

THE PATTERN OF DISEASES IN A SURGICAL UNIT AT A TERTIARY CARE PUBLIC HOSPITAL OF KARACHI

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ABSTRACT

Objective: To study the pattern of diseases in patients admitted in a surgical unit of tertiary care public hospital in Karachi.

Design: Descriptive retrospective analysis of patients admitted from January 1, 2004 to June 30, 2004.

Setting: Surgical Unit IV, Civil Hospital, Karachi.

Results: A total of 501 patients, 284 (56.7%) males and 217 (43.3%) females were admitted during a six months period in Surgical Unit IV of Civil Hospital, Karachi. Out of these 296 (59.1%) patients were admitted through OPD, 190 (37.9%) came from emergency and 15 (3%) from other units. The majority of patients i.e. 114 (22.8%) had gastrointestinal related diseases followed by hernia 94 (18.8%), hepatobiliary diseases 69 (13.8%), ano-rectal diseases 37 (7.4%), abscesses 35 (7%), trauma 28 (5.6%), thyroid diseases 20 (4%), testicular & scrotal related problems 19 (3.7%), breast diseases 17 (3.4%) and tetanus patients 10 (2%). Diabetes mellitus was the commonest associated disease seen in 60 (12%) patients. Four hundred forty-one (88%) patients were discharged after successful treatment while 10 (2.2%) expired during the study period.

Conclusion: This study revealed that the commonest cause of admission was gastrointestinal related problems including acute abdomen, followed by hernias and hepato-biliary diseases, while diabetes mellitus was the most common associated disease.

KEY WORDS: Surgical diseases, Disease pattern, Associated disease, Tertiary care hospital.

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INTRODUCTION

Civil Hospital, Karachi is a 1670-bed tertiary care public hospital that imparts both under-

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graduate and postgraduate teaching and training. It is one of the teaching hospitals affiliated with Dow University of Health Sciences (DUHS). The department of surgery comprises of six general surgical units besides the specialties of neurosurgery, paediatric surgery, orthopedic surgery, urology, vascular surgery, maxillo-facial surgery and plastic surgery. All units function independently.

Surgical Unit IV has 45 beds and its medical staff consists of a Professor, an Associate Professor, two Assistant Professors, 3 RMO's and a number of postgraduates and house officers. Like other general surgical units it has one OPD per week and is also on emergency call on OPD day, besides having emergency every sixth Sunday. Civil Hospital being a tertiary care hospital attracts patients not only from Karachi but also from the rural areas of Sindh and Balochistan province.

This study was carried out to find the pattern of diseases among the admitted patients.

PATIENTS AND METHODS

This is a retrospective analysis of all patients admitted in Surgical Unit IV of Civil Hospital, Karachi from January 1, 2004 to June 30, 2004. A Proforma was designed to document the data. The information recorded included patient's demographic data, provisional and final diagnosis, mode of admission, treatment, final outcome and presence of associated diseases. All the data was analyzed by SPSS version-10 on computer.

RESULTS

During the six months study period, 501 patients were admitted in Surgical Unit IV, CHK. Out of these 284 (56.7%) were males and 217 (43.3%) females. Most i.e. 296 (59.1%) cases were admitted through OPD, while 190 (37.9%) came from emergency and 15 (3%) from other units. The age distribution of the

Table I: Age Distribution

Age	Number	Percentage
12-20	82	16.4
21-30	147	29.3
31-40	117	23.4
41-50	75	15.0
51-60	51	10.2
61-70	22	4.4
>70	7	1.4
TOTAL	501	100.0

Table II: Disease Pattern

Disease	Number	Percentage
Gastrointestinal related	114	22.8
Hernia	94	18.8
Hepato-biliary region	69	13.8
Ano-rectal region	37	7.4
Abscess	35	7.0
Trauma	28	5.6
Thyroid related	20	4.0
Testicular & scrotal	19	3.7
Breast related	17	3.4
Tetanus	10	2.0
Miscellaneous	58	11.5
TOTAL	501	100.0

patients is shown in Table-I. Four hundred and forty one (88%) patients were discharged after successful management, 10 (2%) expired, 39 (7.8%) were referred to other units, while 11 (2.2%) left against medical advice.

