

Disease patterns in the medical wards of a rural South African hospital

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Abstract

A retrospective record review was done to determine disease patterns of patients admitted in the medical wards of St. Rita's Hospital, in rural Northern Province of South Africa. Hypertension dominated the disease pattern followed by pulmonary tuberculosis, gastro-enteritis, pneumonia, diabetes, and asthma.

The findings of this study suggest that diseases prominent in the affluent urban population affect patients seen at this rural hospital. The focus of primary care physicians should be to manage chronic illnesses adequately at the clinic level in order to reduce hospital admissions due to these diseases. Improvement in the tuberculosis control programme, living conditions, provision of safe, clean water and proper sewage disposal will help to reduce the incidences of tuberculosis and diarrhoeal diseases in this rural population. Future studies are necessary to monitor the trend of disease patterns in this rural population.

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INTRODUCTION

Epidemiological information on disease profiles of the black population in Southern Africa is scanty. Between September 1968 and January 1970, Edginton et al reviewed the diagnoses of 485 female and 53 male patients admitted in the medical wards of Jane Furse Memorial Hospital in Sekhukhuleni.¹ The aim of their study was to document similarities and differences in disease patterns among blacks living in Sekhukhuleni (rural) and Johannesburg (urban). Pulmonary tuberculosis dominated the disease pattern, followed by rheumatic heart disease, cardiomyopathy, onychia, goitre and surprisingly diabetes mellitus. Severe obesity, hypertension, bronchial asthma, cholelithiasis, peptic ulceration, and porphyria cutanea tarda were rarely diagnosed. Falkner and Reeve conducted a similar study on 997 patients admitted in the medical wards of the same hospital between 1st

November 1982 and 31 October 1983. Their results revealed increasing incidences of asthma, hypertension and diabetes well-recognised in urban blacks, while tuberculosis remained a common problem and a cause for concern.² Our main objective was to describe the socio-demographic characteristics and diagnoses of patients admitted in the medical wards of St. Rita's Hospital, Northern province.

METHODS

St. Rita's Hospital is a 334-bed regional hospital in the Sekhukhuleni district of Northern Province. A total of 1486 patients were admitted in the medical wards of the hospital between 1st January and 31 December 1996. From this, a systematic sample of every second patient took place. This resulted in 743 patients comprising of 408 females and 335 males. Data collection and uni-variate analysis were done using the EPI-info software. The coding of the

diagnoses was done with the assistance of Prof. ME Edginton.

RESULTS

A total of 1486 patients were admitted during the study period (670 males and 816 females). The sample of 743 patients consisted of 335 males (45,1%) and 408 females (54,9%). The age range was between 12 and 93 years and geriatric patients (60-69 years) had the highest admissions (18,6%). The six most common diseases at discharge were hypertension - 143/743 (19%), pulmonary tuberculosis - 71/743 (10%), gastro-enteritis - 58/743 (8%), pneumonia - 43/743 (6%), diabetes - 39/743 (5%), and asthma 31/743 (4%) (Table I). Disease distribution did not show any significant association between diagnoses and patients' villages of origin.

DISCUSSION

Hypertension topped the list of the six most common diseases constituting

Table I: Frequency distribution of the six most common diseases.

Disease	Male	Female	Total
Hypertension	52	91	143 (19%)
Pulmonary tuberculosis	53	18	71 (10%)
Gastro-enteritis	18	40	58 (8%)
Pneumonia	22	21	43 (6%)
Diabetes	17	22	39 (5%)
Asthma	6	25	31 (4%)
Others	167	191	358 (48%)
Total	335	408	743 (100%)

19% (143/743) of the sample, and females (91/143) were more affected than males. All patients admitted for hypertensive episodes had diastolic blood pressures ≥ 120 mmHg or presented with congestive heart failure plus hypertension. The prevalence of hypertension in this study was 19% and shows a substantial increase in comparison with the studies of Edginton et al (7,6%) and Reeves et al (8,7%) respectively.^{1,2} Hypertension represents a major health problem for black population living in western countries.³ In South Africa, studies have demonstrated that there is a higher prevalence of hypertension in the urban black population when compared with their white counterparts living in the same area.^{4,5} Many factors including age, urbanisation, socio-economic status, acculturation have been attributed for this difference. In addition, blacks have an increased volemia, which is related to a genetically determined increase in sodium sensitivity, as well as an abnormal transport mechanism of sodium.^{3,4}

Very few patients were diagnosed with coronary heart diseases i.e. 2/143 (1,4%). This is consistent with a number of studies that have reported that blacks in sub-Saharan Africa have low lipid profiles, which play a protective role in the lower incidence of coronary heart disease.^{6,7} Pulmonary tuberculosis among male patients in the study 53/71(75%) was significant. The reasons for this include over crowding, high unemployment and poor socio-economic conditions. In addition, the tuberculosis control programme in this

area has been poor for many years. The latter is a national problem as only 57% of people who received anti-tuberculosis treatment in year 2000 were declared cured at the end of their treatment.⁸

Gastro-enteritis occurred in 8% (58/743) of all patients with dehydration levels $>10\%$. This is an important finding because admissions for gastro-enteritis in adults are generally uncommon. Only 20% of households in this area had running tap water in their homes, approximately 78% use pit latrine and 19% had no form of sanitation.⁹ It is quite obvious that poor access to clean, safe water and poor sanitation are partly responsible for the occurrence of gastro-enteritis in the adult population of this community. In addition, the increasing incidence of HIV/AIDS, in which diarrhoea is a well-known presentation and the utilisation of traditional healers who administer herbs to induce vomiting and diarrhoea should not be overlooked as other possible causes. Patients often report prior consultations with traditional healers before seeking hospital help. Diabetes was diagnosed in 5% of the sample with a sex distribution almost equal in males and females. The prevalence has remained similar to previous studies.^{1,2} This may be due to a low genetic predisposition coupled with traditional feeding practices, which favour a low prevalence of the diabetes.

LIMITATIONS OF THE STUDY

The study was not community based, hence the findings cannot be generalised

to the entire Sekhukhune district. But it provides useful information on the medical disease patterns of this rural area. In addition, infectious diseases such as typhoid fever and malaria were not included as these are kept in the isolation ward and were too few to make a difference in the overall picture.

CONCLUSION

The findings of this study suggest that diseases prominent in the affluent urban population to a considerable extent affect rural patients seen at this hospital. The focus of primary care clinicians should be to manage chronic illnesses adequately at the clinic level in order to reduce admissions due to these diseases. Improvement in the tuberculosis control programme, living conditions, provision of safe, clean water and proper sewage disposal will help to reduce the incidence of tuberculosis and diarrhoeal diseases amongst this rural population. Future studies are necessary to monitor trends of disease patterns in the rural population of South Africa. □

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