

Clinical Profile of Heart Failure at the Reference Health Center of Municipal I of Bamako District

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Abstract

The aim of the study is to establish the relative frequency of heart failure in patients in consultation in the cardiology unit at the Reference Health Center of La Commune I in the District of Bamako and see the place they occupy in this pathology. It is a retrospective study from January 1, 2019 to September 31, 2019. The study concerned all patients with insufficiency during the period concerned according to the clinical arguments before the electrocardiographic, the frontal chest radiography, the cardiac doppler ultrasound and biology. We selected 337 patients, i.e. 17.6% of the patients consulted during this period: 217 women (64.4%) and 120 men (35.6%) with an age range between 50 - 60 years.

The main medical history and cardiovascular risk factor was hypertension with 62.6%. The most frequent functional sign was dyspnea with 90.5%. Cardiac auscultation was dominated by tachycardia 95.2% and MI murmur 50.1%.

Cardiomegaly was the most common abnormality on the AP chest X-ray at 98.5%.

On the electrical side, we recorded 33% of heart rhythm disturbances; HVG 64.7%; 60.2% repolarization anomaly; the HAG 50.1% and the Q wave of necrosis 45.4%. In LV systolic function was impaired in 70.0% of our patients. Hypertensive cardiomyopathy was the most common diagnosis with 47.7%.

Keywords: Heart failure; Clinical profile; Reference Health Center of Commune I of the District of Bamako

Introduction

Heart failure is the inability of the heart (right and / or left) to provide adequate blood flow to meet the body's metabolic needs. It is a complex and very frequently observed syndrome, which is the result of many advanced heart diseases^[1]. Heart failure is the only cardiovascular disease whose incidence and prevalence are increasing due to the aging of the population but also to better management of heart disease^[2]. According to the European Society of Cardiology [ESC], at least 15 million patients with heart failure in Europe, out of a population of 900 million in 51 countries^[3]. In the United States, there are approximately 5 million people suffering from heart failure, and more than 550,000 new cases are diagnosed every year^[4]. In English-speaking Africa, it represents 3 to 7% of admissions according to data from hospitalization statistics^[5]. A study carried out in 2006 in French-speaking Africa reported a proportion of 27.5% of emergency hospitalized patients^[6]. Despite recent therapeutic advances, heart failure remains a serious illness with heavy mortality^[7]. In Mali; national statistics on heart failure are mainly hospital, in particular 41.3% of all heart attacks observed according to DIALLO et al^[8] and a prevalence of heart failure with arrhythmia at 22.29% N ' GUISSAN N^[9]. We are conducting this study, with the aim of establishing the relative frequency of heart failure in a non-hospital setting.

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Objectives

The objective of this work is to assess heart failure in patients in consultation in the cardiology unit at the Reference Health Center of La Commune I of the District of Bamako and of:

- 1) Determine the frequency,
- 2) Describe the clinical, electrical, ultrasound aspects of heart failure in these patients,
- 3) And describe the therapeutic aspects

Methodology

Work environment: The study took place at the Reference Health Center of Commune I of the District of Bamako within the Cardiology Unit.

Type of study: Retrospective based on patient records in consultation.

Study period: The study took place over a period from January 1, 2018 to December 31, 2019, i.e. 24 months.

Inclusion criteria: Was included in our study, any patient who was seen in consultation during the study period for clinically heart failure.

Non-inclusion criteria: Was not included in our study, any patient hospitalized or not seen in consultation during the study period.

Method of data collection and storage: The data was collected on a survey sheet, analyzed with SPSS 17.0 software and entered in Word 2007.

Ethics: Since the study was retrospective. We have not encountered any particular ethical problem; however, we were keen to preserve the anonymity and confidentiality of patients.

Results

From January 1, 2018 to December 31, 2019, in the cardiology unit of the Reference Health Center of Commune I of Bamako, we collected 337 patients with HF out of 1,913 consulted, i.e. a prevalence of 17,6%. The female sex was the most represented in 64,4% (217) of cases, either a ratio= 1.8. The most affected age group was 50 to 60 years, or 61,4% (208) of cases. Frequent medical histories were: hypertension 62,6% (211); heart failure 14,5% (49); diabetes 10,7% (36) and asthma 2,1% (7). HTA; Smoking; Diabetes and hypercholesterolemia were the main risk factors with respectively: hypertension 62,6% (211); 21,1% (71); 5,6% (19) and 3,6% (12). The major functional signs were: dyspnea 90,5% (305); cough 67,9% (229); palpitations 34,7% (117); chest pain 27,0% (91); exertional hepatalgia 13,9% (47) and vertigo 6,5% (22). Cardiac auscultation found in patients: tachycardia 95, 2 (321); systolic murmur of MI 50,1% (169); gallop 25,2 (85) and diastolic murmur of IAo 12,5% (42). The other clinical signs were: crackling groans in the lung fields 81,1% (274); IMO 60,0% (201); TVJ 53,1% (179); hepatomegaly 46,6. The majority of patients had radiological cardiomegaly, i.e. 98,5%. Of the 337 patients with heart failure; the ECG had

