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Epidemiological, Clinical and Etiological Aspects of Heart Failure at Kati Chu

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ABSTRACT

Introduction: Heart failure is a major public health problem, it is a frequent and serious pathology. The aim of our study was to analyze the epidemiological, clinical and etiological aspects of heart failure in the Cardiology Department of Kati University Hospital. **Methods**: We carried out a descriptive cross-sectional study covering the period from January 2018 to April 2018. All cases of diagnosed heart failure, outpatient or hospitalized were included. **Results**: A total of 93 cases were included, the male sex predominated with 52 patients, a sex ratio of 1.26. The age group (60-74) was the most represented 30.1% of the cases. Housewives were in the majority with 25.8%, followed by the elderly 16.1%. The most frequent clinical signs were dyspnea (75.3%), cough (60.2%), Edema of the lower limbs (52.7%). cardiac ultrasound and Electrocardiogram were performed in 81% of the cases. Ischemic heart disease and valvular heart disease were the main etiologies found 28%. **Conclusion**: Heart failure is a frequent and serious condition in our environment. Preventive measures must be implemented through continuous training of health personnel for the detection and early management of heart failure.

Keywords: Heart failure, Cardiology, Public health, Epidemiological, Dyspnea, Cough

INTRODUCTION

Heart failure is a frequent pathology whose prevalence in Europe is estimated between 2-3% by the European Cardiology Society with intra-hospital lethality at 8.3% in 2009 by the French observatory of heart failure [1, 2]. For people age over 65, this prevalence is 7 times higher [2]. Its incidence is constantly increasing in developing countries, in proportion to the improvement of the socio-economic conditions of the populations [3,4]. It affects an elderly population, often carrying comorbidities, as well as children and women of reproductive age due to the prevalence of AAR. The natural history of patients with heart failure is marked by numerous hospitalizations secondary to cardiac decompensations. this is why the monitoring of the management of patients with chronic heart failure must be regular, putting the cardiologist at the center of the care system to detect possible decompensation. The management of heart failure and its numerous decompensations associated with the presence of co-morbidity represents an ever increasing financial burden in developing countries. In Africa, the

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heart failure admission rate is between 3 and 7% and concerns hospital series [5, 6, 7]. With an estimated mortality of 20% [7] Mali is a country with a basic infrastructure with very few medical specialists, most of whom are concentrated in urban centers. It is a poor country with limited resources the diagnosis of these conditions is delayed, treatment is difficult. In Mali, in the Cardiology Department of the Point G Hospital in 2002, the IC represented 41.3% of all hospitalizations and mainly concerns the elderly [5]. Better knowledge of the epidemio-clinical and progressive aspects of the disease will help prevent and / or improve case management. The aim of this work is to describe the epidemiological, clinical and etiological aspects of cases of heart failure at Kati University Hospital.

MATERIALS AND METHODS

It is a descriptive cross-sectional study that was carried out from January 2018 to April 2018 at the University Hospital of Kati. The study took place over a four-month period, all cases of diagnosed heart failure, outpatient follow-up or hospitalization were included. Patients with cardiovascular conditions other than heart failure were not included. A questionnaire was sent to each case. The variables studied were: From the patient files meeting the inclusion and interview criteria, the following data were collected on a questionnaire: socio-demographic (age, sex, profession), clinical (signs decompensation), additional examinations (biological, radiological, electrocardiographic, echocardiographic).

Data analysis

The data has been coded in digital form to enable it to be used on a microcomputer. The following software was used for data processing and report entry: Microsoft Access 2007, SPESS version 12, Microsoft Word 2007. Pearson's chi-square test was used for the comparison of qualitative variables and the Yates test if applicable. For the numbers below 5, we used the Fisher test. The differences observed will be considered significant for $p < 0.05$ for a 95% confidence interval.

RESULTS

A total of 93 cases were included, 52 men and 41 women, for a sex ratio of 1.26.

