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## RESEARCH ARTICLE

# CARDIOMYOPATHIES IN INTENSIVE CARE UNIT OF SYLVANUS OLYMPIO UNIVERSITY HOSPITAL OF LOME

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### ABSTRACT

**Objectives:** Determine the prevalence of heart diseases in intensive care and the different risk factors. Material and method : we conducted a retrospective study on a sample of 84 hospitalized patient files from January 2011 to January 2013 at CHU- Sylvanus Olympio de Lomé has been realized.

**Results:** In total, the average age of our patients was 51 years old. The sex ratio was at 1.21. The most common heart diseases were hypertensive and dilated at 38.09% each. Other diagnoses retained focused on: Left heart failure, the PAO cardiogenic on HTA push, decompensated cardiomyopathy and hypertensive. Risk factors were: alcoholism (73.5%), hypertension (61.91%). In our study 54.76% of patients were kept more than two (02) weeks. Among our patients 64.29% came out of their health favorably.

**Conclusion:** Cardiomyopathies meet at all ages. The risk of occurrence was very high in patients and depends on the patient's predisposition and eating habits.

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## INTRODUCTION

The demographic and epidemiological transition in recent decades has led to the emergence of non-infectious chronic diseases due to the increase in life expectancy. Cardiovascular diseases are at the forefront of these chronic diseases. These pathologies are either the cause or consequence of underlying cardiovascular disease or that of other non-specific pathologies of the cardiovascular system. Thus the myocardium is the target of most of the pathologies in question and will be long-term source of cardiac insufficiency decompensated or not. This term is described as cardiomyopathies the various myocardial disorders without associated valvular, coronary, congenital, pulmonary or pericardial diseases. They can be hypertrophic, restrictive, dilated or arrhythmogenic dysplasia of the right ventricle (Ayodele and Okechukwu, 2012). First December because of Bachelor in industrialized countries, the prevalence of art cardio myopathy increase of deaths in decays (Thiam *et al.*, 2000). Thus dilated peripartum cardiomyopathy is common in sub-Saharan Africa and unclear origin (OMS, 2004). According to WHO, the blood pressure is the main (OMS, 2004). One study has shown that all risk factors have the arterial system as tropism, resulting in a structural and

functional change in the arterial system infarction (Agostino, 2008). The diagnosis of cardio myopathy is clinical and para clinical. Treatment is symptomatic and etiologic if possible. The prognosis remains serious with a mortality rate that increases with age, and depends on the severity and quality of patient follow-up. The medical resuscitation of the CHU-SO is the service that hosts the majority of patients requiring hospitalization in case of decompensation of chronic diseases including heart disease. This study aimed to General to determine the epidemiological, diagnostic and evolutionary profile of cardiomyopathies at the medical resuscitation of the University Hospital Center (CHU) Sylvanus Olympio of Lome.

## MATERIALS AND METHODS

This was a retrospective study that ran from January 2011 to January 2013 in the department of medical resuscitation at Sylvanus University Hospital Olympio (SO) of Lome. We studied the records of patients hospitalized in intensive care for cardio myopathies during this period. We included in our study, records patients of both sexes admitted to the ICU who experienced cardio myopathy pa during the study period. Were not included in our study all incomplete files and all patients who were hospitalized for cardiac disease outside the study period and other non-myocardial heart disease. The parameters studied were age, occupation, obesity, consumption or not of

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alcohol, tobacco and coffee, the results of electrocardiography (ECG), the chest radiographic and doppler heart. The diagnosis of heart lay on clinical, echo heart graphic, electrocardiographic. The collected data were processed by computer method using EPI-info software.

## RESULTS

In total, 84 patient medical records met the inclusion criteria. There was a male predominance of 54.76% with a sex ratio of 1.21. The mean age of the patients in our study was 51 years with extremes of 20 to 82 years and a standard deviation of 13.63. The age range of 49 at 59 was the most represented with a rate of 30.95%. Housewives (28.57%) and employees (26.19%) were the most represented (Table 1).

**Table 1. Distribution of patients by profession**

|            | Effective | Percentage% |
|------------|-----------|-------------|
| Household  | 26        | 28.57       |
| salaried   | 22        | 26.19       |
| Retirement | 14        | 16.67       |
| Particular | 11        | 11.91       |
| Farmer     | 6         | 7.14        |
| trader     | 4         | 4.76        |
| Student    | 4         | 4.76        |
| Total      | 84        | 100.00      |

Level has personal antecedents; hypertension (61.91%) was then made the most represented factor of the coffee outlet of the coffee (54.76%). Obesity, alcoholism, dyslipidemia and diabetes accounted for 30.95% each. At the family level, coffee (76.19%), alcohol (73.80%), obesity (64.28), HTA (61, 90) have been the most recovered antecedents. Diabetes and tobacco each accounted for 30.95% and unresolved heart disease 21.42%. Clinically, 40.48% were normotensive and 52.38 hypertensive. The 7.2% were in pre - HTA. The main signs clinical signs found were dyspnea (80.95%), edema of the lower limbs (64.29 %), jugular turgor (45.23%). AT the ECG, left ventricular hypertrophy was the most represented at 38.09%, followed by sinus tachycardia (30.95%), del hemi previous block (21.42%), and ischemia under epicardia (16.67%). On the plan the heart echography Doppler, systolic left ventricular dysfunction was the most representative with 33.33% as shown in Table 2.

