International Journal of Medicine Research
ISSN: 2455-7404; Impact Factor: RJIF 5.42
Received: 29-07-2020; Accepted: 16-08-2020; Published: 30-08-2020
www.medicinesjournal.com
Volume 5; Issue 3; 2020; Page No. 81-83

Freguency of internal medicine disease in Al- Amiriyah general hospital

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Abstract
Background: Internal medicine is the medical specialty dealing with the prevention, diagnosis, and treatment of adult diseases. Investigating the prevalence of internal diseases and causes of hospitalization of patients in the west of Iraq can be helpful for healthcare programmers in scheduling a healthy and joyful and reducing their mortality and morbidity.
Objectives: To determine the etiological factors, outcomes among hospitalized patients with internal medicine disease.
Methods: A cross sectional study was carried out on patients with internal medicine disease admitted to al_amiriyah General Hospital, during the period between 1st January to 1st September 2019. A total of 307 patients 189 male and 118 female who was admitted to the medical floor constituted the study group.
Results: There were (61.56%) male's patients and (38.44%) female's patients. The prevalence of various causes of in this study was: Obstructive pulmonary diseas (19.21%), Pneumonia (11.41%), Gastroenteritis (11.08%), Peptic ulcer disease (9.45%), cerebrovascular accidents (7.49%), Heart failure (6.84%), Chronic Bronchitis (6.19%), Diabetes mellitus (6.19%), Urinary tract infection (4.89%), Migraine (4.56%), Liver failure (3.92%), Chronic renal failure (3.58%), Hepatitis (3.27%) and Deep Venus thrombosis (1.96%) of the patients.
Conclusions: The incidence of internal medicine disease is high in our hospital. Occurrence of the internal disease in rural population more than in urban one. Case _fatality rate was low in our study. The Obstructive pulmonary disease was the leading causes of admission fallowed by pneumonia.

Keywords: internal medicine disease, Obstructive pulmonary disease, Pneumonia, Gastroenteritis, Al- Amiriyah

Introduction

Internal medicine is the medical specialty dealing with the prevention, diagnosis, and treatment of adult diseases. Physicians specializing in internal medicine are called internists or physicians in Commonwealth nations. Internists are skilled in the management of patients who have undifferentiated or multi-system disease processes. Internists care for hospitalized and ambulatory patients and may play a major role in teaching and research. Of note is that internal medicine and family medicine are often confused. Because internal medicine patients are often seriously ill or require complex investigations, internists do much of their work in hospitals. Internists often have subspecialty interests in diseases affecting particular organs or organ systems. The etymology of the term internal medicine in English is rooted in the German term Innere Medizin from the 19th century [1]. In contrast, physicians in previous generations, such as the 17th-century physician Thomas Sydenham, who is known as "the English Hippocrates", had developed nosology (the study of diseases) via the clinical approach to diagnosis and management, by careful bedside study of the natural history of diseases and their treatment [2]. The 19th century saw the rise of internal medicine that combined the clinical approach with use of investigations [1]. Many early-20th-century American physicians studied medicine in Germany and brought this medical field to the United States. Thus, the name "internal medicine" was adopted in imitation of the existing German term [2]. Perhaps because it is complex to explain treatment of diseases that are not localized to a single-organ, there has been confusion about the meaning of internal medicine and the role. The American College of Physicians defines internists as "physicians who specialize in the prevention, detection and treatment of illnesses in adults" [3]. Medicine is mainly focused on the art of diagnosis and treatment with medication, internists either work as general medicine or subspecialize in additional area of internal medicine. There are many subspecialties includes; Cardiology and their branch (Interventional cardiology, Clinical cardiac electrophysiology), Respiratory medicine, Endocrinology, Gastroenterology, Hematology, Infectious disease, Nephrology, Immunology, Medical oncology, Rheumatology, Geriatric medicine, Neurology, Nuclear medicine, Palliative medicine, Critical care medicine, Tropical medicine, Clinical genetics and Sport medicine.

A patient can be admitted to the hospital with multiple conditions or diagnoses. The principal diagnosis is the condition that is primarily responsible for a patient's hospitalization. This condition can affect other components of the patient's hospital stay, including the length of stay, health care costs, and procedures performed [4].

Data from the Healthcare Cost and Utilization Project (HCUP) on the most common principal diagnosis in 2010 for all hospital stays in the United States show Changes in the overall number of stays and the rate of hospitalization in the population. There were 39 million hospital stays in the U.S.A (1,261) stays per (10,000) population. Two respiratory illnesses—pneumonia and chronic obstructive pulmonary disease (COPD), Two circulatory conditions—congestive heart failure (CHF) and cardiac dysrhythmias —were among the 10 most frequent principal diagnoses for all hospital stays in the United States [4]. Pneumonia was the second most common reason for hospitalization in (2.8 percent of all stays).

Mood disorders was the most common principal diagnosis among children ages 1–17. Osteoarthritis was the most common diagnosis among adults ages 45–64. Four of the most common conditions for uninsured hospital stay increased worldwide are: skin and subcutaneous tissue infections, mood disorders, non-specific chest pain, and alcohol-related disorders. Acute renal failure was the most rapidly growing condition during last years, with an increase in the rate of hospitalization [5].

Aim of Study

The main purpose of this study was to determine the frequency of the causes and outcomes among hospitalized patients with internal medicine disease.

Materials and Methods

This is a prospective study was performed on patients admitted to al_ amiriyah general Hospital, during the period between January1 to September 1, 2019. A total of (307) patient, (61.56%) males and (38.44%) females who were admitted to the hospital constituted the study group. Data were collected from follow up sheets of all patients, regarding age, sex, residence, risk factor and co-morbid disease, result of all investigations and final diagnosis. Also, personal information of the patients was kept onfidential.

