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Research Article

Morbidity and Mortality Linked to Heart Failure to the Cardiology Department of the Ignace Deen Hospital in Conakry

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Abstract

Introduction: Heart failure (HF) is a chronic, complex and serious condition which symptoms are likely to significantly affect the quality of life of the affected patients with a high lethality. The objective of this study was to determine the aspects linked to the morbidity and mortality of this condition in the cardiology department of the Ignace Deen hospital in Conakry.

Patients and methods: This was a 2-year retrospective descriptive study in the Cardiology Department of the Ignace Deen Hospital in Conakry. it concerned patient files hospitalized for HF.

Result: We collected 155 records of patients hospitalized for heart failure, 5 records were excluded due to insufficient information. However 150 patient files were retained with a hospital prevalence of heart failure of 12%. Patients over 50 were the most frequent or 85.33%. The male genre was predominant with a frequency of 65.33%. The main cardiovascular risk factors found in our series were high blood pressure (HBP), smoking, diabetes with respective frequencies of (23.49%), (15.14%), (10.29%). Regarding etiology, ischemic heart disease was the most common in our series with a frequency of 38%. We recorded 6% of deaths in our study.

Conclusion: This study shows a significant hospital prevalence of heart failure with a high mortality rate at the Ignace Deen University Hospital Center mainly linked to the alteration of the ejection fraction of the left ventricle and class III/IV of dyspnea according to the NYHA.

Keywords: morbi mortality; heart failure; ignace deen university hospital center of conakry

Introduction

Heart failure corresponds to an inability of the heart to maintain an adequate cardiac flow to deal with the metabolic needs of the organism [1]. It is a chronic, complex and serious affection, which symptomatology is likely to strongly affect the quality of life of affected patients with high lethality [2]. It is a major public health problem [3]. It is a frequent pathology which prevalence is estimated at 2 and 3% in adult population in developed countries. Given the aging of the population, its incidence is by increasing constant in the elderly with a rate around 3 and 13% from 65 years. [2].

Despite many therapeutic progress, HF remains a serious pathology in the dark prognosis with mortality at 1 year up to 24% after a year of evolution[1]. Sub-Saharan Africa, in the midst of an epidemiological transition, is not on the sidelines, where only hospital data is available [4]. There is little study in Guinea on the morbidity and mortality of HF. Thus the aim of this study was to describe the aspects linked to the morbidity and mortality of heart failure, in particular epidemiological, clinical and therapeutic aspects at the Cardiology department of the Ignace Deen hospital in Conakry.

Patients and methods

It was a retrospective study of the descriptive type relating to the data of patients hospitalized during the period from January 1, 2021 to December 31, 2023 in the cardiology department of the Ignace Deen Hospital in Conakry.

The study targeted all hospitalized patient files during this study, it concerned the files of patients hospitalized for heart failure. They have

been included, patient files meeting the diagnostic criteria for heart failure according to European Society of Cardiology (ESC); Clinical level (typical symptoms: dyspnea, edema of the lower limbs, physical asthenia; which can be associated with left -wing congestive signs: frizzy rails; or rights: turgocence of the jugular veins, peripheral edema linked to a cardiac dysfunction) and according to ultrasound (HF with reduced ejection fraction when the EFLV was less than 40%; HF with moderately reduced EFLV when it was between 40-49% and HF with EFLV greater than or equal to 50%). They were excluded the incomplete files which did not include a cardiac ultrasound.

Data collection: Our data were: epidemiological; clinical, paraclinical and therapeutic, and were collected via a dedicated form. The analysis was carried out using SPSS 21 software, with frequencies for qualitative variables and averages for quantitative ones.

Ethical considerations: the data has been collected anonymously by guaranteeing confidentiality.

Results

During the study period, 1,248 patients were admitted to the cardiology department of the Ignace Deen National Hospital. We have collected 155 files of hospitalized patients for heart failure.

5 files were excluded for insufficient information. However, 150 patient files were retained with a hospital prevalence of heart failure of 12%.

Patients over 50 were the most frequent or 85.33%. The male genre was predominant with a frequency 65, 33% **(Table I).** The main cardiovascular risk factors found in our series were HTA, smoking, diabetes with respective frequencies (23.49%), (15.14%) and (10.29%) **[Table II] .**

Regarding etiology, heart disease of ischemic origin was the most frequent in our series with a frequency at 38% followed by hypertensive heart disease and valvulopathies with respective prevalences of 28% and 16.66% **(Table III).**

The distribution of patients according to poor prognostic factors of HF **(Table IV).** We recorded 6% death in our study **(Table V)**

Variables	Numbers	Percentage (%)
Age (year)		
< 50	22	14,66
≥50	128	85,33
Sex :		
Men	98	65,33
Women	52	34,6
Residence place		
Urban	133	88
Rural	17	11