**Table 2. Distribution of patients according to data from the echography – Doppler**

|  | Effective | Percentage% |
|--|-----------|-------------|
| Systolic dysfunction of the left ventricle | 28        | 33.33       |
| Concentric left ventricular hypertrophy    | 18        | 21.42       |
| Hypertensive cardiomyopathy                | 14        | 16.67       |
| Pulmonary hypertension                     | 14        | 16.67       |
| Aortic insufficiency                       | 14        | 16.67       |
| Asymmetrical septal hypertrophy            | 10        | 11.91       |
| Mitral insufficiency                       | 8         | 9.52        |
| Relaxation disorders of OG1                | 8         | 9.52        |
| VG relaxation disorder                     | 6         | 7.14        |
| Decompensated heart disease                | 6         | 7.14        |
| Dilatation of the sigmoid valves           | 2         | 2.38        |

A biology, 51, 19% had hyperglycemia and 11.90% e glucose intolerance. The etiologies were retained century the art cardio myopathies hypertensive and dilated in respectively 38, 09% and ischemic 9.52% of cases. The average duration of hospitalization was more than two weeks with a rate of 54.76%. Almost 2/3 of patients (65%) had a favorable outcome.

## DISCUSSION

Our study consisted of an epidemiological, clinical and evolutionary evaluation of cardiomyopathies in the intensive care unit of the CHU-SO. This study presents some recruitment bias due to the incompleteness of the files. In addition, the inability to perform certain tests such as the dosage of the B-Type Natriuretic Peptide (BNP) and A- Type Natriuretic Peptide (ANP) constitute deficiencies in prognostic prediction of survival and re - hospitalization. In fact, a recent study has shown a relationship between the abnormal low or high level of BNP and the death of insufficient heart suffers, either by insufficient hormonal response or metabolic abnormality of the hormone or over response (Huang *et al.*, 2016). We noted a male predominance with a sex ratio of 1.21. On the other hand Cénac *et al.* 2000 in Niger had found a female predominance. Our results are identical to those of Maurizio (Maurizio *et al.*, 2007) in 2016 which found a ratio of 1.12. The average age of our patients was 51 years old with extremes of 20 years and 82 years. The most represented age group was 50-59 years old. Maurizio *et al.* 2007 Vait has made the same observation with a mean age of  $55.4 \pm 2.2$  years for men and  $50.1 \pm 2.5$  years for women. In general, heart disease meets at any age. Kandé *et al.* in 1988 in Senegal had found 44 years. High blood pressure was the first risk factor in our study. In the genesis of heart disease, studies are unanimous on the place occupied by HTA (Cenac *et al.*, 2000). We found 61.91% hypertensive patients. Thiam *et al.*, 2000 found 41%. This result will be explained by the fact that it focused only on ischemic heart disease and also because of the increased incidence of cardiovascular risk factors. There were 35.75% of patients obese in our series. Donald (2000) in France had found 52% of obese. Improved living conditions could be a source of obesity due to lack of exercise. Diabetes in our series accounted for 30.95%. Our results were close to those of Sraïri *et al.* <sup>10</sup> in Morocco who had found 36.78%.

The high frequency of smoking patients (30.95%) is comparable to that found by Thiam *et al.* in Senegal (Thiam *et al.*, 2000), Kimbaly- Kaki *et al.* Congo (Kimbaly- Kaki *et al.*, 2000) and Samadoulougou *et al.* in 2011. Burkina Faso with respectively a 44% frequency ; 38.3% and 36% of smokers in their studies. In our series, we found 73.8% of patients consuming alcohol. Balaka *et al.* in 2014 Togo found 19, 23% patients consuming alcohol in his study in a population of 104 hypertensive with rhythm disorders. This disparity is due to the fact that the estimation of the daily quantity of alcohol ingested was difficult. The various clinical signs are those found the s usually found in the heart and determine the severity of the latter. On a paraclinical level, the cardiac echography - doppler allowed to know the etiology of heart disease. Sraïri *et al.* 2000 had made these same observations in Morocco during his study. These results could be explained by the different myocardial attacks. In terms of diagnosis, 38.09% had at least one dilated heart disease. Kane *et al.* 1997 in Senegal found a rate of less than 1.14%. This result was due to the fact that his study focused on young subjects, or that heart disease progressively evolves with age and risk factors. Thiam *et al.* 2000 on their part found 12.80% because their study was about ischemic heart disease. The c hypertensive heart disease accounted for 38.09% of patients. Thiam *et al.* 2000 also found 12.80%. This high rate in Togo could be explained by the lack of resources of the population for a balance sheet in time. The is chemicheart disease represented 9.52%. Kandé *et al.* 1988 in

Senegal found similar results with a rate of 9.5%. The evolution was favorable in 64.29% of our patients. Thiam *et al.* 2000 were 62% favorable. Early treatment would improve this rate because a death rate of 35.71% seems high given the huge progress in cardiology at present.

### Conclusion

The s cardiomyopathies are conditions that damage the myocardium, to the exclusion of other cardiac structures (valves, coronary, and pericardium). We noted a slight male predominance and a gender disparity with a death rate of 35.71%. Dilated and hypertensive cardiomyopathies were the most prevalent and hypertension was the main factor. The Cardiomyopathy is a serious disease whose cross support should include cardiologist, internist, geriatrician, physiotherapist and psychologist. The controlled of hypertension and its risk factors may help reduce the incidence of these cardiomyopathies.

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