIN (isolation and purification)

Al Zakwani, Ibrahim  
LUPUS ERYTHEMATOSUS, SYSTEMIC

Alam, A.Y.  
PRIMARY HEALTH CARE

Alamri, Hussein S.  
HEPARIN (therapeutic use)

Alanazi, Aziz  
HEPARIN (therapeutic use)

Alavi Naini, Roya  
COUGH

Alavian, S.M.  
HEPATITIS C (epidemiology)

Albaramki, J.  
ABNORMALITIES, MULTIPLE (diagnosis)

AlBedah, Abdullah M.N.  
COMPLEMENTARY THERAPIES

Ale Taha N.  
DENTAL CASTING TECHNIQUE

Alfadil, S.M.  
COMMUNICABLE DISEASES

Alghamdi, Abdullah A.  
HEPARIN (therapeutic use)

Alhaddad, Zain Hasan  
MESENTERIC LYMPHADENITIS (diagnosis)

Ali Asgari, A.  
LIVER DISEASES (ultrasonography)

Ali, Ola Sayed M.  
DIABETES MELLITUS, TYPE 2 (complications)

Alizadeh, A.M.  
REFERRAL AND CONSULTATION

Alizadeh, Ali Mohammad  
CURCUMIN (therapeutic use)

Alizadeh, P.  
CLEFT LIP

Alkhasawneh, E.  
ACQUIRED IMMUNODEFICIENCY SYNDROME

Almasood, Ali S.  
HEPARIN (therapeutic use)

Almoghaier, Abdulrahman M.  
HEPARIN (therapeutic use)

Almutairi, Meshal  
HEPARIN (therapeutic use)

Alnemer, Khalid  
ACUTE CORONARY SYNDROME (mortality)

Alotaiby, Mohamed A.  
HEPARIN (therapeutic use)

Alsenson, A.A.  
CHICKENS (immunology)

Altuwaijri, S.  
MENSTRUATION DISTURBANCES (epidemiology)

Alwan, N.A.S.  
BREAST NEOPLASMS

Alymani, Abdulla S.  
DUODENAL ULCER (complications)

Alzahrani, A.M.  
ANGIOTENSIN-CONVERTING ENZYME INHIBITORS (therapeutic use)

Amarin, Z.  
MATERNAL MORTALITY

Ameh, Emmauel A.  
GENERAL SURGERY

Amer, Mona G.  
INTERFERON-ALPHA (adverse effects)

Amin, A.  
CHEESE (microbiology)

Aminlari, A.  
REHABILITATION
Baghianimoghadam, M.H.  
HEALTH EDUCATION (methods)

Bahadori, M.  
TUBERCULOSIS (diagnosis)

Baharvand, Hossein  
BONE MARROW TRANSPLANTATION

Bahloul, Moustafa B.M.  
URINARY INCONTINENCE, STRESS (surgery)

Bakhsh, Meysam Ganji  
DENDRITIC CELLS

Bakhshandehe, A.R.  
REHABILITATION

Bakour, R.  
BETA-LACTAMASES

Bakr, M.M.  
EXTRAEMBRYONIC MEMBRANES

Balaha, M.H.  
FETAL DEATH (etiology)

Balubaid, O.  
DENIQUE (transmission)

Baneshi, M.R.  
BREAST NEOPLASMS

Banihashem, Samieh  
OBESITY, ABDOMINAL

Banimustafa, R.  
BATTERED WOMEN (psychology)

Banoee, T.  
BLINDNESS (congenital)

Barazandeh, F.  
HELCIOBACTER PYLORI

Baroutian, S.  
AIR POLLUTION

Basalamah, Mohammed A.  
PANCREATITIS, ACUTE NECROTIZING (immunology)

Bashir, Rehab  
SOIL (chemistry)

Basir, M. Mohammadi  
DENTAL PINS

Bazara, Fakiha A.  
GLUCOSEPHOSPHATE DEHYDROGENASE DEFICIENCY (epidemiology)

Bazargani, R.  
BLOOD DONORS

Behmanesh, Mehrdad  
OCIMUM BASILICUM

Belaguide, K.  
PHARMACOEPIDEMIOLOGY (methods)

Ben Gobrane, H.L.  
EMERGENCY SERVICE, HOSPITAL (utilization)

Ben Hamida, A.  
EMERGENCY SERVICE, HOSPITAL (utilization)

Ben Salem, H.  
ISONIAZID (adverse effects)

Benzartr, M.  
ISONIAZID (adverse effects)

Bernaba, N.R.  
STOMACH NEOPLASMS (microbiology)

Beshir, Samia Riad  
OSTEOPOROSIS (etiology)

Bhargava, Deepa  
NOSE (injuries)

Bhatt, Pooja  
FIBROSARCOMA (diagnosis)

Bhatti, A.  
HEPATITIS B (epidemiology)

Bidhendi, G. Nabi  
PLANTAGO

Bin Ghouth, Wadea Saeed  
MESENTERIC LYMPHADENITIS (diagnosis)

Binbisher, Saeed A.  
DUODENAL ULCER (complications)

Biuckians, E.  
REFERRAL AND CONSULTATION

Bolursaz, M.R.  
CONTACT TRACING

Borghei, S.M.  
WATER POLLUTANTS, CHEMICAL

Bouchtia, M.  
PANCYTOPENIA (etiology)

Boumaiza, M.  
FLATFISHES

Carvalho, Natalie  
FAMILY PLANNING SERVICES

Case Alan J.  
LEISHMANIASIS, CUTANEOUS (therapy)

Castro Gutierrez, V.M.  
HYDROCARBONS

Castro, V.L.  
TITANIUM

Changizi, S.  
REFERRAL AND CONSULTATION

Chapari, Havva  
CULTURE MEDIA, CONDITIONED
Charred, T.
FLATFISHES

Chen, X.
BIOFUELS

Cherrah, Y.
PHARMACOEPIDEMIOLOGY (methods)

Chon, T.S.
PHYTOPLANKTON

Chouba, L.
POLYCYCLIC HYDROCARBONS, AROMATIC

Clemente, Z.
TITANIUM

Constantino, R.E.
BATTERED WOMEN (psychology)

Crisp, J.
ASTHMA

Cuevas, Luis E.
COUGH

Cui, Dejun
LYMPHOMA, EXTRANODAL NK-T-CELL (pathology)

Dallak, A.M.
ACQUIRED IMMUNODEFICIENCY SYNDROME

Danesh, Hamideh
PSYCHOMOTOR AGITATION (drug therapy)

Daneshvar, R.
BLINDNESS (congenital)

Danial, Moheb F.
BREAST NEOPLASMS

Darwish, Abeer M.
COLITIS (chemically induced)

Darwish, Atef M.M.
HYSTEROSCOPY (utilization)

Daryani, N. Ebrahimi
INFLAMMATORY BOWEL DISEASES
PLATELET AGGREGATION INHIBITORS

Dashash, M.
ORAL HEALTH

Davies, C.R.
LEISHMANIASIS, CUTANEOUS

Davis, Gary D.
LEISHMANIASIS, CUTANEOUS (therapy)

Davoudikia, Ali Asghar
COUGH

Dawoudi, S.H.
TUBERCULOSIS, PULMONARY

Dawsey, Sanford M.
ESOPHAGEAL NEOPLASMS

Delirezh, Norouz
TRETINOIN (therapeutic use)

Delirezh, Nowruz
CULTURE MEDIA, CONDITIONED
DENDRITIC CELLS

Desouky, S.A.
SCENEDESMUS (growth and development)

Divis, P.
METALS

Docekalova, H.
METALS

Dogan, K.
HEMATOMA, EPIDURAL, SPINAL (diagnosis)

Dolatkhah Nejad, Mohammad Reza
PROBIOTICS

Donofrio, Mary
ARTERIOVENOUS MALFORMATIONS (surgery)

Doraisamy, P.
SEWAGE

Drissi, M.
BETA-LACTAMASES

Ebadi, T.
WATER POLLUTANTS, CHEMICAL

Ebadifar, A.
ORTHODONTIC WIRES

Ebn Ahmady, A.
TOBACCO USE CESSATION

Eghbali, H.
COLITIS, ULCERATIVE (epidemiology)

Eid, Amal M.
PESTICIDE RESIDUES (analysis)

El Ashmawy, Ibrahim M.
CEFOTAXIME (adverse effects)

