

PROFILE AND OUTCOME OF CARDIOVASCULAR ADMISSIONS AT THE UNIVERSITY OF UYO TEACHING HOSPITAL, UYO - A FIVE YEAR REVIEW

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ABSTRACT

Objective: The incidence of cardiovascular diseases (CVD) in developing countries has been on the increase in the last few decades. Demographic changes and adoption of negative life style associated with urbanization have been incriminated. This study is to ascertain the burden of cardiovascular disease in Uyo, a town which has been undergoing rapid urbanization in the last decade.

Subjects and Methods: A five-year retrospective analysis of cardiovascular admissions into the Medical Wards of the University of Uyo Teaching Hospital between September 1996 and September 2001 was carried out. Medical records of patients were used. The Epi Info 2002 software was used to analyse data.

Results: Five hundred and fifty eight (19.8%) of the 2875 medical admissions were patients with cardiovascular diseases. Their mean age was 52 ± 12.7 years and mean duration of hospital stay was 9 ± 7 days. Hypertension accounted for 311(55.7%) of the cases, of these 107 (34.4%) presented with cerebrovascular accident (CVA). 44.3% presented in Heart failure and causes included Hypertension(14.9%), Cardiomyopathies particularly the dilated type (15.1%), Rheumatic heart disease(6.6%) and Anaemia (7.7%). 69(12.4%) cardiovascular deaths were recorded, of these 34 (6.1%) were in patients with Cerebrovascular accident. Most deaths occurred within seven (7) days of admission. Duration of stay significantly influenced outcome ($p=0.000$)

Conclusion: Cardiovascular diseases constitute a significant health problem in our community. Intensive cardiovascular health education and promotion of healthy life style are advocated. Tertiary health care facilities should be equipped to cope with cardiovascular care in view of the looming epidemic of cardiovascular disease even in developing countries.

Key Words: Cardiovascular diseases, admissions, outcome, Uyo

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INTRODUCTION

There has been an increase in the incidence of non communicable diseases especially cardiovascular disease in developing countries in the past few decades^{1,2}. This has been linked to demographic changes, urbanization and life-style modifications. Hospital based diseases frequently often serve as important sources of health statistics for health providers and planners. Monitored over a period they may assist in assessing changes in disease pattern and mortality³. Though there has been previous reports of medical admissions in tertiary institutions in Nigeria^{3,4,5} few have focused on admissions occasioned by cardiovascular diseases.^{6,7} The University of Uyo Teaching Hospital is located in

Uyo capital of Akwa Ibom State. As a referral Centre it serves all the towns in the state as well as adjoining parts of Rivers, Cross River and Abia states. Being an oil rich state, many towns have witnessed changes in life-style of the inhabitants and demographic shifts associated with urbanization. Urbanization has been linked with increase incidence of cardiovascular disease^{2,8}

This study is therefore aimed at reviewing medical admission occasioned by cardiovascular disease with a view to determining their prevalence, burden on health facility as well as out come. Data thus generated would help in planning and further research.

SUBJECTS AND METHODS

Medical records of patients admitted as a result of cardiovascular diseases between September 1996 and September 2001 at the University of Uyo

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Teaching Hospital were analysed. The medical department has 40 beds, 22 for males and 18 for females. Data extracted from case records included personal data, diagnosis, length of stay in hospital and outcome. The definitive diagnoses were made after patients had been investigated and hematological, radiographic, echocardiographic (2-D and M-Mode) data obtained. Data were analysed in groups and percentages using Epi-Info 2002 software. Test of significance was done using Chi square test. The level of statistical significance was fixed at $p < 0.05$.

RESULTS

Demographics

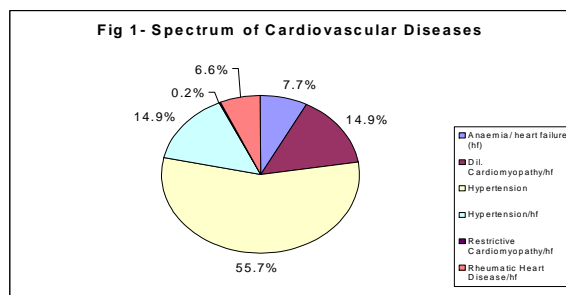
Over the five year period a total of 2,875 patients were admitted into the medical wards. Of these 558 were on account of cardiovascular diseases giving a frequency of 19.4%. There were 298 males and 260 female giving a male: female ratio of approximately 1:1. This difference observed in the frequency among the sexes was not statistically significant. ($p = 0.474$). The mean age of the patients was 52 ± 12.7 years. Most were aged forty years and above.