Table I : Distribution of patients according to socio-demographic variables

CVRF	Numbers	Percentage(%)
HBP	121	23,49
Smoking	78	15,14
Diabetes	53	10 ,29
Dyslipidemia	51	9 ,90
Obesity	8	1,55

Table II: distribution of patients according to cardiovascular risk factors

Poor prognostic factors of HF	Numbers	Percentage(%)
Elderly	75	50
Altered ejection fraction	97	64,66
Class III – IV NYHA	128	85,33
Arterial hypotension	23	15,33
Anemia	5	3,33
Renale failure	7	4,66

Table III: distribution of patients according to the factors of poor prognostic heart failure

Underlying heart disease	Numbers	Percentage(%)
Ischemic	57	38
Pericarditis	7	4,66
Hypertensive heart disease	42	28
Valvulopathy	25	16,66
Chronic cor pulmonale	9	6
Peripartum cardiomyopathy	5	3,33
Congenital heart disease	2	1,33

Dilated cardiomyopathy	3	3,33
Total	150	100

Table IV: distribution of patients according to underlying heart disease

Evolution	Numbers	Percentage (%)
Favorable	141	94
Death	9	6
Total	150	100

Table V: Distribution of patients according to evolution

Discussion:

The hospital prevalence of HF in our series was 12%. This prevalence is greater than that of Mansour Pl and col in Djibouti who found in their study a frequency of 2.7% [5], and lower than that of D.A Affangla and col in Senegal which notified 14.28% [6]. This disparity of the prevalence of HF could be explained by the frameworks and the study periods which were not similar. The average age of patients in our series was 60 years. This result corroborates with that of the study carried out by Affangla D.A and Col [6]. The majority of our patients were male, which joined the data in the literature [5, 6]. HBP was the predominant cardiovascular risk factor in our study followed by smoking and diabetes. These risk factors are found by several authors in their different series [7, 8]. These results are explained by a modification of the lifestyle of our populations and the emergence of non -transmitted diseases.

In our series, ischemic heart disease was the most represented. This result joins the Moroccan study [9] .

Hypertensive heart disease occupied the second row of etiologies which was in accordance with studies in sub-Saharan Africa [9, 10]. The increase in ischemic heart disease in our country is explained by the change in lifestyle and urbanization but perhaps also by more efficient diagnostic means.

Valvular pathology represented 8.73% of the causes of HF in our series. Our result is comparable to that of a sub-Saharan study where the authors have notified a frequency 9.4% [10]. If in developed countries their mechanism is often dystrophic or degenerative in one hand, in developing countries on the other hand, it is still and often rheumatic damage.

Poor prognosis factors for HF were dominated by the alteration of the evidence of ejection of the LV (64.66%), hypotension (15.33%), class III/IV of dyspnea according to the NYHA (85.33%). Indeed in our study, the severe alteration of EFLV was a major factor of bad prognosis. One of the most powerful and recognized prognostic factors for the most powerful and recognized systolic heart failure, with a significant increase in mortality, in particular by sudden death when the EFLV is altered, with a threshold value that range between 45% and 35% depending on studies [11]. These poor prognosis factors are proven because mortality at 1 year is 30% to 55% in HF at stages III and IV of NYHA [12].This could be explained on the one hand by the delay in the care of patients and on the other hand, by an elevation of the pulmonary capillary pressure resulting in a decrease in pulmonary compliance, an increase in the work of the respiratory muscles and hypoxemia.
The lethality rate was 6%. This rate varies in the various African hospital series with 9.03% in Yaounde [13] and in Morocco [14]. Many factors, including delay in care, could explain this mortality of HF in our regions. This delay, also underlined in other studies [13, 14], is sometimes linked to financial constraints limiting access to care in our regions.

Conclusion:

This study shows a significant hospital prevalence of heart failure with a high mortality rate at the Ignace teaching hospital linked mainly to the alteration of ejection EFLV and class III/IV of dyspnea according to the NYHA. These results highlight the importance of strengthening prevention strategies and rapid management of cardiovascular risk factors in order to reduce the morbidity and mortality of heart failure in Guinea.

Conflict of interest

The authors declare that they have no conflict of interest with this article.

Authors Contribution:

All authors have read and approved the final and revised version of this article.

Thanks :

Our thanks are sent to all those who participated in the development of this study

Authors contribution:

Barry Mamadou Alpha, Camara OM, Keita FB, contributed to the study design and discussion of results.

Camara OM and Keita Fatoumata Binta contributed to the collection of data and the analysis of the statistical data of the study.

Abdoulaye Fodé Touré actively participated in the writing of the manuscript and the final version of the article, ensuring the precision and clarity of the information presented.

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