El Bassel, N.
ACQUIRED IMMUNODEFICIENCY SYNDROME

El Bassouny, Dalia R.
LENS, CRYSTALLINE (ultrastructure)

El Baz, Ayman
CARCINOMA, HEPATOCELLULAR (chemically induced)

El Berbawy, S.M
BRUCELLOSIS (blood)

El Berbawy, S.M.
LYMPHADENITIS (microbiology)

El Dawela, R.E.
SKIN DISEASES (epidemiology)

El Deeb, Dalia F.
ENDOMETRIUM (pathology)
El Deeb, Dalia Fathy
ACHILLES TENDON (injuries)

El Deib, Kamal Maamoun
TAMOXIFEN (adverse effects)

El Dosoky, Ibrahim
CARCINOMA, HEPATOCELLULAR (chemically induced)

El Far, A.H.
REPRODUCTION (drug effects)
CHICKENS (immunology)

El Gamal, Dalia Abdo
MUSCLE, SKELETAL (pathology)

El Gammal, Mohamed A.
URETHRAL STRicture (surgery)

El Gazzar, U.B.
CHICKENS (immunology)

El Gilany, A.H.
BREAST FEEDING

El Habshiy, Haddad S.A.
DENGUE FEVER (prevention and control)

El Haleem, Manal Reda
PHENOLS (adverse effects)

El Hassan, A.M.
NEUROSCHISTOSOMIASIS (diagnosis)

El Hassan, L.A.
NEUROSCHISTOSOMIASIS (diagnosis)

El Homosany, Safaa R.
CEFOTAXIME (adverse effects)

El Kak, F.
PARTURITION

El Katch, M.I.Y.
CHICKENS (growth and development)

El Khateb, M.
ABNORMALITIES, MULTIPLE (diagnosis)

El Khoiya, S.A.
RABBITS (growth and development)

El Lakany, Hany F.
INFLUENZA IN BIRDS (epidemiology)

El Mahalli, A.A.
PATIENT READMISSION

El Metwally, Eman M.
INSULIN RESISTANCE (physiology)

El Moneim, A.A.
SKIN DISEASES (epidemiology)

El Morsy, Ahmed Said
OSTEOPOROSIS (etiology)

El Nashar, Ihab M.H.
URINARY INCONTINENCE, STRESS (surgery)

El Nasharty, M.A.
REPRODUCTION (drug effects)

El Saman, Ali M.
HYSTEROSCOPY (utilization)

El Sers, Dalia A.
COLITIS (chemically induced)

El Shanawany, A.A.
MYCOTOXINS (isolation and purification)

El Sharaby, A.
TONGUE (growth and development)

El Shareif, H.J.
MYOCARDIAL INFARCTION (etiology)

El Shawarby, Amany Mohamed
MESENCHYMAL STEM CELLS (drug effects)

El Shemi, Adel Galal A.
PANCREATITIS, ACUTE NECROTIZING (immunology)

El Shiekh, A.I.
RABBITS (growth and development)

El Sify, A.
SHIGA-TOXIGENIC ESCHERICHIA COLI (isolation and purification)

El Sonbaty, Mostafa
TISSUE EXPANSION (methods)

El Tallawy, Hamdy
EPILEPSY (epidemiology)

El Toukhi, M.A.
STOMACH NEOPLASMS (microbiology)

Elawam, A.E.
POSTMENOPAUSE

Elbakery, Karama M.
FECES (parasitology)

Elelvi, S.
CHROMIUM

Elgamode, Bassam
SOIL (chemistry)

Elhasan, T.D.A.
COMMUNICABLE DISEASES

Elhoury, M.E.
ANGIOTENSIN-CONVERTING ENZYME INHIBITORS (therapeutic use)

Elleissa, R.A.
BREAST NEOPLASMS

Elkhalifa, S.
DISEASE TRANSMISSION, INFECTIOUS (prevention and control)
Elnasharty, M.
TONGUE (growth and development)
INTESTINE, SMALL (growth and development)

Elnegris, Heba M.
ORCHIECTOMY (adverse effects)

Elolemy, Ahmed Tawfik
COMPLEMENTARY THERAPIES

Elouzi, Abdurrahim A.
SOIL (chemistry)

Elrakhawy, Fatma Ibrahim Khalil
DIABETES MELLITUS, EXPERIMENTAL
(chemically induced)

Elramalli, A.K.
METHICILLIN-RESISTANT STAPHYLOCOCCUS AUREUS (isolation and purification)

Elshakaa, Nagwa Mohamed
CARTILAGE (abnormalities)

Emam, M.
CHICKENS (growth and development)

Emamdjomeh, Hessamaldin
CONNEXINS

Embarak, M.Z.
PARASITES (parasitology)

Esmaeily, H.
BLOOD DONORS

Esmaeilzadeh, A.
BONE DISEASES, METABOLIC (epidemiology)

Esmat, Amy Y.
MYOCARDIAL ISCHEMIA (therapy)

Etemadi, Arash
ESOPHAGEAL NEOPLASMS

Ez El Deen, Manal El Sayed
CORONARY ARTERY DISEASE

Ez Elarab, H.S.
PATIENT SAFETY

Ezedine, M.
CROSS INFECTION (microbiology)

Ezz, Magda K.
MYOCARDIAL ISCHEMIA (therapy)

Faghihi, A.A.
LEARNING

Faghihi, Mahdieh
CREATINE KINASE, MB FORM (drug effects)

Fahmy, Bassam F.G.
BEES (microbiology)

Fakeye, Oluotimi O.
BACTERIURIA (epidemiology)

Falah, Masoumeh
CONNEXINS

Farag, S.
SEROTONIN UPTAKE INHIBITORS (adverse effects)

Farahani, Maryam Moshkani
BONE MARROW TRANSPLANTATION

Farahini, Hosein
BENZIMIDAZOLES (therapeutic use)

Farazmand, Abbas
BACTERIAL PROTEINS

Farghaly, Wafaa M.A.
EPILEPSY (epidemiology)

Farhadi, Mohammad
CONNEXINS

Farokhi, Farah
CULTURE MEDIA, CONDITIONED DENDRITIC CELLS

Farrag, Kawther Abd El Raheem
OSTEOPOROSIS (etiology)

Faruk, Eman M.
FLUTAMIDE (toxicity)

Farzin, M.
MATRIX METALLOPROTEINASE 3 (blood)

Fasaei, Bahar Nayeri
SALMONELLA TYPHIMURIUM

Fathalla, M.F.
CLINICAL TRIALS AS TOPIC (history)

Fatmi, Z.
TUBERCULOSIS (epidemiology)

Fattahi, M.J.
MATRIX METALLOPROTEINASE 3 (blood)

Fawzi, M.H.
DEPRESSION (diagnosis)

Fawzi, M.M.
DEPRESSION (diagnosis)

Fawzy, Amal
ACHILLES TENDON (injuries)

Fazeli, Roghayeh
BONE MARROW TRANSPLANTATION

Fitzwarryne, Caroline
HEALTH MANPOWER
Forghani, H.
HEALTH EDUCATION (methods)

Foroumadi, Alireza
CANDIDA (drug effects)

Fotouhi, A.
MOTOR VEHICLES

Fowotade, Adeola
BACTERIURIJA (epidemiology)

Fraceto, L.F.
TITANIUM

Freije, R.H.
OCEANOGRAPHY

Froushani, Seyyed Meysam Abtahi
TRETINOIN (therapeutic use)

Galal, M.O.
ANGIOTENSIN-CONVERTING ENZYME INHIBITORS (therapeutic use)

Gallagher, R.
ASTHMA

Ganji, A.
BONE DISEASES, METABOLIC (epidemiology)

Garba, Ekundayo S.
GENERAL SURGERY

Georgiadis, T.H.
BUTTERFLIES

Ghabanchi, J.
MATRIX METALLOPROTEINASE 3 (blood)

Ghaleb, Khaled A.
CORONARY ARTERY DISEASE

Ghallab, Mohamed
ACUTE CORONARY SYNDROME (blood)

Ghanizada, A.
MENTAL DISORDERS (epidemiology)

Gharagozlo, Mohammad Javad
SALMONELLA TYPHIMURIUM

Gharaibeh, M.
MATERNAL MORTALITY

Gharibi, A.
BIOFUELS

Ghavami, Yaser
CONNEKINS

Ghazali, Ashraf Abdel Rahman Mohamed Sadik
CONSERVATION OF NATURAL RESOURCES (economics)