For statistical analysis SPSS _20 (statistical package for social sciences- version 20) and the chi-square test was used to analysis the group's percentage in addition to statistical tables. Variables were described using frequencies and percentages. A p-value < 0.05 was considered to be significant and a p-value > 0.05 considered to be not significant.

Results

Of the 307 patients studied, 189 of them were males and 118 were females and the male to female ratio was found to be 1.60:1. *p* -value was not significant. In this study Obstructive pulmonary disease and pneumonia were noticed in a higher percentage. *P-value*>0.05 as shown in table.1.

Table 1: distribution of disease according to the gender.

Disease	Male	Female	Total No.	Frequency
Obstructive pulmonary disease	35	24	59	19.21%
Pneumonia	25	10	35	11.41%
Gastroenteritis	22	12	34	11.08%
Peptic ulcer disease	11	18	29	9.45%
cerebrovascular accidents	17	6	23	7.49%
Heart failure	16	5	21	6.84%
Chronic Bronchitis	11	8	19	6.19%
Diabetes mellitus	14	5	19	6.19%
Urinary tract infection	8	7	15	4.89%
Migraine	5	9	14	4.56%
Liver failure	9	3	12	3.92%
Chronic renal failure	9	2	11	3.58%
Hepatitis	7	3	10	3.27%
Deep Venus thrombosis	0	6	6	1.96%
Total No.	189	118	307	100 %

With respect to the admission rate of patients to hospital. The percentage was high especially during winter months. Patient with repeated admission consider as one case, as shown in table 2.

Table 2: distribution of cases according to the admission rate.

Month	No.	Percentage
January	57	18.56%
February	47	15.30%
March	43	14.00%
April	37	12.05%
May	30	9.77%
June	32	10.42%
July	16	5.21%
August	45	14.65%
Total No.	307	100%

Table 3: show the geographical distribution of hospitalized patients.

Geographical area	NO.	Percentage
Rural	194	63.20%
Urban	113	36.80%
Total	307	100%

Table 4. Shows that most cases in the current study were admitted in winter season, here high prevalence rate observed. Internal medicine admission rate according to hospital admission was (8.39%).

Table 4: frequency of Internal medicine admission according to hospital admission.

Month	Hospital	Medical floor	Percentage
January	469	57	12.15%
February	443	47	10.60%
March	472	43	9.11%
April	476	37	7.77%
May	462	30	6.49%
June	395	32	8.10%
July	508	16	3.15%
August	432	45	10.41%
Total	3657	307	8.39%

Discussion

There were very limited data on the causes of hospital admissions among adults in al_amiriyah. However, the current study provides evidence that respiratory illnesses account for a significant and increasing fraction of the causes of hospitalization among adults. This study is the first study done about the causes of hospitalization to the medical floor in al_ amiriyah general hospital. Al_ amiriyah is discrete in al- Anbar province in the west of Iraq. Total number of population was about (110,000) people's. The total number of beds in the hospital was 120. The number of medical floor was 20 beds. The results show that the majority of the hospitalized cases had respiratory illnesses. Average length of hospitalization was 2 days, between 1 and 6 days. In this study Obstructive pulmonary disease account for the majority of cases seen in (19.21%), 36 patients was asthma and 23 patients was COPD. This is compatible with other studies as in the USA [4].

For puemania (11.40%) mostly of them viral origin. it was (16.4%) which is higher than other studies; in USA (2.8%) [4], which are related to high cases of infectious diseases in our patients. Regarding gastroenteritis in this study was (34) patients.21 patients of them was acute diarrhea and 13 patients was bloody diarrhea.

The ulcer causes was (9.45%) most of them was duodenal 23

Form 35 patients (65.7%) which are higher than in USA (4), its duo to dietary habits and poor sanitation of both water and food. The current study showed no big difference between male and female regarding the incidence, as shown in table.1. There is a significant association between the sex of the patients and the risk factors especially in cerebrovascular accidents, chronic renal failure and Heart failure as shown in table.1. The case fatality rate was (1.62%) which is considered to be low compared to other studies in USA (7.8%) [4]. The study show the occurrence of internal medicine disease is rural population was more than in urban one; 194 patients from rural area (63.20%) compared to 113 patients from urban area (36.80%).This is disagreement with other studies. Probably due to structure of our population and life style of the area. Our patients have co-morbid diseases including cerbro vascular accident (7.49%), heart failure (6.84%) and Diabetes mellitus (6.19%) Which are run commonly in Iraq. The percentage of medical floor admission compared with the total hospital admission was (8.39%) as shown in table.4. which is come second to pediatric admission during the same period. Lastly our study show disagreement with other studies for example (in the United States), Infectious and parasitic diseases, including malaria, bacterial diseases, and HIV disease, were the leading cause of admission accounting for 19.8% of all admissions. Respiratory illnesses were second accounting for 16.2% of admissions while diseases of the circulatory system were third at 11.3%. The remaining leading causes of admission were in descending order: digestive system 13.9% genitourinary system 10.6% and circulatory system disorders 7.4%.

Conclusion

The incidence of internal medicine disease is high in our hospital. Occurrence of the internal disease in rural population more than in urban one. Case _fatality rate was low in our study. The Obstructive pulmonary disease was the leading causes of admission fallowed by pneumonia.

Recommendation

As the epidemiology of adult disease transitions from infectious to non-communicable diseases, health researchers and policy makers will need to establish reliable and consistent systems for diagnosing and recording disease in order to optimize treatments and preventive interventions. The methods suggested to slow progression of diseases and decrease hospitalization includes: water and food sanitation, control of diet, smoking cessation and avoidance of nephrotoxins. Although control of the D.M, HTN, hyperlipidemia and their complication have highly significant role in the health programs.

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