

PATTERN OF MEDICAL ADMISSIONS AT THE FEDERAL MEDICAL CENTRE, ASABA- A TWO YEAR REVIEW

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ABSTRACT

Objective: A two-year retrospective evaluation of the pattern of medical admissions at the Federal Medical Centre (FMC), Asaba, Delta State, Nigeria.

Methodology: Case notes of all admissions and deaths in the medical wards between November 2005 and October 2007 were retrieved and reviewed. The mean, standard deviation and percentages of relevant data were derived and presented in simple descriptive statistics.

Results: One thousand, eight hundred and sixty patients were admitted over the study period. One thousand and eight of these [1008; 54.2%], were male, while eight hundred and fifty two [850; 45.8%] were female, making a female/male ratio of 1:1.18. The patients ages ranged between fifteen and ninety years, with a mean of 51.56 ± 18.35 years. The age range of male patients ranged from 16 to 88 years, with a mean of 55.55 ± 17.99 years, while that of the female patients ranged from 15 to 90 years, with a mean of 57.14 ± 13.79 . The length of stay in the ward ranged from 1 to 97 days, with a mean of 10.32 ± 10.93 days. There were 23.25 patients per bed per year and a bed occupancy rate of 65.74%. There were 240 deaths [12.90% of total admissions]. The interval between admission and death ranged between 1 and 31 days, with a mean of 7.14 ± 6.7 days. One hundred and twenty four patients [124; 6.7%] were referred to other health facilities, while ninety six [96; 5.2%] left against medical advice. The commonest causes of admission in males was hypertension, diabetes mellitus and HIV, while in females, it was HIV, hypertension and diabetes mellitus. Commonest causes of death in males were hypertension, HIV and diabetes, while in female subjects, it was HIV, hypertension and diabetes.

Conclusion: Non-communicable diseases- [hypertension, diabetes mellitus] and HIV/AIDS were the major causes of admissions and death in both genders.

Key words: Pattern, Medical admissions, Asaba.

(Accepted 10 November 2008)

INTRODUCTION

Prevalence of diseases is of paramount importance in developing a health plan for any community. However, community based reports are not always feasible in the developing world, because of logistics and funding. Hospital based data are therefore more readily available and feasible. These data are very useful and when applied properly, can reflect the pattern of illnesses in the feeder communities of the hospital in question and serve as an early warning system facilitating health policy formulators in putting their priorities right. Reports of pattern and outcome of medical admissions from several Nigerian tertiary hospitals abound¹⁻⁵. However, this is the first from the Federal Medical Centre Asaba, a tertiary health facility serving all the communities in Delta State and neighbouring Anambra and Edo States. This hospital has two medical wards [male and female], each being a twenty-bed facility.

Admissions are mainly through the medical outpatients department and the accident and emergency unit. This study reviewed the medical admissions and deaths over a two-year period spanning from November 2005 to October 2007, seeking to determine the pattern of illnesses presenting to our tertiary health institution.

PATIENTS AND METHODS

The case notes of all admissions and deaths in the medical wards between November 2005 and October 2007 were retrieved and reviewed. Data were extracted from the case notes including definitive diagnosis, age, sex, duration of admission, referral, discharge against medical advice and other relevant variables, and analysed statistically. The mean, standard deviation and percentages of relevant were derived and presented in simple descriptive statistics.

RESULTS

Over the two-year period, a total of one thousand, eight hundred and sixty [1860] patients were admitted into the medical wards. Eight hundred and fifty two [852] were female, constituting 45.8%, while one thousand and eight [1008] were males, constituting 54.2%. Female/male ratio was 1:1.18. The general age range of the patients was between 15 years to 90 years with a mean of 51.56 years ± 18.35 . The age range for the male patients was 16 to 88 years, with a mean of 55.55 years ± 17.99 . The female age range was 15 to 90 years with a mean of 57.14 years ± 13.79 . The length of stay in the ward ranged between 1 to 97 days with a mean of 10.32 days ± 10.93 . There were 23.25 patients per bed per year and a bed occupancy rate of 65.74%. There were 240 deaths [12.9% of total patient population]. 128 deaths occurred in males [12.7% of male population], while 112 deaths occurred in females [13.1% of female population].