Gholami, Roya
CESAREAN SECTION

Ghoneim, Hanan A.
REPRODUCTION (drug effects)

Ghorab, E.
HEARING LOSS (epidemiology)

Ghorashi, Saied Ali
CLOSTRIDIUM PERFRINGENS

Ghorbani, A.
BETA-THALASSEMIA (psychology)

Goldie, Sue J.
HEALTH SYSTEMS PLANS
FAMILY PLANNING SERVICES

Golozar, Asieh
ESOPHAGEAL NEOPLASMS

Grant, I.N.
DEPRESSION, POSTPARTUM (epidemiology)

Gundag, M.
HEMATOMA, EPIDURAL, SPINAL (diagnosis)

Habib, Fawzia S.
OSTEOARTHRITIS, KNEE (drug therapy)

Habibi, M.
LEARNING

Habibzadeh, F.
REPRODUCTIVE BEHAVIOR

Habibzadeh, S.
DENTAL IMPLANT-ABUTMENT DESIGN

Hafez, Manal Shaaban
REPERFUSION INJURY (pathology)

Haggag, Y.N.
ANEMIA, IRON-DEFICIENCY (complications)

Hafez, Tarek Ahmed
CARCINOMA, HEPATOMCELLULAR (chemically induced)

Haggar, Y.N.
ZOONOSES (transmission)

Hagholi, Fedeyeh
CESAREAN SECTION

Hajighasemi, Fatemeh
ISOSORBIDE DINITRATE (pharmacology)

Hakin, Seema R.
FIBROSARCOMA (diagnosis)

Hamad, Emad M.
CEREBRAL PALSY (etiology)

Hamam, Ghada Galal
OSTEOPOROSIS (etiology)

Hamamy, H.
ABNORMALITIES, MULTIPLE (diagnosis)

Hamid, Hamida
LEISHMANIASIS, CUTANEOUS (therapy)
Hammed, Samy Hosny  
MESENCHYMAL STEM CELLS (drug effects)

Hammoud, H.  
CROSS INFECTION (microbiology)

Hanafy, Laila K.  
GLUTAMIC ACID (toxicity)

Hantooshzadeh, Sedigheh  
CESAREAN SECTION

Hany, Ahmed M.M.  
DENGUE FEVER (prevention and control)

Haq, Z.  
TUBERCULOSIS (prevention and control)

Harada, H.  
SEWAGE

Harrison, O.  
INFLUENZA, HUMAN (epidemiology)

Harshavardhana, B.G.  
MAGNETICS

Hasannia, Sadegh  
RNA-BINDING PROTEINS

Hashemi, S.M.  
PYRAZOLES

Hashim, A.A.  
SALMONELLA INFECTIONS (epidemiology)

Hasna, F.  
LICE INFESTATIONS (epidemiology)

Hassab El Nabey, Ahmed K.  
URETHRAL STRICTURE (surgery)

Hassan, Zeinb A.  
INTERFERON-ALPHA (adverse effects)

Hassanein, Khaled M.A.  
DIPHOSPHATES (adverse effects)

Hassani, A.H.  
WATER POLLUTANTS, CHEMICAL

Hatahet, W.  
ORAL HEALTH

Hatef, M.R.  
BONE DISEASES, METABOLIC (epidemiology)

Hawai, S.M.  
MENSTRUATION DISTURBANCES (epidemiology)

Hayhshcnus, M.  
REPRODUCTIVE BEHAVIOR

Hayoum, A.  
ISONIAZID (adverse effects)

Hazem, Noha  
CARCINOMA, HEPATOCELLULAR (chemically induced)

Hedaya, S.A.  
SEROTONIN UPTAKE INHIBITORS (adverse effects)

Hedayat, Darioush Kamal  
SIROLIMUS (therapeutic use)

Heidari, M.  
MICROCYSTIS

Hersi, Ahmed  
ACUTE CORONARY SYNDROME (mortality)

Heydari, S.T.  
MATRIX METALLOPROTEINASE 3 (blood)

Hibino, Narutoshi  
ARTERIOVENOUS MALFORMATIONS (surgery)

Hobbenaghi, Rahim  
TRETINOIN (therapeutic use)

Hoffiani, Maroof  
HEALTH MANPOWER

Homayee, Sarwar  
HEALTH MANPOWER

Honorvar, Behnam  
INFLUENZA A VIRUS, H1N1 SUBTYPE

Hosseini, M.  
HEPATITIS C (epidemiology)

Hosseini, Negar Mohammad  
CANDIDA (drug effects)

Hosseini, Seyed Ali Reza  
CLINICAL TRIALS AS TOPIC

Hosseini, Younes  
HIV-1 (drug effects)

Houshmand, Massoud  
CONNEXINS

Hsairi, M.  
EMERGENCY SERVICE, HOSPITAL (utilization)

Huang, Chun Chieh  
AORTA (pathology)

Hussain, S.  
DEPRESSION (diagnosis)

Hussein, Abdel Aziz  
ASTHMA (chemically induced)

Hussien, Assem  
TISSUE EXPANSION (methods)

Hussin, Ahmed  
ACHILLES TENDON (injuries)

Hussin, Amira  
ACHILLES TENDON (injuries)

Ibrahim, Sali O.  
FLUTAMIDE (toxicity)
Ibrahim, A.  
DENGUE (transmission)

Ibrahim, Ehab R.  
GLUTAMIC ACID (toxicity)

Ibrahim, J.G.  
SKIN DISEASES (epidemiology)

Ibrahim, Nermien A.  
ERGOLINES (toxicity)

Ibrahim, Suzi H.  
ANEMIA, IRON-DEFICIENCY (complications)

Idriss, Nagla K.  
COLITIS (chemically induced)

Imani, Alireza  
CREATINE KINASE, MB FORM (drug effects)

Islam, M.  
DEPRESSION (diagnosis)

Islam, Najmul  
MYCOBACTERIUM TUBERCULOSIS

Ismail, N.A.  
PATIENT SAFETY

Ismayilova, L.  
ACQUIRED IMMUNODEFICIENCY SYNDROME

Jadali, Zohreh  
HEPATITIS C

Jaddou, H.  
MATERNAL MORTALITY

Jafari, H.R.  
SOIL

Jafarshad, R.  
HEPATITIS C (genetics)

Jaghasi, I.  
ORAL HEALTH

Jalalian, E.  
DENTAL CASTING TECHNIQUE

Jalalian, S.H.  
DENTAL CASTING TECHNIQUE

Jamil, Abdul Moneim  
ACUTE CORONARY SYNDROME (blood)

Javadi, Shahram  
CULTURE MEDIA, CONDITIONED

Javadian, E.  
LEISHMANIA INFANTUM (isolation and purification)

Jeong, K.S.  
PHYTOPLANKTON

Jiang, Mingde  
LYMPHOMA, EXTRANODAL NK-T-CELL (pathology)

Jnaneshwari, Jayaram  
PANCREATIC NEOPLASMS (diagnosis)

Join, A.  
WORKPLACE (psychology)

Jonas, Richard A.  
ARTERIOVENOUS MALFORMATIONS (surgery)

Jones, C.  
LEISHMANIASIS, CUTANEOUS

Jonsson, C.M.  
TITANIUM

Joo, G. J.  
PHYTOPLANKTON

Jooma, R.  
HEALTH

Joukar, F.  
HEPATITIS C (genetics)

Jovanovic, L.  
METHYL ETHERS

Jovic, J.  
METHYL ETHERS

Juibary, Ali Ghabeli  
CLINICAL TRIALS AS TOPIC

Kabbash, I.A.  
DENGUE (transmission)

Kalhouri, A. Alimohammad  
SOIL

Kalleny, Nagwa Kostandy  
CARTILAGE (abnormalities)

Kamel, Esam Salah  
NIGELLA SATIVA (toxicity)

Kamel, Hosam Eldeen M.  
COLORECTAL NEOPLASMS (diagnosis)

Karam, Rehab A.  
ERGOLINES (toxicity)

Karami, M.  
SOIL

Karamizadeh, Z.  
LEARNING

Kargar, M.  
SOIL

Karout, N.  
MENSTRUATION DISTURBANCES (epidemiology)
Kashani, A.H. Faghihi
COLITIS, ULCERATIVE (epidemiology)

