

Cardiovascular Morbidity and Mortality in the Cardiology Service of the University Hospital Point G

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Abstract: During the study period 1264 patients were enumerated divided into 736 women (58.2%) and 528 men (41, 8%) with a sex ratio of 0.72. The 56 to 65 age group was the modal class (24.2%). The provenance was urban in 68.5%. Almost 2/3 of our patients (66.5%) had low monthly incomes. Dyspnea was the major reason for consultation (22.2%). HTA was the most frequently described nosological group with a frequency of 52.5%. Overall mortality was 6.8 percent.

Keywords: morbidity, mortality cardiovascular, University hospital POINT G

1. Summary

Cardiovascular pathology is the set of diseases that affect the heart and vessels. Our work aimed to determine cardiovascular morbidity and mortality in the cardiology department of the G-UHC in Bamako. It would have a prospective and descriptive recruitment study from January 1, 2017 to December 31, 2017, including all admitted patients, hospitalized or not for cardiovascular pathology in the said department during this period. 1264 patients were identified divided into 736 women and 528 men with a sex ratio of 0.72. The 56 to 65 age group was the most represented at 24.2%. Almost 2/3 of our patients, 66.5%, had a low monthly income. HTA was the most frequently reported nosological group with a frequency of 52.5%. Hospital mortality was 6.8%. Vascular diseases were the most lethal pathologies 24.4% lethality. Since cardiovascular disease is a public health problem, hypertension remains the most common in our context

2. Introduction

According to the World Health Organization, cardiovascular disease is the leading cause of death in the world. There are an estimated 17.5 million deaths from cardiovascular diseases, representing 31% of global mortality, and more than 82% of these cardiovascular deaths occur in low- and middle-income countries (1). In Africa according to Bertrand (2), cardiovascular diseases constitute 15% of adult hospitalizations and are responsible for 10 to 20% of hospital deaths. WHO estimates that by 2020 the cardiovascular morbidity that African countries will face will have doubled. Based on these findings, a hospital study was needed to better define the contours of cardiovascular morbidity and mortality in the cardiology department of the Point G. CHU.

3. Material and methods

This was a prospective and analytical study conducted in the cardiology department of the CHU Point "G" from 1 January 2017 to 31 December 2017 and concerned all patients hospitalized or followed during the period study.

Inclusion criteria were any patient of both sexes and any age admitted to the service for cardiovascular disease. Patients registered for non-cardiovascular pathology were included in the study.

For data collection, patients were recruited from the follow-up file. The parameters studied in this file were sociodemographic, clinical, paraclinical and evolution of the disease.

Word and Excel 2013 software was used for data entry and SPSS 16.0 and Epi Info 3.3.2 software for their analysis. The static test used was chi2 with a significance level of 5%.

4. Results

4.1 Epidemiological and Sociodemographic Data

During the study period 1264 patients were counted divided into 736 women and 528 men with a sex ratio of 0.72 in favor of women (Table I). The 56 to 65 age group was the most represented at 24.2%. Provenance was urban in 68.5% of cases. Almost 2/3 of our patients (66.5%) had a low monthly income below the SMIG of MALI (of 40000fcfa 1euro = 655.55fcfa). Cardiovascular risk factors were dominated by hypertension and sedentary lifestyle with 60.1% and 33.3%, respectively.

4.2 Clinical data

Dyspnea was the major reason for consultation (22.2%). The heart was most often regular (89.2%) and normal heart rate (54%). Almost 3/4 of the workforce (74.8%) had elevated blood pressure on admission.

4.3 Paraclinical data

On the resting electrocardiogram the dominant abnormalities were, excitability disorders (tachycardias, supra ventricular and ventricular extrasystoles, atrial fibrillation), left ventricular hypertrophy and conduction disorders (branch block, BAV) with respectively 37.8%, 30.2% and 10.3% frequency. 888 patients had performed echocardiography, dilatation Cavitory was described in 42.89% of patients;