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Table 1: Causes of Admission and Death in Males.

| Diagnosis | Number N=1008 | % of Admission | Deaths | Mortality (%) |
|------------------------------------|------------------|-------------------|--------|------------------|
| Hypertension related ailments | 328 | 32.54 | 56 | 17.07 |
| Diabetes Mellitus related ailments | 136 | 13.49 | 5 | 3.67 |
| H.I.V/AIDS related | 120 | 11.90 | 48 | 40 |
| Sickle cell crisis | 52 | 5.16 | Nil | 0 |
| Renal diseases | 64 | 6.37 | Nil | 0 |
| Severe Malaria | 44 | 4.37 | Nil | 0 |
| Peptic ulcer disease | 36 | 3.57 | 3 | 8.33 |
| Gastroenteritis | 16 | 1.59 | Nil | 0 |
| Tuberculosis | 16 | 1.59 | 4 | 25 |
| Asthma | 16 | 1.59 | Nil | 0 |
| Hepatitis related ailments | 36 | 3.57 | 3 | 8.33 |
| Seizure disorder | 8 | 0.79 | Nil | 0 |
| Septicemia | 32 | 3.17 | 1 | 3.13 |
| Chronic lymphocytic leukemia | 4 | 0.4 | Nil | 0 |
| Others | 100 | 9.92 | 8 | 8 |

Figure 1: Age and Sex Distribution of Subjects.

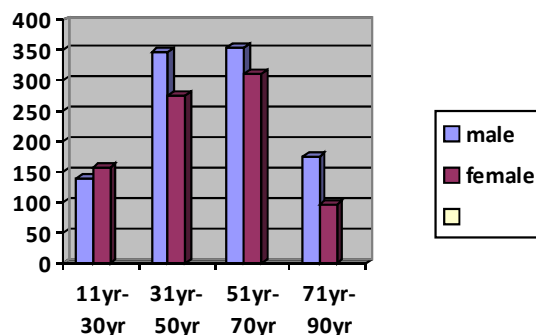


Table 2: Causes of Admission and Deaths in Females.

| Diagnosis | Number [n=852] | Percentage (%) of cases | Number of deaths | Mortality (%) |
|------------------------------------|-------------------|----------------------------|---------------------|------------------|
| H.I.V/AIDS related | 208 | 24.41 | 42 | 20.19 |
| Diabetes Mellitus related ailments | 108 | 12.68 | 8 | 7.4 |
| Severe Malaria | 88 | 10.33 | 1 | 1.14 |
| Hypertension related ailments | 184 | 21.60 | 24 | 13.04 |
| Peptic ulcer disease | 34 | 3.99 | 1 | 2.94 |
| Renal diseases | 32 | 3.76 | 4 | 12.5 |
| Asthma | 24 | 2.82 | 1 | 4.17 |
| Tuberculosis | 16 | 1.88 | 1 | 6.25 |
| Gastroenteritis | 14 | 1.64 | Nil | 0 |
| Septicemia | 36 | 4.23 | 3 | 8.33 |
| Hepatitis | 56 | 6.57 | 15 | 26.79 |
| Seizure disorder | 8 | 0.94 | Nil | 0 |
| Sickle cell crisis | 4 | 0.47 | Nil | 0 |
| Others | 40 | 4.69 | 12 | 30 |

The interval between admission and death ranged between 1 and 31 days with a mean of 7.14 days \pm 6.7. One hundred and twenty four patients [6.7% of total population] were referred to other health facilities for further management, while ninety six [5.2%] left against medical advice within the study period.

Figure 1 shows the age and sex distribution of subjects. Most male and female subjects were aged between 51 and 70 years, while the fewest number of subjects were aged between 11 and 30 years.

Table 1 shows the major causes of admission and death in male subjects. The commonest causes of admission were

hypertension (128 patients; 12.70%), diabetes mellitus (120 patients; 11.90%), HIV/AIDS (120 patients; 11.90%). These three constituted 53.96% of the total admissions in the male ward. The commonest causes of death were hypertension, HIV and diabetes.