Kashour, Tarek
ACUTE CORONARY SYNDROME (mortality)

Kassim, A.
IRON (deficiency)

Kaveh, M.
ENAMEL MICROABRASION

Kazemi, Sh.
ADIPONECTIN

Kazim, Hameedullah M.
HEPARIN (therapeutic use)

Keshav, A.
GLYCOLATES

Keshtkar, A.
REFERRAL AND CONSULTATION

Keshvari, A.
PERITONEAL FIBROSIS (diagnosis)

Khachnaoui, N.
ISONIAZID (adverse effects)

Khader, Y.
MATERNAL MORTALITY

Khajeh Noori, B.
LEPTIN (blood)

Khakshoor, H.
BLINDNESS (congenital)

Khalaf, A.
HEALTH STATUS

Khalaf, Gehan
TOBACCO SMOKE POLLUTION (adverse effects)

Khalesi, A.K.
HEPATITIS C (genetics)

Khalil, S.A.
SHIGA-TOXIGENIC ESCHERICHIA COLI (isolation and purification)

Khalili, Gholam Reza
PSYCHOMOTOR AGITATION (drug therapy)

Khalilzadeh, S.
CONTACT TRACING

Khan, A.
HEALTH

Khan, A.A.
HEALTH

Khan, W.
TUBERCULOSIS (prevention and control)

Khani, H.
BETA-THALASSEMIA (psychology)
Krishnaveni, J.
IMMUNOGLOBULIN LIGHT CHAINS

Kumar, Prasanna N.
IMMUNOGLOBULIN LIGHT CHAINS

Kuo, Chin Chi
AORTA (pathology)

Kutb, Muna A.M.
PROSTATIC NEOPLASMS (genetics)

Lahijanian, A.
ENVIRONMENT

Lalevic, B.
METHYL ETHERS

Langroudi, Reza Pilehchian
CLOSTRIDIUM PERFRINGENS

Lankarani, Kamran Bagheri
MATERNAL MORTALITY

INFLUENZA A VIRUS, H1N1 SUBTYPE

Laurel, Nwaorga O’C.
CERVIX UTERI

Ibrahim, M.I.M.
TUBERCULOSIS (economics)

Leo, F. Tauro
PANCREATIC NEOPLASMS (diagnosis)

Li, Gandi
LYMPHOMA, EXTRANODAL NK-T-CELL
(pathology)

Li, Jinnan
LYMPHOMA, EXTRANODAL NK-T-CELL
(pathology)

Maah, M.J.
METALS, HEAVY

Mabrouk, A.
HEARING LOSS (epidemiology)

Machat, J.
METALS

Madadgar, Omid
SALMONELLA TYPHIMURIUM

Madani Civi, Manouchehr
BONE MARROW TRANSPLANTATION

Madani, Fatemeh Zahra Resvan
ISOSORBIDE DINITRATE (pharmacology)

Madani, M.
ENAMEL MICROABRASION

Madani, S.H.
CORAL REEFS

Madfaic, Z.A.
BREAST NEOPLASMS

Mady, Housam Eldeen H.
BREAST NEOPLASMS

Mahani, Saeed Esmaeili
ASCORBIC ACID

Maharlouei, Najmeh
MATERNAL MORTALITY

Mahdavi, R.
BLINDNESS (congenital)

Maheshwari, Gaurav
EVIDENCE-BASED MEDICINE

Maheshwari, Namrata
EVIDENCE-BASED MEDICINE

Maheswari, M.
SEWAGE

Mahfouz, Ahmed A.
ACUTE CORONARY SYNDROME (blood)

Mahfouz, Mohamed H.
DIABETES MELLITUS, TYPE 2 (complications)

Mahjour, J.
DISEASE TRANSMISSION, INFECTIOUS
(prevention and control)

Mahmal, L.
PANCYTOPENIA (etiology)

Mahmood, Isam H.
METABOLIC SYNDROME X

Mahmoud, Faten Y.
DIABETES, GESTATIONAL (physipathology)

Mahmoud, T.
ABNORMALITIES, MULTIPLE (diagnosis)

Mahmoud, Zizi S.
ACUTE CORONARY SYNDROME (blood)

Mahmoudi, Mahmoud
CESAREAN SECTION

Mahmoudian, Saeid
CONNEXINS

Mahmoudkhani, R.
WATER POLLUTANTS, CHEMICAL

Mahrour, U.E.
RABBITS (growth and development)

Majdi, M.R.
BETA-THALASSEMA (psychology)

Makama, Jerry G.
GENERAL SURGERY

Makarem, Mohammad H.
HYSTEROSCOPY (utilization)
Malekzadeh, R.
HELICOBACTER PYLORI

Malekzadeh, Reza
ESOPHAGEAL NEOPLASMS

Malik, A.M.
COMMUNICABLE DISEASES

Malik, M.R.
PRIMARY HEALTH CARE

Mane, Deepa R.
FIBROSARCOMA (diagnosis)

Mansoor, Ghulam Farooq
REAGENT KITS, DIAGNOSTIC (supply and distribution)

Mansour Ghanaei, F.
HEPATITIS C (genetics)

Mansour, A.M. Hamdan
BATTERED WOMEN (psychology)

Mansour, Magda A.
PULMONARY FIBROSIS (chemically induced)

Mansy, Marium F.
BRUCELLOSIS (blood)

Marcovecchio, J.E.
OCEANOGRAPHY

Mardani, M.
MATRIX METALLOPROTEINASE 3 (blood)

Maruyama, Y.
SEWAGE

Marzabadi, E. Azad
BETA-THALASSEASIA (psychology)

Mashlah, A.M.
STUDENTS, DENTAL

Masoodi, M.
COLITIS, ULCERATIVE (epidemiology)

Masoud, Karim
TISSUE EXPANSION (methods)

Massarrat, Sadegh
CANDIDA (drug effects)

Mazhar, A.
HEPATITIS B (epidemiology)

Mazloomi, Ezat
MATERNAL MORTALITY

Mazroa, Shireen A.
IMMUNOHISTOCHEMISTRY (standards)

McKay, R.I.B.
PHYTOPLANKTON

Mehrabanian, N.
RESTLESS LEGS SYNDROME (drug therapy)

Mehrmofakham, S.H.
LEPTIN (blood)

Meihami, A.
DENTAL CASTING TECHNIQUE

Mekkawy, Mohamed A.
BONE NEOPLASMS (diagnosis)

Mellat Ardekanli, A.
RESTLESS LEGS SYNDROME (drug therapy)

Mesci, B.
CHROMIUM

Mesli, E.
BETA-LACTAMASES

Messai, Y.
BETA-LACTAMASES

Metanat, M.
TUBERCULOSIS, PULMONARY

Metwally, Hala Gabr
AMIODARONE (toxicity)

Metwally, Nabil A.
EPILEPSY (epidemiology)

Metwelly, K.K.
EXTRAEMBRYONIC MEMBRANES

Mhadhbi, L.
FLATFISHES

DIAZINON (toxicity)

Mi, J.
PHOSPHORUS

Milaat, W.
DENGUE (transmission)

Mimish, L.
HEAT STROKE

Minuchehr, Zarrin
BACTERIAL PROTEINS

Mirbagheri, S.A.
PHYTOPLANKTON

Mirhashemi, F.S.
DENTAL IMPLANT-ABUTMENT DESIGN

Mkono, M.
PHYTOPLANKTON

Mnza, A.
DISEASE TRANSMISSION, INFECTIOUS (prevention and control)

Moazzami, Kasra
BONE MARROW TRANSPLANTATION

Modabernia, S.H.
CLEFT LIP
Moezzyzadeh, M.  
CASEINS

Mofleh, J.  
HEMORRHAGIC FEVER, CRIMEAN  
(epidemiology)

Moghadami, Mohsen  
INFLUENZA A VIRUS, H1N1 SUBTYPE

Moghaddami, Abbas  
OBESITY, ABDOMINAL

Mogharehabed, A.  
ENAMEL MICROABRASION

Moghimi, S.  
CESAREAN SECTION

Moghimian, Maryam  
CREATINE KINASE, MB FORM (drug effects)

Mohtadaee, Mehdi  
BENZIMIDAZOLES (therapeutic use)