Table 1: Age And Distribution Of Patients With Cardiovascular Disease

Age	Males	Females	Total(%) N=558
<20	0	1	1(0.2)
20-29	7	11	18(3.2)
30-39	31	27	58(10.4)
40-49	74	66	140(25.1)
50-59	84	81	165(29.6)
Total	298	260	55(100)

Spectrum of Cardiovascular Diseases

This is shown in Fig 1. Majority 311 (55.7%) were admitted on account of Hypertension with 107 of these (34.4%) associated with cerebrovascular accident (CVA). The rest of the patients 44.3% were in congestive cardiac failure (CCF). Hypertension accounted for 14.9% of those admitted in CCF. Other diseases associated with CCF were Cardiomyopathies - 15.1%, Anaemia - 7.7% and Rheumatic heart disease - 6.6%.



Length of stay and outcome

The length of hospital stay ranged between 1 to 32 days with mean duration of 9 ± 7 days.

There were 69 deaths (12.4%) during this period and 55 (9.9%) discharged themselves against medical advice (LAMA). Majority 34 (6.1%) of the deaths were in patients with cerebrovascular accidents resulting from Hypertension. More of the deaths occurred within seven days of admission. The relationship between duration of stay and death occurring at this time was found to be statistically significant ($p = 0.000$).

Table 2: Outcome of Cardiovascular Admissions

Event	Number	(%)
Death	69	12.4
Discharge	431	77.2
Left Against Advice (LAMA)	55	9.9
	3	0.5
Total	558	100

DISCUSSION

This study has shown that cardiovascular diseases (CVD) are common in persons above 40 years as most of the patients admitted on account of cardiovascular disease were in this age group. This can be explained by the fact that longevity prolongs the time exposure to risk factors resulting in a great probability of CVD in the older age groups.² It is therefore important for persons in this age group to undergo routine check up to make for early detection and treatment of CVD.

Hypertension was the commonest CVD warranting admission into the medical wards. This finding may be a reflection of the burden of the disease in the community under study. The prevalence of Hypertension has been documented as 10-15% in urban areas in Nigeria.⁹ Uyo is a rapidly developing city and increasing urbanization while raising the standard of living and increasing life span has been shown to be accompanied by life style changes that predispose to hypertension and other cardiovascular disease.^{1,2}

Heart failure from different causes accounted for 44.3% of cardiovascular admissions and corroborates finding in other studies^{3,4} where heart failure was found to be a major cause of medical admissions. Majority were as a result of Hypertension while other causes were Cardiomyopathies, rheumatic heart disease and anaemia. The large number of patients admitted in heart failure may be a reflection of poor awareness of risk factors and early symptoms of cardiovascular disease. It may also be attributed to late presentation for treatment or lack of access to

early cardiovascular care. Hypertension has also been shown to be a major cause of heart failure in other studies in Africa.^{7, 10} Heart failure itself accounts for 3-7% of all hospital admissions in Africa.¹¹ and is fast becoming a global disease as the prevalence is increasing worldwide at an alarming rate¹². Our finding is therefore in keeping with the global situation.

Another complication of uncontrolled or poorly treated hypertension is cerebrovascular accident (CVA) which was the mode of presentation in 107 (34.4%) of the hypertensives. The fatality rate was 31.8% and contributed to 6.1% of all cardiovascular deaths in the study period. 15% of the CVA cases also left against medical advice (LAMA). The findings highlight the possible rise in the prevalence of CVA in the community and further reflects the poor state of hypertension control. The high fatality rate maybe a reflection of the severity of the ictus at presentation or the quality of medical care available to the patients. The high rate of self discharge is in keeping with local myth about CVA with the belief by large segment of the community that they result from spiritual attack thus better managed traditionally or spiritually. The average duration of stay was less than ten days with most patients staying for less than seven days. Those staying for two weeks and above were those with cerebrovascular accident (CVA). Most of the deaths occurred in the first seven days of admission and were mainly in those with hypertension complicated by CVA. Deaths from heart failure complicating other CVDs also occurred at this time and may be attributable to late presentation for treatment or late referrals. The issue of late referral as a contributing factor to mortality particularly in the first few days of admission had been highlighted in earlier studies.⁵

In conclusion, cardiovascular diseases constitute a significant health problem in our community as reflected in the findings from this study. Intensive health education is advocated and aimed at increasing awareness of the cardiovascular risk factors as well as promoting healthy life style. Early detection and treatment of CVD is also advocated.

Early referrals to tertiary health institutions are encouraged. These centres should also be equipped with both manpower and equipment to handle the impending epidemic of CVD consequent upon urbanization.

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