Table 2 shows the major causes of admission and death in female subjects. The commonest causes of admission were HIV/AIDS (208; 24.41%), hypertension and Diabetes mellitus (108; 12.68%). These three in combination comprised 62.44% of total admission in the female ward during the period under review. The commonest causes of death were HIV, hypertension and diabetes.

DISCUSSION

It is assumed that cases admitted in the medical wards of tertiary hospitals reflect the pattern of diseases in the immediate community in which they are located, and the surrounding communities, which they subserve as a referral center.¹ The higher male: female admission ratio of this study is in agreement with most African studies conducted in other tertiary health institutions which have shown that men attend hospital more than women, and that most women attend when complications have set in.¹ The average length of stay of 10.32 days and 65.74% bed occupancy rate reported in this study is comparable to that reported from Ogun State University Teaching Hospital Sagamu, which had 65% bed occupancy, but less than that of the University College Hospital Ibadan which reported 88% bed occupancy.^{1,2} These reports show that while hospital services are generally in high demand in Nigeria, the efficiency of bed usage in our medical wards is low and suggests the need for improved admission policies that should reduce the length of stay in hospital and facilitate bed occupancy of about 75% for acceptable hospital performance.³ In the male subjects, the commonest causes of admission were hypertension, diabetes mellitus, HIV/AIDS, CVA and heart failure while in the females, it was HIV/AIDS, diabetes mellitus, CVA, malaria, liver cirrhosis and heart failure. Compared to the studies at Ogun State University Teaching Hospital¹, Adeoyo Specialist Hospital Ibadan⁴, and University College Hospital Ibadan⁵, infectious diseases especially tuberculosis, accounted for a much lower percentage of the admissions in this study.

However the higher prevalence of HIV/AIDS in our study compared to the others mentioned above cases is worth noting (19.90% males and 24.41% females). This is by far higher than that reported in the studies mentioned above and may be explained by the periods during which these studies were carried out. Apart from the report from Sagamu, the other studies were carried out before the 1980's when the HIV pandemic was not in existence. Even the Sagamu study was done significantly earlier, when awareness, attitude and index of suspicion for the infection varied significantly. Also, the attitude of the community in seeking treatment for "less troublesome" infection in chemists and only coming to the hospital with the more "serious" ones may be partly responsible for the lower prevalence of infectious diseases. The findings of this study regarding the much lower prevalence of infectious diseases compared to the non-communicable diseases may also be a reflection of the greater impact of disease control measures such as health education, immunization and better sanitation. The high HIV/AIDS prevalence may be a reflection of greater awareness and utilization of the free healthcare available for this group of patients in our hospital. Prevalence of tuberculosis in our study was 1.59% males and 1.88% females.

This is comparable to 1.7% reported at Adeoyo Specialist hospital, Ibadan⁴, but much lower than 26.0% reported from Ogun State University Teaching Hospital Sagamu¹. This may reflect the efficacy of our institutions programme of free tuberculosis drugs given on out patient basis, reducing morbidity and need for admission. The commonest non-communicable diseases necessitating

admission in our center within the study period were hypertension and diabetes mellitus in both males and females. This is in agreement with the report from Ogun State University Teaching Hospital, which had heart failure, CVA, chronic renal failure and diabetes mellitus as the commonest non-communicable causes of admission. The higher prevalence of these non-communicable diseases in our study compared to theirs may reflect a geographical difference.

With regards to mortality, 17.85% of our admissions died. This is comparable to 19.0% reported at University Teaching Hospital Ibadan³, but less than 25.0% reported from Sagamu.¹ HIV/AIDS was responsible for 37.75% deaths in both male and female subjects. This is reflective of the late presentation of these patients.

CONCLUSION

This study identified non-communicable diseases and HIV/AIDS as the major causes of admissions and deaths in our center. Efforts geared towards strengthening preventive and health educational strategies should be the priority of health policy formulators to curtail the increasing emergence of non-communicable diseases as major causes of morbidity and mortality in our environment.

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