Mohagghghehi, A.M.  
REFERRAL AND CONSULTATION

Mohagghghehi, Mohammad Ali  
CURCUMIN (therapeutic use)

Mohammadi, H.  
LEARNING

Mohammadi, Mehdi  
COUGH

Mohammed, Asmaa G.M.  
DENGUE FEVER (prevention and control)

Mohammed, Refaat S.  
OFLOXACIN (adverse effects)

Mohanakrishnan, A.  
IMMUNOGLOBULIN LIGHT CHAINS

Mohammad, Hend S.  
ZOONOSES (transmission)

Mohammad, Maha M.  
INSULIN RESISTANCE (physiology)

Mohammed, Basma Abdullah  
MESENCHYMAL STEM CELLS (drug effects)

Mohamed, Asmaa Abd Elmonem  
MESENCHYMAL STEM CELLS (drug effects)

Mohamed, M.  
COMMUNICABLE DISEASES

Mohamed, Dalia A.  
ORCHIECTOMY (adverse effects)

Mohamed, Doha Saber  
NIGELLA SATIVA (toxicity)

Mohamed, Eman M.  
EPILEPSY (epidemiology)

Mohamed, Hazem S.E.  
URINARY INCONTINENCE, STRESS (surgery)

Mohamed, M.E.  
COMMUNICABLE DISEASES

Mohamed, M.  
COMMUNICABLE DISEASES

Mohamed, Refaat S.  
OFLOXACIN (adverse effects)

Moini, F.  
DENTAL PINS
Mortagy, A.K.
POSTMENOPAUSE

Mortazavian, Amir Mohammad
PROBIOTICS

Mosayebi, Ghasem
TRETINOIN (therapeutic use)

Moshrat, M.
CLEF LIP

Mossalanejad, A.
ENVIRONMENT

Mostafa, Hany K.K.
TOBACCO SMOKE POLLUTION (adverse effects)

Mostafa, Mostafa S.
BONE NEOPLASMS (diagnosis)

Motamedi, S.H.
CASEINS

Mourad, Farouk A.
LIVER DISEASES (surgery)

Mousazadeh, H.
ENAMEL MICROABRASION

Moussa, Manal Hassan
SKIN TRANSPLANTATION

Moustafa, Adham M.
BEES (microbiology)

Moustafa, E.
VIOLENCE

Moustafa, Mohamed E.
SELENOPROTEINS (analysis)

Moustafa, Randa M.
CEREBRAL PALSY (etiolo)

Mozeh, M.B.
LEPTIN (blood)

Musmar, S.G.
SMOKING

Mwangi, S.N.
PHYTOPLANKTON

Mzoughi, N.
POLYCYCLIC HYDROCARBONS, AROMATIC

Nabeel, A.M.
POSTMENOPAUSE

Nabolsi, M.M.
HEALTH STATUS

Nabir, S.S.
MENTAL DISORDERS (epidemiology)

Nadir, Mohammed
LEISHMANIASIS, CUTANEOUS (therapy)

Naeem, M.M.
HEPATITIS B (epidemiology)

Nafili, H.
PANCYTOPENIA (etiolo)

Najafabadi, Masood Soltani
ORYZA SATIVA

Najafi, I.
PERITONEAL FIBROSIS (diagnosis)

Namiri, Mehrnaz
BONE MARROW TRANSPLANTATION

Nandakumar, N.B.
SEWAGE

Naqvi, H.A.
DEPRESSION (diagnosis)

Naseh, R.
SOIL

Nassar, Mahmood A.
PROSTATIC NEOPLASMS (genetics)

Natik, Kayhan
COMMUNITY HEALTH WORKERS

Nazarabadi M. Hasanzadeh
BLINDNESS (congenital)

Nazem, A.
CHEESE (microbiology)

Nejadkoorki, F.
AIR POLLUTION

Nejadi, Vahid
DENDRITIC CELLS

Nemetallah, B.R.
SEROTONIN UPTAKE INHIBITORS (adverse effects)

Nikazar, M.
WATER POLLUTANTS, CHEMICAL

Nikdoost, Farahnaz
SIROLIMUS (therapeutic use)

Nikfam, S.
PANCREATIC NEOPLASMS

Nirmala, V.
IMMUNOGLOBULIN LIGHT CHAINS

Njindam, Iliassou Mfochive
HIV INFECTIONS

Nosier, M.B.
EXTRAEMBRYONIC MEMBRANES

Nossair, M.A.
ZOONOSES (transmission)

Nour Eldin, A.
TONGUE (growth and development)
Nouri, S.Z.
MENTAL DISORDERS (epidemiology)

Nouri, Z. Tabibzadeh
TOBACCO USE CESSATION

Nourtaromlou, M.K.
PERITONEAL FIBROSIS (diagnosis)

Nwabuisi, Charles
BACTERIURIA (epidemiology)

Ofoghi, Hamideh
BACTERIAL PROTEINS

Ohowa, B.
PHYTOPLANKTON

Okela, Mohamed
INFLUENZA IN BIRDS (classification)

Okour, A.M.
MATERNAL MORTALITY

Okuku, E.O.
PHYTOPLANKTON
METALS, HEAVY

Okumu, S.
PHYTOPLANKTON

Olimat, H.
ACQUIRED IMMUNODEFICIENCY SYNDROME

Omar, Mohamed O.M.
BEES (microbiology)

Omar, Nesreen M.
DIABETES MELLITUS, EXPERIMENTAL (complications)
LENSES, CRYSTALLINE (ultrastructure)

Okour, A.M.
MATERNAL MORTALITY

Pan, X. J.
PHOSPHORUS

Parsanejad, N.
CONTACT TRACING

Pedramnia, Shahrzad
CANDIDA (drug effects)

Peel, Sheila A.
REAGENT KITS, DIAGNOSTIC (supply and distribution)

Perdes, Mohammad Saber
QUALITY OF HEALTH CARE

Peter, H.K.
METALS, HEAVY

Piccolo, M.C.
OCEANOGRAPHY

Pourreza, Abolghasem
CESAREAN SECTION

Pourshahid, Omid
INFLUENZA A VIRUS, H1N1 SUBTYPE

Pourshams, A.
PANCREATIC NEOPLASMS

Prakash, P.
DIET

Prathvi, Shetty
PANCREATIC NEOPLASMS (diagnosis)

Prohic, E.
SOIL

Qayed, Mohammad H.
CEREBRAL PALSY (etiology)

Quanta, W.
ISONIAZID (adverse effects)

Raafat, Mona H.
DOXORUBICIN (toxicity)

Raafat, Mona Hussein
CISPLATIN (toxicity)

Rabie, M.R.
REFERRAL AND CONSULTATION

Rachidi, S.
CROSS INFECTION (microbiology)

Rafidzadeh, S.
LEISHMANIA INFANTUM (isolation and purification)

Rafiee, G.H.
SOIL

Rageh, Tarek A.
EPILEPSY (epidemiology)

Rahaei, Z.
HEALTH EDUCATION (methods)
Rahbar, F.
CORAL REEFS

Rahimabadi, M.S.
HEPATITIS C (genetics)

Rahimdel, A.G.
RESTLESS LEGS SYNDROME (drug therapy)

Rahimi Foroushani, Abbas
ZINC (blood)

Rahmani, Ahmad Masoud
REAGENT KITS, DIAGNOSTIC (supply and distribution)

Raicevic, V.
METHYL ETHERS

Raja'a, Y.A.
TUBERCULOSIS (economics)

Rajabpour, Saeed
BENZIMIDAZOLES (therapeutic use)

Ramezani, M.
BETA-THALASSEMA (psychology)

Rashidi, Batool Hossein
CESAREAN SECTION

Rashidian, Arash
CESAREAN SECTION

Rassi, Y.
LEISHMANIA INFANTUM (isolation and purification)

Rasti, Behnam
RNA-BINDING PROTEINS

Ravanshad, Mehrdad
HIV-1 (drug effects)

Razavi, Khadijeh
OCIMUM BASILICUM

Rehman, A.
HEPATITIS B (epidemiology)

Rejeb, N.
ISONIAZID (adverse effects)

Rentas, Francisco J.
REAGENT KITS, DIAGNOSTIC (supply and distribution)

Rezaee, M.
MATRIX METALLOPROTEINASE 3 (blood)

