

Aetiologies of Heart Failure Cases in Southern Nigeria

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Article History	Abstract
Original Research Article	<p>Introduction: Heart failure results from complex mechanisms initial stressors leads to myocardial damage. With neuro-endocrine activation and cytokine release. Inadequate compensation leads to heart failure.</p> <p>Aims: To determine aetiological factors for heart failure in a teaching hospital in southern, Nigeria</p> <p>Methodology: One hundred and eighty six patients were diagnosed using framinham criteria for heart failure. Investigations like chest X-ray and echocardiography was done.</p> <p>Results: Hypertension was the most common risk factor with 138 (74.2%) respondents. On echocardiography, 162 (64.5%) had hypertensive heart disease, 34 (18.3%) had valvular heart disease</p> <p>Conclusion: Hypertension is the most common risk factor and hypertensive heart disease is the most common aetiology for heart failure</p> <p>Keyword: Hypertension, Echocardiography, Hypertensive heart disease.</p>
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INTRODUCTION

Heart failure results from complex pathophysiological mechanisms in which an initial stressor event causes damage to the myocardium, resulting in increased myocardial wall stress. There is subsequent activation of multiple neuro-endocrine systems such as the renin-angiotensin-aldosterone system (RAAS), accompanied by the increased sympathetic overdrive as a result of activation of the sympathetic nervous system. There is also an associated release of various cytokines including tumour necrosis factor. These events culminate in further myocardial wall stress and remodeling which when not adequately compensated results in heart failure. In studies carried out in sub-saharan Africa, Hypertension was the major background aetiological factor in heart failure. Ischaemic heart disease however occupied this position in studies carried out among Caucasians.^{1,2}

AIMS

To determine aetiological factors for heart failure in a teaching hospital in southern, Nigeria

METHODOLOGY

This was a cross sectional analytic study carried out in university of benin teaching hospital, Nigeria. 186 patients diagnosed using framingshams criteria were evaluated using history, examination and echocardiography. Data was analysed using SPSS 20 package.

RESULTS

Respondents were 186 patients including 96 (51.6%) females and 90 (48.4%) males. Hypertension was the major cardiovascular risk factor from the history and examination which was present in 138 (74.2%) of respondents. The aetiology of heart failure in descending order were 162 (64.5%) hypertensive heart disease, 34 (18.3%) valvular heart disease, 19 (10.2%) dilated cardiomyopathy (DCM), Cor pulmonale 7 (3.8%) and 6 (3.2%) ischaemic heart disease as shown in Figure.

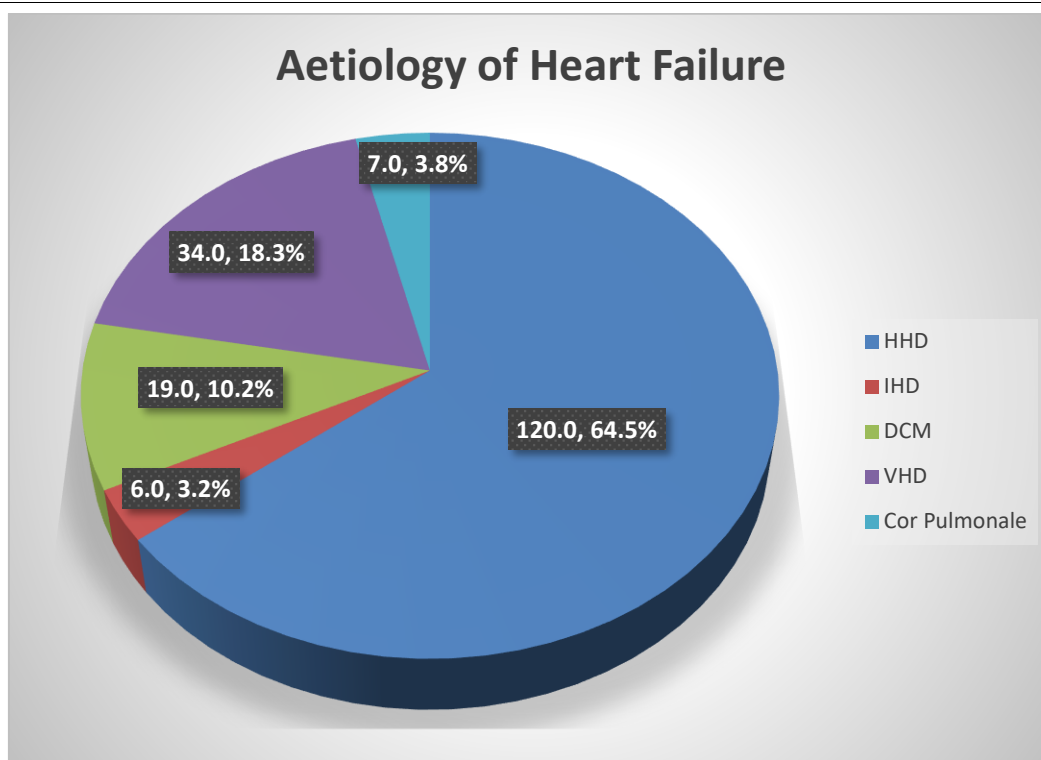


Figure: Pie chart showing the aetiology of heart failure

DISCUSSION

Hypertension was the major cardiovascular risk factor which was present in 138 (74.2%) of respondents similar to those seen in other studies in sub-Saharan Africa reflecting hypertensive heart disease as the most important aetiological factor in heart failure. For instance in a related study carried out in Abeokuta, Nigeria by Ogah et al, the prevalence of systemic hypertension among heart failure patients was estimated to be 72%. Other worldwide studies have also recorded similar rates of hypertension among heart failure patients. Majority of patients (60%) have had at least 1 in-hospital management for heart failure in the course of the disease. All the subjects met Framingham's criteria for the diagnosis of heart failure, with at least 2 major and 1 minor criteria met with the most common criteria met being radiologic cardiomegaly which was seen in 98% of respondents, closely followed by orthopnoea which was found in 97% of subject.³

The major aetiological factor for heart failure in the study subjects was hypertensive heart disease (64.5%), this is followed by valvular heart disease (18.3%), then dilated cardiomyopathy (10.4%). Ischaemic heart disease was the background aetiological factor in 3.2% of subjects. This is in keeping with the findings in earlier Nigerian studies. Ogah et al in a cohort study of 415 heart failure patients in a specialist centre in Abeokuta, Southern Nigeria, and reported hypertensive heart disease to be responsible for

78.5 percent of heart failure. Similarly, Ojji et al in a related cohort study in Abuja, reported a similar finding^{3,4}

CONCLUSION

Hypertension is the most common risk factor and hypertensive heart disease is the most common aetiology of heart failure

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