The majority of patients i.e. 114 (22.8%) had gastrointestinal related diseases followed by hernial diseases 94 (18.8%), hepato-biliary diseases 69 (13.8%), ano-rectal problems 37 (7.4%), abscesses 35 (7%), trauma 28 (5.6%), thyroid diseases 20 (4%), testicular and scrotal related problems 19 (3.7%), breast diseases 17 (3.4%) and tetanus 10 (2%) as shown in Table-II, III & IV.

Table III: Incidence of major diseases

Disease	Number	Percentage
Gastrointestinal Diseases		
Appendicitis	68	13.6
Intestinal Obstruction	17	3.4
Perforated duodenal ulcer	9	1.8
Carcinoma Colon	2	0.4
Reversal of Ileostomy	4	0.8
Typhoid Perforation	3	0.6
Gastric Outlet Obstruction	2	0.4
Peritonitis	8	1.6
ITP*	1	0.2
Hernias		
Inguinal, Obstructed Hernia	66	13.2
Epigastric Hernia	6	1.2
Paraumbilical Hernia	14	2.8
Incisional Hernia	5	1.0
Umbilical Hernia	2	0.4
Hiatus Hernia	1	0.2
Hepato-biliary diseases		
Acute Cholecystitis	3	0.6
Chronic Cholecystitis	51	10.2
Cholangiocarcinoma	1	0.2
Obstructive Jaundice	7	1.4
Pancreatitis	7	1.4
Breast diseases		
Fibroadenoma	4	0.8
Carcinoma Breast	5	1.0
Breast Abscess	6	1.2
Duct Ectasia	2	0.4
Thyroid diseases		
Multinodular Goiter	12	2.4
Cold Nodule thyroid	7	1.4
Carcinoma Thyroid	1	0.2

* Idiopathic thrombo cytopenic purpura

Table IV: Incidence of trauma

	Number	Percentage
Stab wound	9	1.8
Gun Shot wound	9	1.8
Road Traffic Accident (RTA)	5	1.0
Blunt Abdominal Trauma	2	0.4
Blunt Chest Trauma	3	0.6
TOTAL	28	5.6

Table V: Co-Morbidity

Associated Disease	Number	Percentage
Diabetes	60	12.0
Hypertension	54	10.8
Anemia	40	7.9
Hepatitis	29	5.8
Tuberculosis	18	3.6
Asthma/COPD*	11	2.2
Miscellaneous	22	4.4

* Chronic Obstructive Pulmonary Disease

As regards the presence of associated diseases, 60 (12%) patients were diabetic and 54 (10.8%) hypertensive while anaemia was present in 40 (7.9%) patients (Table V).

DISCUSSION

The pattern of diseases vary with the geographical areas, in different races, age groups, social classes and in people with different occupations. Environmental as well as genetic factors are also responsible for the varied pattern of diseases in different areas.

Very few local studies are available on the topic among patients admitted in tertiary care hospitals. Only two studies have described detailed pattern of diseases in medical wards^{1,2} and one from a surgical ward³ while one⁴ from a surgical unit has mentioned it as an overview.

There are many differences between our study and the study from another surgical unit³. The number of patients admitted during six months in this study was 501, as compared to 563 during the one year period reported by Shaikh et al³, which included paediatric surgical and urological cases. This shows that Civil Hospital, Karachi (CHK) bears the major brunt of the city's patients requiring surgery includ-

ing emergency patients referred from different hospitals. Gastrointestinal related diseases (22.8%) were the most prominent cause of admission in our study, while Shaikh et al³ reported hernias (16%) as their most common cause. Manzar S⁴ from Nawabshah reported genitourinary diseases (29%) as the commonest and gastrointestinal diseases (22%) as the second commonest cause.

In the Gastrointestinal (GI) tract, the most common disease in our study was related to appendix i.e. 13.6% (n=68), whereas in the other study only 22 (3.9%) cases were reported during one year.³ The incidence of perforated appendix was 6% (n=4) in our study, though text books describes 20% of all patients with acute appendicitis to have perforation at the time of presentation.⁵ Intestinal obstruction, another major surgical emergency was seen in 17 (3.4%) of our patients.

Inguinal Hernias account for 90% of all the external abdominal hernias⁶. In our study the total number of hernias were 94 (18.8%), 66 (70.2%) among these were inguinal while Shaikh R et al³ reported 15.9% hernia cases, 85.5% of them being inguinal. Manzar S⁴ on the other hand reported an overall hernia incidence of 9% with 84% inguinal hernia.