Rezvani, M.B.
DENTAL PINS

Riad, Hisham A.
LIVER DISEASES (surgery)

Rismanchi, Mojtaba
INFLUENZA A VIRUS, H1N1 SUBTYPE

Robert, Leon L.
LEISHMANIASIS, CUTANEOUS (therapy)

Rodriguez Rodriguez, C.E.
HYDROCARBONS

Roodsari, Hamid Reza Sadeghipour
CREATINE KINASE, MB FORM (drug effects)

Roshanipoor, M.
REPRODUCTIVE BEHAVIOR

Roydhouse, J.K.
ASTHMA

Rozi, S.H.
TUBERCULOSIS (epidemiology)

Saad, Wael
TISSUE EXPANSION (methods)

Sabaeian, Behnam
INFLUENZA A VIRUS, H1N1 SUBTYPE

Saberi, F.
PRE-ECLAMPSIA

Sabz, Fatemeh Tanhaye Kalate
CULTURE MEDIA, CONDITIONED

Sabzwari, S.
DEPRESSION (diagnosis)

Sadadi, Fereshteh
SIROLIMUS (therapeutic use)

Sadat, Z.
PRE-ECLAMPSIA

Sadegh, M.
DENTAL CASTING TECHNIQUE

Sadeghian, G.
SKIN DISEASES (etiology)

Sadeghian, Hakimeh
BONE MARROW TRANSPLANTATION

Sadiq, M.
HEALTH MANPOWER

Sadrnejad, S.A.
PHYTOPLANKTON

Sadrnejad, S.K.H.
ORTHODONTIC WIRES

Saeed, K.
WORKPLACE (psychology)

Saeed, K.M. Islam
TUBERCULOSIS (epidemiology)

Safadi, R.
BATTERED WOMEN (psychology)
<table>
<thead>
<tr>
<th>Author</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safi, Najibullah</td>
<td>LEISHMANIASIS, CUTANEOUS (therapy)</td>
</tr>
<tr>
<td>Sahabi, M.</td>
<td>DENTAL IMPLANT-ABUTMENT DESIGN</td>
</tr>
<tr>
<td>Sajedi, Parvin</td>
<td>PSYCHOMOTOR AGITATION (drug therapy)</td>
</tr>
<tr>
<td>Sajedi, Reza Hasan</td>
<td>RNA-BINDING PROTEINS</td>
</tr>
<tr>
<td>Salah El Din, Rania</td>
<td>DIABETES MELLITUS, EXPERIMENTAL (chemically induced)</td>
</tr>
<tr>
<td>Salama, Nagla M.</td>
<td>ENDOMETRIUM (pathology)</td>
</tr>
<tr>
<td>Salameh, P.</td>
<td>CROSS INFECTION (microbiology)</td>
</tr>
<tr>
<td>Salari, Sahar</td>
<td>ASCORBIC ACID</td>
</tr>
<tr>
<td>Saleh, Hussien R.</td>
<td>BONE NEOPLASMS (diagnosis)</td>
</tr>
<tr>
<td>Salehi, Ahmad Shah</td>
<td>FAMILY PLANNING SERVICES HIV INFECTIONS</td>
</tr>
<tr>
<td>Salehi, Taghi Zahraei</td>
<td>SALMONELLA TYPHIMURIUM</td>
</tr>
<tr>
<td>Salem, A.A.A.</td>
<td>PARASITES (parasitology)</td>
</tr>
<tr>
<td>Salem, Ahmed A.S.</td>
<td>COLORECTAL NEOPLASMS (diagnosis)</td>
</tr>
<tr>
<td>Saleem, Amani, M.</td>
<td>PESTICIDE RESIDUES (analysis)</td>
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<td>Salem, Amdad Gaber Alsaid</td>
<td>DIABETES MELLITUS, EXPERIMENTAL (chemically induced)</td>
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<td>Salim, A.D.</td>
<td>NEUROSCISTOSOMIASIS (diagnosis)</td>
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<td>Samaha, H.A.</td>
<td>ZOONOSES (transmission)</td>
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<tr>
<td>Salemella Infections</td>
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<td>Samimi Rad, K.</td>
<td>HEPATITIS C (epidemiology)</td>
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<td>Samimi, Mansoureh</td>
<td>ZINC (blood)</td>
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<td>Samir, N.</td>
<td>VIOLENCE</td>
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<td>Sandeep, K.</td>
<td>MAGNETICS</td>
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<td>Sandhya, V.</td>
<td>IMMUNOGLOBULIN LIGHT CHAINS</td>
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<td>SOIL (chemistry)</td>
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<tr>
<td>Sanei, A.</td>
<td>LEISHMANIA INFANTUM (isolation and purification)</td>
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<td>Sanei, Head</td>
<td>CHEESE (microbiology)</td>
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<tr>
<td>Saniee, Parastoo</td>
<td>CANDIDA (drug effects)</td>
</tr>
<tr>
<td>Sarahroodi, Shadi</td>
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<td>Sarbolouki, Mohammad Nabi</td>
<td>CURCUMIN (therapeutic use)</td>
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<td>BREAST FEEDING</td>
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<td>SIROLIMUS (therapeutic use)</td>
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<td>LEPTIN (blood)</td>
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<td>Saydain, Ghulam</td>
<td>HYPERTENSION, PULMONARY</td>
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<td>INTESTINE, SMALL (growth and development)</td>
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<td>TISSUE EXPANSION (methods)</td>
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<td>DIPHOSPHATES (adverse effects)</td>
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<td>BRUCELLOSIS (blood)</td>
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<td>OFLOXACIN (adverse effects)</td>
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<td>COLITIS (chemically induced)</td>
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<td>Schluepmann, Henriette</td>
<td>ARABIDOPSIS</td>
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<tr>
<td>Scott, Paul T.</td>
<td>REAGENT KITS, DIAGNOSTIC (supply and distribution)</td>
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<td>Sedaghat, Mehdi</td>
<td>OBESITY, ABDOMINAL</td>
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<td>Sedghipour, Mohsen</td>
<td>SIROLIMUS (therapeutic use)</td>
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<td>CESAREAN SECTION</td>
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Seita, A.
TUBERCULOSIS (prevention and control)

Seleem, Hanan S.
PULMONARY FIBROSIS (chemically induced)

Selim, Assmaa O.
FATTY LIVER (etiology)

ARSENIC (toxicity)

Selim, Aymen M.M.
COLORECTAL NEOPLASMS (diagnosis)

Selim, Sally Ahmed
ARSENIC (toxicity)

Selvamurugan, M.
SEWAGE

Sepanlou, Sadaf G.
CESAREAN SECTION

Seyithanoglu, M.H.
HEMATOMA, EPIDURAL, SPINAL (diagnosis)

Shafiei, N.
BLOOD DONORS

Shafieiyoun, S.
WATER POLLUTANTS, CHEMICAL

Shah, S.
ASTHMA

Shahangian, Seyyedeh Shirin
RNA-BINDING PROTEINS

Shahhoseini, Gholamreza
BENZIMIDAZOLES (therapeutic use)

Shahir, Ihsanullah
HEALTH MANPOWER

Shahreki, S.H.
TUBERCULOSIS, PULMONARY

Shahriari, S.H.
PLANTAGO

Shahriari, T.
PLANTAGO

Shaikh, A.
ACCIDENTS, TRAFFIC

Shaikh, M.A.
ACCIDENTS, TRAFFIC

Shakeri, M.T.
BLOOD DONORS

Shalabi, Mona A.
CARTILAGE (abnormalities)

Shalaby, Mohamed
URETHRAL STRICTURE (surgery)

Shams, Nemat
SALMONELLA TYPHIMURIUM

Shamsara, Mahdi
CLOSTRIDIUM PERFRINGENS

Shankar, R.
MAGNETICS

Shariati, Parvin
BACTERIAL PROTEINS

Sharif, S.I.
MYOCARDIAL INFARCTION (etiology)

Sharifi Mood, B.
TUBERCULOSIS, PULMONARY

Sharifi, Mozafar
OCIMUM BASILICUM

Shaybouh, R.
PARTURITION

Shehata, Ghaydaa A.
EPILEPSY (epidemiology)

Sheikh, M.A.
HEPATITIS B (epidemiology)

Sheng, K.C.
BIOFUELS

Shenouda, Helpies D.
FLUTAMIDE (toxicity)