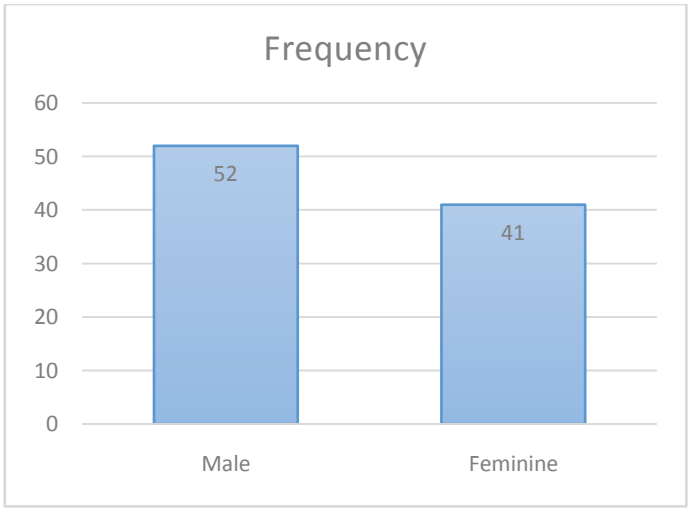

Figure 1: Distribution by sex

Source: Medical record

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The age group (60 –74) was the most represented 30.1% of the cases (Table 1).

Table 1: Distribution by age

Age	Frequency	%
<15	7	7.5
15-29	13	14
30-44	18	19.4
45-59	19	**20.4**
60-74	28	**30.1**
≥75	8	8.6
Total	**93**	**100**

Source: Medical file

Housewives accounted for 25.8%, followed by seniors 16.1% (Figure 2).

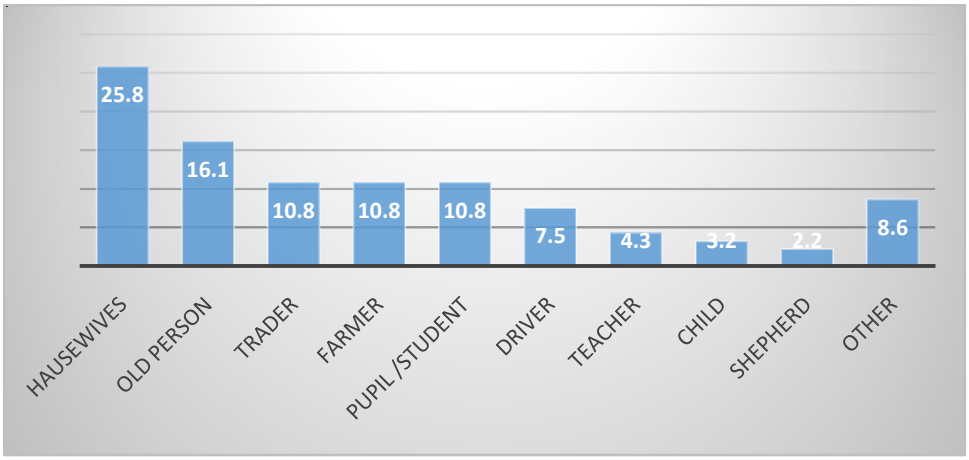

Figure 2: **Distribution by profession**

Source: Medical record

Dyspnea was the most Common sign (75.3%), followed by cough (60.2%) and IMO in more than half of the patients (52.7%) (Table 2).

Table 2: **Distribution according to functional signs**

Functional signs	Frequency	%
Dyspnea	70	**75.3**
Cough	56	**60.2**
IMO	49	**52.7**

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Chest pain	18	19.4
Asthenia	15	16.1
Sputum	13	14.0
Palpitations	10	10.8
Hepatitis	9	9.7

Source: Medical record

Cardiac ultrasound and Electrocardiogram were performed in 81% of patients (Table 3).

Table 3: Number of additional examinations carried out

Complementary examinations carried out	Frequency	%
Chest X- Ray	12	13
ECG	75	**81**
Cardiac ultrasound	75	**81**
Biology	60	64.5

Source: Medical file

Ischemic heart disease and valvulopathy were the most common etiologies, 28% for each, followed by hypertensive heart disease with 17.2% (Figure 3).