Amongst the hepatobiliary diseases one patient (1.8%) had cholangiocarcinoma, an incidental finding on routine histopathology. It is a rare disease here, but the incidence varies with the geographical region and racial-ethnic groups. The highest incidence is reported amongst Chileans, American Indians and in parts of northern India, where it accounts for as much as 9.1% of all biliary tract disease.⁷

Carcinoma Breast is reported to be the most common cause of death in middle-aged women in Western countries. In 1998, approximately one million new cases were diagnosed worldwide. Studies also report that in England and Wales, one women out of 12 are likely to develop the disease.⁸ Jaffrey et al from Pakistan have also reported breast cancer as the commonest tumour among females of Karachi.⁹ In our study out of the total 501 patients, we had 5(1%) patients of breast cancer.

Injury and trauma is the leading cause of death and disability in the first four decades of life. This holds true even in acquired immunodeficiency syndrome (AIDS) prevalent areas of the world. The National Academy of Sciences in the United States has labelled injury as the 'neglected disease of modern society' and a leading emergency surgeon has referred to trauma as 'the neglected stepchild of modern medicine'. In our study 28 (5.6%) patients were admitted with history of trauma, including 18 (3.6%) cases of stab and gunshot wounds.

The most common associated disease in our patients were diabetes mellitus (12%) and hypertension (10.8%). The prevalence of diabetes according to various studies varies from 5-15%. A population based survey conducted by Shera et al showed the prevalence of diabetes as 16.2% in men and 11.7% in women.¹⁰ A study conducted in the Bahawalpur city using WHO criteria showed an overall prevalence of diabetes to be 5.33%.¹¹ According to 1998 National Health Survey, there are about twelve million hypertensive patients in Pakistan. About 18% of our population above the age of 15 years and 33% above the age of forty five years suffer from hypertension.¹² Jabeen et al¹ also reported that diabetes as well as stroke due to complication of hypertension are the major problems of our society. This means that we still need to do a lot more as regards to creating awareness as well as control of diabetes and hypertension in our population.

CONCLUSION

There is a need to have more detailed studies regarding the pattern of diseases admitted to tertiary healthcare facilities in Pakistan, so that appropriate intervention could be planned.

REFERENCES

1. Jabeen M, Jawaid M. The pattern of admissions in a medical unit at a tertiary care public hospital of Karachi. *SPECIALIST (Pak J Med Sci)* 1999;15(2):131-6.
2. Chaudhary GM. ICD-9 Pattern of diseases at Nishtar Hospital Multan. *Specialist (Pak J Med Sci)* 1997;13(3):235-44.
3. Shaikh R, Jeddi MF, Ali G, Iqbal SA. Pattern of diseases in a surgical unit at Lyari General Hospital, Karachi. *Med Channel* 2000;6(2):29-31.
4. Manzar S. Inguinal Hernias-Incidence, complication and management. *J Coll Physician Surg Pak* 1992;2(1):7-9.
5. Steele RJC. Disorders of small intestine and vermiform appendix. In: Cuschieri SA, Steele RJC, Moossa AR eds. (2002) *Essential surgical practice*. 4th ed. Georgina Bentliff: 527-68.
6. Cushieri SA. Disorders of the abdominal wall and peritoneal cavity. In: Cuschieri SA, Steele RJC, Moossa AR eds. (2002) *Essential surgical practice*. 4th ed. Georgina Bentliff. 174-7.
7. Russel RCG. The gall bladder and bile ducts. In: Russell RCG, William NS, Bulstrode CJK. eds (2004) *Bailey & Love's Short Practice of Surgery*. 24th ed. Oxford University Press, New York, 1093-113.
8. Richard CS. The Breast. In: Russell RCG, William NS, Bulstrode CJK. eds (2004) *Bailey & Love's Short Practice of Surgery*. 24th ed. Oxford University Press, New York, 824-46.
9. Jaffrey NA, Zaidi SHM. Cancer in Pakistan. *J Pak Med Assoc* 1987;27:165-7.
10. Shera AS, Rafique G, Khawaja IA et al. Pakistan National Diabetes Survey: Prevalence of Glucose intolerance and associated factors in Shikarpur, Sindh Province. *Diabetic Medicine* 1995;12:1116-21.
11. Shaukat A, Arain TM, Mehmood SM et al. The prevalence of diabetes mellitus in the general population of Bahawalpur City. *J Coll Physicians Surg Pak* 1998;8(4):167-9.
12. National Health Survey by Pakistan Medical Research Council 1998.