parietal hypertrophy was noted in 0.07%. Systolic function of the left ventricle was impaired in 33.45% and pericarditis in 0.07%. Renal failure and hyperglycemia were the major laboratory abnormalities found with 22.2% and 13.5% frequency, respectively HTA and hypertensive heart disease, primary cardiomyopathy and vascular diseases (aortic dissection, aneurysm, deep vein thrombosis and pulmonary embolism, arteritis of the lower limbs) were the pre-eminent % 21.2% and 19.3% frequency. Coronary artery disease ranked fourth, rhythm and conduction disorders ranked fifth, and valvulopathies ranked sixth among nosological groups. Their distribution by sex showed a predominance in men of primary cardiomyopathy (26.3%), coronary artery disease (17%) and CPC (2.7%) as opposed to hypertension (57.9%) and cardiothyreosis (1.4%) more often seen in women. In the 0-25 age group, valvulopathies (46.1%) and peripartum cardiomyopathy predominated. There was early onset of hypertension with increasing recruitment with age; the distribution of primary cardiomyopathy and vascular diseases in all age groups and finally the absence of congenital heart disease.

The average hospital stay for hospitalized patients was 10 days with extremes at 3 days and 28 days and a favorable evolution was observed in 93.20%. Hospital mortality was 6.8%; male lethality (65%) was higher than that of women (35%). Extreme ages were the most affected with 16.9% for the age group 0 to 25 years and 33.3% from 85 years. More than half of the deceased had a low socio-economic standard of living. The most deadly conditions were vasculopathies, primary cardiomyopathy and coronary artery disease with 24.4%; 17.4% and 15.1% frequency (Table 4). Finally the mortality rate of hypertension was 11.6%.

5. Discussion

Our population was 58.2% women and 41.8% men. These figures are comparable to those of Koate (3) in Dakar (58% women vs. 42% men). In contrast to our study, Touré A (4) and Touré M (5) had regained a male predominance with 54% of men and 54.5% of men respectively. The same observation was made by Serme in Ouagadougou (6) and Diallo in Bamako (7). Diouf in Dakar (8) and Agboton in Cotonou (9) found no statistical difference between the two sexes.

The modal class was 46 to 65 years old (42.5%) with extreme ages of 14 and 94 years old while it was 60 to 74 years old in Touré A (4) with 28.4% and 60 to 89 years old. years at Coulibaly S (10) in Mali with 45.5%.

Patients in more than 2/3 of the cases (68.5%) resided in Bamako in agreement with Touré A (4) (64.1%). This could be explained by the proximity of the hospital.

Patients with a low socio-economic standard of living were the most frequent (66.5%) in agreement with the rest of the literature (4; 5; 10).

HTA was the most common cardiovascular risk factor (60.1%). This rate was slightly lower than that of Touré M (5) (72.6%) and Touré A (4) (70.3%). Physical inactivity

(33.3%), menopause (23.0%) and smoking (16.5%) were the other leading cardiovascular risk factors.

The HTA and its complications in the series were by far the preeminent nosological group (52.5%) with a risk that increased with age up to 65 years, according to the classical observation in the literature (4, 11). However, its current frequency is much higher than that observed by Touré M (5) in Mali (25.07%), reflecting the progression of this pathology.

Primary cardiomyopathy (21.2%) was the second most represented nosological group. This rate was comparable to that of Touré M (5) (18.71%) but higher than those of Touré A (4) in 2005, Bertrand Ed (12) and Bouramou C (13) with respectively 7.9%; 5.3% and 10.1%. This difference could be explained by the insufficiency of the technical platform and the delay in the management making the etiological diagnosis difficult.

Vascular disease ranked third with 19.3% and coronary artery disease ranked fourth with 10.7%. These rates were much higher than those reported in 2005 in the annals of cardiology and angiology (14).

The disorders of rhythm and conduction ranked fifth among the nosological groups with 5.5%. This rate was higher than those reported by all the other authors cited above, testifying to the progression of this pathology.

Valvulopathies accounted for 5.10% of the nosological groups. This rate is low compared to the rates reported by Touré A (4) (7%) and Touré M (5) (11.88%). This difference could be explained by the fact that most patients diagnosed with valvulopathies in childhood were referred to the Luxembourg Children's Hospital and the Gabriel Touré University Hospital or practice cardio-pediatricians. We had not found a case of congenital heart disease, unlike Touré A (4) who reported 0.3% of cases.