Sheta, M.I.
STOMACH NEOPLASMS (microbiology)

Shi, L.Q.
PHOSPHORUS

Shideed, O.
RESEARCH SUPPORT AS TOPIC

Shirzad, S.
PLATELET AGGREGATION INHIBITORS

Shishani, K.R.
BATTERED WOMEN (psychology)

Shooshtari, M. Jazayeri
REHABILITATION

Shoukry, Youssef
DIABETES MELLITUS, EXPERIMENTAL
(chemically induced)

Shouman, Mohamed S.
DIABETES MELLITUS, TYPE 2 (complications)

Siavoshi, Farideh
CANDIDA (drug effects)

Siddiqui, Z.
ACCIDENTS, TRAFFIC

Sifsalam, M.
PANCYTOPENIA (etiology)

Simbar, M.
FAMILY PLANNING SERVICES (history)
Sinha, Pranava  
ARTERIOVENOUS MALFORMATIONS (surgery)

Sohrabvandi, Sarah  
PROBIOTICS

Soleiman, Mona M.  
CORONARY ARTERY DISEASE

Soliman, Hala Mahmoud  
FATTY LIVER (etiology)

Soliman, Nevine Bahaa E.  
CARTILAGE (abnormalities)

Somrani, N.  
EMERGENCY SERVICE, HOSPITAL (utilization)

Song, D.  
PHOSPHORUS

Soni, A.B.  
GLYCOLATES

Sotoudehmanesh, R.  
LIVER DISEASES (ultrasonography)  
AMYLOIDOSIS (diagnosis)

Spanou, S.  
BUTTERFLIES

Spetter, C.V.  
OCEANOGRAPHY

Squire, S. Bertel  
COUGH

Subramanyam, B.  
PHENOL

Suhyb, Sanusi R.  
CERVIX UTERI

Sultan, Nabeel  
THORACIC SURGERY

Suresh, S.  
GLYCOLATES

Surlan Momirovic, G.  
METHYL ETHERS

Suzuki, S.  
SEWAGE

Sweed, H.S.  
POSTMENOPAUSE

Szkandera, R.  
METALS

Tabatabaei, Seyyed Abdol Hossein  
SIROLIMUS (therapeutic use)

Tadbir, A. Andisheh  
MATRIX METALLOPROTEINASE 3 (blood)

Taghavi, N.  
CLEFT LIP

Taghdir, Majid  
RNA-BINDING PROTEINS

Taghizadeh, Mohsen  
ZINC (blood)

Taha, Ahmed M.I.  
LIVER DISEASES (surgery)

Tahaei, M.E.  
HEPATITIS C (epidemiology)

Taher, M.  
PLATELET AGGREGATION INHIBITORS

Talaie, A.R.  
METHYL ETHERS

Talei, A.R.  
BREAST NEOPLASMS

Tanzeem, Shahila  
ECTROMELIA (diagnosis)

Tarabin, Amir  
ACUTE CORONARY SYNDROME (mortality)

Tavakolian, Atefeh  
CANDIDA (drug effects)

Tavassoli, F.  
BLINDNESS (congenital)

Tawfeeq, F.N.  
BREAST NEOPLASMS

Tawfik, Nabawia M.  
CORONARY ARTERY DISEASE

Tazi, I.  
PANCYTOPENIA (etiology)

Tazik, Ebrahim  
OBESITY, ABDOMINAL

Thabet, S.  
IRON (deficiency)

Todd, Catherine S.  
REAGENT KITS, DIAGNOSTIC (supply and distribution)

Tokiko, S.  
HEALTH STATUS

Torabian, A.  
WATER POLLUTANTS, CHEMICAL

Torkey, H.A.  
SHIGA-TOXIGENIC ESCHERICHIA COLI (isolation and purification)

Tsai, Ching Wei  
AORTA (pathology)

Tsegenidi, K.  
BUTTERFLIES

Tudiver, F.  
FETAL DEATH (etiology)
Uemura, S.H.
SEWAGE

Ullah, Anhar
ACUTE CORONARY SYNDROME (mortality)

Usama, M.A.
SCENEDESMUS (growth and development)

Vafaee, A.
BLOOD DONORS

Vakili, S. Taba Tabab
INFLAMMATORY BOWEL DISEASES
PERITONEAL FIBROSIS (diagnosis)

Vargas Azofeifa, I.
HYDROCARBONS

Veghari, Gholamreza
OBESITY, ABDOMINAL

Venkatakrishnan, L.
IMMUNOGLOBULIN LIGHT CHAINS

Verma, V.
GLYCOLATES

Wang, Y.
PHOSPHORUS

Wanjeri, V.O.
PHYTOPLANKTON

Warrier, A.K.
MAGNETICS

Wasfy, Salwa E.
COLITIS (chemically induced)

Waslien, C.
DIET

Wassif, G.O.
PATIENT SAFETY

Wida’a, Q.H.
MYCOBACTERIUM AVIUM COMPLEX (isolation and purification)

Xia, Y.H.
BIOFUELS

Xu, Hui
LYMPHOMA, EXTRANODAL NK-T-CELL (pathology)

Xue, Linyun
LYMPHOMA, EXTRANODAL NK-T-CELL (pathology)

Yadav, R.S.
DISEASE TRANSMISSION, INFECTIOUS (prevention and control)

Yadollahie, M.
REPRODUCTIVE BEHAVIOR

Yaghini, J.
ENAMEL MICROABRASION

Yahyaraeyat, Ramak
SALMONELLA TYPHIMURIUM

Yakhchali, Bagher
BACTERIAL PROTEINS

Yamamah, G.
HEARING LOSS (epidemiology)

Yavari, A.R.
SOIL

Yazdi, S.A. Tabatabae
BLINDNESS (congenital)

Yegane, Ali
BENZIMIDAZOLES (therapeutic use)

Yeganeh, F.
LEPTIN (blood)

Yekta, Batool Ghorbani
SIROLIMUS (therapeutic use)

Yilmaz, V.
ENVIRONMENT

Younesian, F.
PYRAZOLES

Youssef, A.I.
STOMACH NEOPLASMS (microbiology)

Yusoff, L.
METALS, HEAVY

Zaghlol, Dorreia Abd Allah
NIGELLA SATIVA (toxicity)

Zaghloul, Somaya S.
GLUTAMIC ACID (toxicity)

Zaghloul, Dorreia A.
OFLOXACIN (adverse effects)

Zaghoul, S.
DIET

Zaim, M.
DISEASE TRANSMISSION, INFECTIOUS (prevention and control)

Zakaria, A.D.
SEROTONIN UPTAKE INHIBITORS (adverse effects)

Zakeri, Zeinab
MATERNAL MORTALITY

Zaki, A.
STOMACH NEOPLASMS (microbiology)

Zaki, Mohamed M.
FLUTAMIDE (toxicity)

Zaman, M.
DEPRESSION (diagnosis)
Zamiri, Nima
INFLUENZA A VIRUS, H1N1 SUBTYPE

Zaoui, A.
ISONIAZID (adverse effects)

Zarifsanayei, N.
LEARNING

Zayyan, Marliyya
CERVIX UTERI

Zein, S.
CROSS INFECTION (microbiology)

Zeinali, A.
RESTLESS LEGS SYNDROME (drug therapy)

Zheng, Shumei
LYMPHOMA, EXTRANODAL NK-T-CELL
(pathology)

Ziaei, H.
SKIN DISEASES (etiology)

Ziaei, Mahboobeh
OCIMUM BASILICUM

Zidan, Rania A.
ERGOLINES (toxicity)

Zidan, Riham A.
DIABETES MELLITUS, TYPE 2 (complications)

Zidan, S.A.
SHIGA-TOXIGENIC ESCHERICHIA COLI
(isolation and purification)