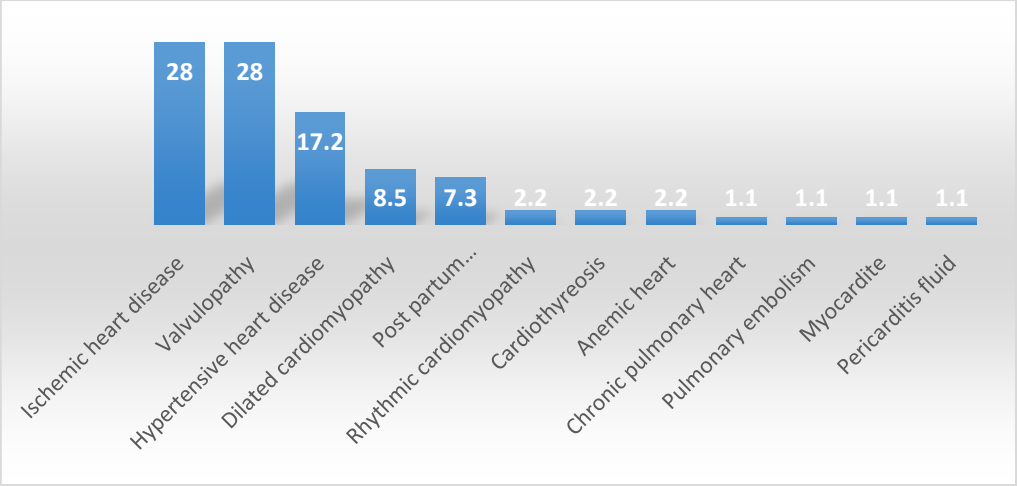

Figure 3: Distribution by etiology

Source: Medical record

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DISCUSSION

A total of 93 patients were collected, 41 women and 52 men (Figure 1), giving a sex ration of 1.26. These results are identical to those of Acar J [7] and Freidberg S [8] who found a sex ratio of 1.44 and 1.03 respectively. Unlike Diallo B [3] who founda sex ratio of 1.4 and “Edutainment” in South Africa [9] found a sex ratio of 1.28 in favor of women. The results, like previous studies, confirm that CI affects an elderly population. The 60 to 74 age group is the most represented (Table 1). The average age of the sample is 49.6 years with extremes of 4 and 86 years. our results are similar to those of Benyass A [10] and lower than those of several African studies in which the average age is between 50 and 60 years [11,12]. Only “Edutainment” in South Africa [9] found a higher average age of 65.7 years andCha Y-M [13]; an average age of 70.4 years. If in the first case they are ICFEP patients, theCha Y-M study concerned CI in people aged 60 and over. the average age is generally lower than the average age in France which is estimated at 79 years [12] these age differences with Europe could be explained by the progress made in these countries, in particular in improving the management of patients with IC and the multidisciplinary care network set up with a large sharegiven to therapeutic education. Housewives and the elderly were the most affected (Figure 2), generally those who were the most vulnerable and exposed to cardiovascular risk factors, which explains their predominance in the study. Dyspnea represented the most found sign (table 2), that is 75.3%, our result agrees with a lot of studies, of which dyspnea remains the main symptom [14, 15, 10], it returns to 3rd position in the study of Ojji D [12] after thecough and chest pain. Very often patients complain of pain if they experience chest tightness during OAP. Cardiac ultrasound and ECG(Electrocardiogram) were performed in the majority of patients (Table 3), or 81% of the cases. these figures are lower than the result of the study carried out by Jamal Kheyi et al in Morocco [16], from which the cardiac ultrasound and the electrocardiogram were carried out in all patients, because they constitute key examinations for taking inburden of heart failure, either when diagnosed or during follow-up. Ischemic heart disease and valvular heart disease were the most frequent etiologies with 28% for each of them (Figure 3), this result is similar to the study carried out by Benyass in Morocco [10]. On the other hand, Cha Y-M [13] and Diallo B in Mali [3] found the predominance of hypertensive heart disease with 34.5% and 46.7% respectively. The increase in ischemic heart disease in our environment can be explained by the change in lifestyle and lifestyle with urbanization. Valvular pathologies occupied second place, despite the progress made in the management of rheumatism, it continues to affect our population, in the absence of possibilities for cardiac surgery or interventional cardiologythese pathologies most often progress to heart failure.

CONCLUSION

Heart failure is a major public health problem. Dyspnea, cough and IMO were the most common symptoms. Ischemic heart disease was the main etiology found. Heart failure is a common condition in our community. Preventive measures must be implemented through continuous training of health personnel for the detection and early management of heart failure.

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