objectified 111 tracings in supraventricular arrhythmia or 33% of cases distributed as follows: atrial fibrillation 90 patients out of 111 tracings or 81,1%; atrial tachycardia 16 (14,4%) patients, and atrial flutter 5 (4,5%) patients. Other frequent electrical abnormalities were: HVG 64,7% (218); Repolarization disorders 60,2%; HAG 50,1% (168); Q of necrosis 45,4% (153) and conduction disorders (BBG, BBD, HAG, etc.) 25,0% (84). Cardiac Doppler ultrasound: OG dilation was observed in all patients, i.e. 100%; LV systolic function was impaired in 70,0% (235); LV dilation accounted for 91,1% (307); valve disease (IM, IAo and IT) 32,3 (109); wall hypertrophy 49,1% (165); segmental kinetic disorders (hypokinesia, akinesia and dyskinesia) 46,9% (158) and dilation of the right cavities 3,3% (11). Laboratory abnormalities observed were: elevation of NT pro BNP 85,2% (287); an increase in troponin 42,4% (143); anemia 16,9% (57); hyperglycemia 8,3% (28); hypercreatininaemia with creatinine clearance (MDRD) below 60 ml / min 5,6% (19); the increase in TSHus 2,7% (9). The diagnosis retained was: Hypertensive cardiomyopathy 47,7% (160); Primary dilated cardiomyopathy 21,0% (71); Ischemic cardiomyopathy 15,4% (52); Valvulopathy 6,8% (23); Hypertrophic cardiomyopathy 3,8% (13); congenital heart disease 2,0% (7) and other pathologies (renal failure, diabetic cardiomyopathy, dysthyroidism, chronic cor pulmonale) 3,3% (11). The drugs used frequently were: diuretics in all patients 100%; 56,7% Converting Enzyme inhibitors (191); beta blockers 54,3% (183); antiplatelet 30,6% (103); anticoagulants 27,6% (93); digitalis 6,2% (21); calcium channel blockers 4,2% (14). The outcome after one week of treatment was favorable (regression or disappearance of functional and clinical signs) in the majority of patients, ie 63,2% (213).

Comment and Discussion

This was a retrospective study from January 1, 2018 to December 31, 2019. During this period, out of 1913 patients consulted 337 were carriers of heart failure. Our main objective is to establish the relative frequency of heart failure in patients in consultation see the place they occupy in this pathology in the cardiology unit at the Reference Health Center of Commune I of the District of Bamako the sample was distributed as follows: females 64,4% of cases versus 35,6% males. The sex ratio is 1.8. N'GUISSAN^[10] found a mean age of 72.5 ± 6.9 years with extremes of 60 and 96 years. This female predominance was found by Ikama^[11] in 56,1% of cases, ie a sex ratio = 0.78. The mean age was 50 ± 4.7 years with extremes of 17 and 85 years. Dyspnea was the main symptom of functional signs with 90,5%; KHEYI^[12] observed 75,1% of dyspnea on exertion. We can't really explain this difference. We can suggest that they are favored by a certain degree of patient subjectivity.

We recorded 78,4% of tachycardia similar to the Moroccan study where it was found in 65% of patients^[13]. The crackling rales dominated the other clinical signs with 81,1% which identical to those of Di Bernardo^[14] 85,0% of cases. This could be explained by the frequent association of lung disease with heart disease.

The major electrical anomalies were LVH 64,7%; 60,2% T wave abnormality; HAG 50,1% and Q wave necrosis 45,4% and supraventricular arrhythmia 33,0%; these results are similar to the work of BENYASS A. et al^[15]. Advanced heart

failure leads to sometimes formidable electrical abnormalities and we also believed that these abnormalities in one context may explain its etiology. Cardiomegaly was noted in 98.5% of patients. N'GUISSAN^[10] and Ould Abderrahmane^[16] found 99.2% and 81.0% respectively for cardiomegaly. This high frequency of cardiomegaly on x-ray could be explained by the fact that cardiomegaly is the first complication of cardiomyopathies. Cardiac Doppler ultrasound revealed an alteration of LV systolic function in 70.0% of patients and LV dilation in 91.1% of cases. Impaired LV systolic function and LV dilation were observed in 27.86% and 63.93% of Ould Abderrahmane patients^[16]. This increased impairment of systolic function could be explained by the delay in the care of patients; the underlying heart disease and especially the high frequency of heart rhythm disturbances. The most common biological abnormality was elevation of NT pro BNP 85.2%; troponins were second at 42.7% followed by anemia 16.9%. The main diagnosis retained was cardiomyopathy hypertensive with 47.7% of cases and 33.5% in the Hawa J.B COULIBALY study^[17]. These results are in agreement with the literature, because if in the past, Valvulopathies dominated, they are currently declining because of the progressive disappearance of rheumatic mitral valve disease^[18]. The therapeutic classes used remained conventional, with 100% diuretics followed by 56.7% converting enzyme inhibitors and 54.3% beta blockers. The high cost of cardiac surgery and the crippling for many patients meant that no patient received surgical treatment despite some indications including valve disease and congenital heart disease. We note a favorable outcome in 63.2% of patients at one week of treatment.

Conclusion

Heart failure occupies a prominent place in our study. They strike both sexes and are seen at all ages. The most common etiology was hypertension. It is responsible for significant hemodynamic impotence and the cost of its management remains high. It constitutes a radical obstacle for the patient and for the community; due to the lack of modern therapeutic means and the difficulties inherent in treatment. Particular emphasis should be placed on the prevention and early detection of hypertension and other risk factors for heart failure.

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