Zolghadr, R.
HEALTH EDUCATION (methods)
Appendix II

List of EMR Journals Indexed in IMEMR

(by country)
<table>
<thead>
<tr>
<th>Journal</th>
<th>ISSN</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Afghanistan (2)</strong></td>
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<tr>
<td>Afghan Medical Journal</td>
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<td>AFJPH - Afghanistan Journal of Public Health</td>
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<td><strong>Bahrain (3)</strong></td>
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<tr>
<td>Arab Journal for Food and Nutrition</td>
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<td>Bahrain Medical Bulletin</td>
<td>1012-8298</td>
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<td>JBMS - Journal of the Bahrain Medical Society</td>
<td>1015-6321</td>
<td>Active</td>
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<td><strong>Egypt (138)</strong></td>
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<tr>
<td>AAMJ - Al-Azhar Assiut Medical Journal</td>
<td>1687-1693</td>
<td>Interrupted</td>
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<td>African Journal of Urology</td>
<td>1110-5704</td>
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<td>Afro-Arab Liver Journal</td>
<td>1687-224X</td>
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<td>Ain-Shams Journal of Forensic Medicine and Clinical Toxicology</td>
<td>1687-1030</td>
<td>Interrupted</td>
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<td>Ain-Shams Medical Journal</td>
<td>0002-2144</td>
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<td>AJAIC - Alexandria Journal of Anaesthesia and Intensive Care</td>
<td>N/A</td>
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<tr>
<td>Al-Azhar Journal of Dental Science</td>
<td>1110-6751</td>
<td>Interrupted</td>
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<tr>
<td>Al-Azhar Medical Journal</td>
<td>1110-0400</td>
<td>Active</td>
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<td>Alexandria Dental Journal</td>
<td>1110-015X</td>
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<td>Alexandria Journal of Food Science and Technology</td>
<td>1687-3920</td>
<td>Interrupted</td>
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<td>Alexandria Journal of Hepatogastroenterology</td>
<td>2090-1879</td>
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<td>Alexandria Journal of Pediatrics</td>
<td>1687-9945</td>
<td>Active</td>
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<td>Alexandria Journal of Pharmaceutical Sciences</td>
<td>1110-1792</td>
<td>Interrupted</td>
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<tr>
<td>Alexandria Journal of Veterinary Science</td>
<td>1110-2407</td>
<td>Active</td>
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<tr>
<td>Alexandria Medical Journal [The]</td>
<td>0516-5849</td>
<td>Interrupted</td>
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<td>Annals of Pediatric Surgery</td>
<td>1687-4137</td>
<td>Interrupted</td>
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<tr>
<td>Applied Endocrinology in Egypt</td>
<td>1110-1776</td>
<td>Interrupted</td>
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<td>Arab Family Health and Population</td>
<td>N/A</td>
<td>Active</td>
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<tr>
<td>Arab Journal of Biotechnology</td>
<td>1110-6875</td>
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<tr>
<td>Arab Journal of Gastroenterology</td>
<td>1687-1979</td>
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<tr>
<td>Arab Journal of Laboratory Medicine [The]</td>
<td>1110-1822</td>
<td>Active</td>
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<td>ASJOG - Ain-Shams Journal of Obstetrics and Gynecology</td>
<td>1697-2193</td>
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<td>ASNJ - Alexandria Scientific Nursing Journal</td>
<td>1687-3858</td>
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<td>Assiut Medical Journal</td>
<td>1110-0494</td>
<td>Active</td>
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<td>Assiut University Bulletin for Environmental Researches</td>
<td>1110-6107</td>
<td>Active</td>
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<td>Assiut Veterinary Medical Journal</td>
<td>N/A</td>
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<td>Benha Medical Journal</td>
<td>1110-208X</td>
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<td>Bulletin of Alexandria Faculty of Medicine</td>
<td>1110-0834</td>
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<tr>
<td>Bulletin of Alexandria Thoracic Association</td>
<td>N/A</td>
<td>Interrupted</td>
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<tr>
<td>Bulletin of Faculty of Pharmacy - Cairo University</td>
<td>1110-0931</td>
<td>Interrupted</td>
</tr>
<tr>
<td>Bulletin of Faculty of Physical Therapy - Cairo University</td>
<td>1110-6611</td>
<td>Interrupted</td>
</tr>
<tr>
<td>Bulletin of High Institute of Public Health [The]</td>
<td>1110-0036</td>
<td>Active</td>
</tr>
<tr>
<td>Bulletin of Pharmaceutical Sciences - Assiut University</td>
<td>1110-0052</td>
<td>Active</td>
</tr>
<tr>
<td>Bulletin of the Faculty of Science - University of Alexandria</td>
<td>0568-9619</td>
<td>Interrupted</td>
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<tr>
<td>Bulletin of the National Nutrition Institute of the Arab Republic of Egypt</td>
<td>N/A</td>
<td>Interrupted</td>
</tr>
<tr>
<td>Bulletin of the National Research Centre</td>
<td>1110-0591</td>
<td>Interrupted</td>
</tr>
<tr>
<td>Bulletin of the Ophthalmological Society of Egypt</td>
<td>0078-5342</td>
<td>Interrupted</td>
</tr>
<tr>
<td>Childhood and Development Quarterly</td>
<td>1110-8681</td>
<td>Interrupted</td>
</tr>
<tr>
<td>Clinical Diabetes</td>
<td>0891-8929</td>
<td>Active</td>
</tr>
<tr>
<td>EDJ - Egyptian Dental Journal</td>
<td>0070-9484</td>
<td>Interrupted</td>
</tr>
<tr>
<td>Egyptian Heart Journal [The]</td>
<td>1110-2608</td>
<td>Interrupted</td>
</tr>
<tr>
<td>Egyptian Journal of Anatomy [The]</td>
<td>1110-2144</td>
<td>Interrupted</td>
</tr>
<tr>
<td>Egyptian Journal of Biomedical Engineering</td>
<td>1012-5558</td>
<td>Interrupted</td>
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<tr>
<td>Egyptian Journal of Biophysics and Biomedical Engineering</td>
<td>1110-8525</td>
<td>Active</td>
</tr>
<tr>
<td>Egyptian Journal of Breastfeeding</td>
<td>N/A</td>
<td>Active</td>
</tr>
<tr>
<td>Egyptian Journal of Bronchology [The]</td>
<td>1687-8426</td>
<td>Active</td>
</tr>
<tr>
<td>Egyptian Journal of Cardiothoracic Anesthesia</td>
<td>1687-9090</td>
<td>Active</td>
</tr>
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<td>Egyptian Journal of Cataract and Refractive Surgery [The]</td>
<td>N/A</td>
<td>Active</td>
</tr>
<tr>
<td>Egyptian Journal of Chemistry</td>
<td>0449-2285</td>
<td>Active</td>
</tr>
<tr>
<td>Egyptian Journal of Community Medicine [The]</td>
<td>1110-1865</td>
<td>Active</td>
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<td>Egyptian Journal of Dermatology and Andrology</td>
<td>1110-7650</td>
<td>Interrupted</td>
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<td>Egyptian Journal of Diabetes [The]</td>
<td>N/A</td>
<td>Interrupted</td>
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<tr>
<td>Egyptian Journal of Food Science</td>
<td>1110-0192</td>
<td>Interrupted</td>
</tr>
<tr>
<td>Egyptian Journal of Genetics and Cytology</td>
<td>0046-161X</td>
<td>Interrupted</td>
</tr>
<tr>
<td>Egyptian Journal of Histology [The]</td>
<td>1110-0559</td>
<td>Active</td>
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<td>Egyptian Journal of Hospital Medicine [The]</td>
<td>1687-2002</td>
<td>Active</td>
</tr>
<tr>
<td>Egyptian Journal of Immunology [The]</td>
<td>1110-4902</td>
<td>Interrupted</td>
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<td>Egyptian Journal of Medical Human Genetics [The]</td>
<td>1110-8630</td>
<td>Active</td>
</tr>
<tr>
<td>Egyptian Journal of Medical Laboratory Sciences</td>
<td>1110-5593</td>
<td>Active</td>
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<td>Egyptian Journal of Medical Microbiology</td>
<td>1110-2179</td>
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<tr>
<td>Egyptian Journal of Microbiology</td>
<td>0022-2704</td>
<td>Active</td>
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<tr>
<td>Egyptian Journal of Neonatology [The]</td>
<td>1110-8991</td>
<td>Interrupted</td>
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<tr>
<td>Egyptian Journal of Neurology, Psychiatry and Neurosurgery [The]</td>
<td>1110-1083</td>
<td>Interrupted</td>
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<tr>
<td>Egyptian Journal of Nutrition</td>
<td>1687-1235</td>
<td>Active</td>
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**Kuwait (6)**

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**Last update September 2013**
Appendix III

List of EMR Journals Indexed in IMEMR

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