Our study showed an in-hospital mortality rate of 6.8% with a higher rate in the extreme age groups (16.9% in the 0-25 age group and 33.3% in the older age group). at 85). This mortality rate is much lower than those reported by the rest of the literature (4, 5,15), showing progress in the management of its pathologies in this service.

Men were more affected than women (65% vs. 35%) in agreement with Mahnane A et al (15) who had found a mortality of 55% for men and 45% for women.

The low socio-economic standard of living was associated with higher mortality (57.0%).

Vascular diseases (24.4%), primary cardiomyopathies (17.4%) and coronary artery disease (15.1%) were the most deadly nosological groups, reflecting their recruitment at advanced stages of myocardial damage. absence of cardiac surgery unit and interventional cardiology in Bamako.

The mortality rate of pericarditis was 4.7%. Its classically fearsome prognosis (7) was related to the retroviral etiology of this pathology with its opportunistic complications. It is

more and more rapidly sent to the infectious diseases department for appropriate and early treatment.

Finally, the mortality rate of hypertension was 11.6%. This rate was lower than those reported by Mahnane A et al (15) (15%) and Diallo in Bamako (7) (12.5%).

6. Conclusion

Cardiovascular diseases, today, constitute a major public health problem in Mali, because of their frequency, severity, the high cost of their care and the high number of infant-juvenile populations and affected young adults. Our results thus corroborate the observations of WHO and the World Bank that the evolution of cardiovascular pathology is of increasing concern. Our low mortality rate (6.8%) reflects the improvement in the management of cardiovascular disease in the service with the advent of a cardiovascular intensive care facility, but much remains to be done given the increasing number patients but also complications that result.

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Table 1: Distribution of patients by sex and age

Sexe /Age	0-25	26-45	46-65	66-85	SUP 85	Effectifs	%
Masculin	18	93	231	177	09	528	41.80
Féminin	70	232	306	115	06	736	58.20
Effectifs	88	332	537	292	15		
Pourcentage	07	26 .3	42.5	23 .1	01.1		

Table II: Distribution of patients according to the result of cardiac Doppler ultrasound N = 888

Anomalie à l'écho-cœur	effectif	pourcentage
Dilatation cavitaires		
Cavités gauches	221	24,88
Cavités droites	160	18,01
Total	2381	42 ,89
Hypertrophie des parois	64	0,07
Lésions valvulaires		
Fonctionnelles	136	15,32
Organiques	67	07,55
Total	203	22,87
Fonction systolique du VG		
Altérée	29	33,45

Conservée	591	66,55
Trouble de la cinétique segmentaire	140	15,76
HTAP	92	10,36
Thrombus intra cavitaire	10	0,01
Epanchement Péricardique	57	0,07

Table III: Distribution of patients by sex and nosological groups

Groupes Nosologiques	Sexe masculin		Sexe Féminin		TOTAL	
	Effectif	%	Effectif	%	Effectif	%
HTA et cardiopathie hypertensive	237	44,90	426	57,90	663	52,50
Cardiomyopathie dilatée primitive	139	26,30	129	17,50	268	21,20
Maladies vasculaires	108	20,50	135	18,40	243	19,30
Coronaropathies	90	17	45	06,10	135	10,70
Cardiomyopathie du péri partum	00	00	57	07,74	57	07,74
Troubles du rythme et de conduction	30	05,70	39	05,3	69	05,50
valvulopathies	22	04,20	45	06,10	67	05,30
Cœur pulmonaire chronique	14	02,70	09	01,20	23	01,80
Péricardites	07	01,30	10	01,40	17	01,30
cardiothyréoses	05	00,90	10	01,40	15	01,20
endocardite	00	00	02	00,20	02	00,20

Table IV: Distribution of patients by mortality and nosological groups (N = 86)

Groupes nosologiques Mortalité	Effectif	pourcentage
Maladies vasculaires	21	24,40
Cardiomyopathie primitive	15	17,40
Coronaropathies	13	15,10
HTA et cardiopathie hypertensive	10	11,60
Valvulopathies	9	10,50
TDR et de conduction	6	7,00
Cardiomyopathie du péri-partum	4	4,70
Péricardite	4	4,70
CPC	4	4,70