OPEN ACCESS Freely available online

Journal of Clinical Trials

Commentary

Clinical Features of Heart Failure with Preserved Ejection Fraction in a Sub-Saharan Africa Population

Mazou N Temgoua[1,2*], Jérôme Boombhi[1], Joel Noutakdie Tochie[3], Samuel Kingue[1]

[1]Department of Internal Medicine and Sub-Specialties, Medicine and Biomedical Sciences, University of Yaoundé I, Yaounde, Cameroon; [2]Department of Cardiology, Program of Heart Rhythm Disorders and Cardiac Stimulation, University of Clermont-Ferrand, Clermont-Ferrand, France; [3]Department of Anesthesiology and Intensive Care Unit, Medicine and Biomedical Sciences, University of Yaoundé I, Yaounde, Cameroon

ABBREVIATIONS

HFmrEF: Heart Failure with mid-Range Ejection Fraction; HFpEF: Heart Failure with Preserved Ejection Fraction; HFrEF: Heart Failure with reduced Ejection Fraction; LVEF: Left Ventricular Ejection Fraction

STUDY DESCRIPTION

Heart Failure (HF) is a global health problem affecting 64.34 million (8.52 per 1,000 inhabitants) persons worldwide and responsible for 9.91 million years lost due to disability [1]. According to the European Society of Cardiology, three main types of Heart Failures can be distinguished based on Ejection Fraction (EF) : HF with Preserved Ejection Fraction (Left Ventricular Ejection Fraction [LVEF] ≥ 50%), HF with Mid-Range Ejection Fraction (LVEF between 40-49%) and HF with reduced EF (LVEF<40%) [2]. More studies have been done to understand the pathophysiology of HFrEF; actually this entity is well developed and treatment is well codified contrary to HFpEF.

For several centuries, little was known about clinical features of patients with HFpEF particularly in Sub-Sahara Africa. In a bid to fill in this knowledge gap, Jerome Boombhi and colleagues investigated a sub-Sahara African population of 201 patients with HFpEF for the clinical, cardiovascular and laboratory findings and therapeutic aspects of HFpEF, compared with those of HFrEF in Yaounde, Cameroon. This prospective multicenter study was conducted in three major's referral cardiology units of Cameroon. Jerome Boombhi et al. found that HFpEF was more prevalent than HFrEF (45.5% vs. 37.5%). Compared with patients with HFrEF, those with HFpEF were older (p=0.003), and had a significantly higher incidence of hypertension (p=0.034) and obesity (p=0.013). HFrEF was significantly more associated with congestive symptoms than HFpEF such as stage 4 NYHA dyspnea (p=0.040), orthopnoea (p=0.005), jugular venous distention (p=0.034), hepatomegaly (p=0.015), hepato-jugular reflux (p=0.018) and ascites (p=0.020). Furthermore, the third sound gallop was significantly more present in patients with HFrEF (p=0.033) [3]. The rate of atrial fibrillation was more high in patient with HFpEF (33.92% vs. 16.9%, p=0.013). Based on previous literature, the same findings were observed in Western countries [4]. The study by Jerome Boombhi et al. is important because hitherto, the pathophysiology of HFpEF was not clear and treatment was not codified as that of HFrEF [2]. The main mechanisms postulated were diastolic dysfunction, impaired systolic reserve function, abnormal ventricular–arterial coupling, inflammation and endothelial dysfunction, chronotropic incompetence, altered myocardial energetics and peripheral skeletal muscle metabolism and perfusion, pulmonary hypertension, and renal insufficiency [4]. Given the complexity of HFpEF, quiet challenging to yet develop a specific treatment for HFpEF. Hence, more clinical research is still needed with regards to the effective treatment of HFpEF. For the instance, considering the fact those patients with HFpEF generally die secondary to non-cardiovascular causes, the adopted strategies is to treat all comorbidity and symptomatic approach for Heart Failure in such patients as the main goal of the treatment [5]. Some medications seems to have a promising profile in treating HFpEF, These drugs include nebivolol, digoxin, spironolactone and candesartan which have been reported to reduce HF hospitalizations but not HF-related mortality in patients with HFpEF in sinus rhythm. Thus, more Randomized Clinical Trials (RCTs) and a systematic review with meta-analysis of these RCTs are needed for more conclusive high quality evidence to guide decision making in the treatment of HFpEF [5].

In Sub-Sahara Africa, there is a rising incidence of HF with a clinical pattern that was not well-established [6], the study by Jerome Boombhi and colleagues [3] adds more comprehension of clinical characteristics of HFpEF in this poulation. Moreover, this study is particular interesting because in poor-resource settings of Sub-Sahara Africa were echocardiography is not available, specific therapy could be started based on clinical suspicion of the aforementioned clinical signs HFpEF highlighted by Jerome Boombhi and colleagues [3]. For example, older hypertensive women with heart failure should have adequate control of blood pressure and all co-morbities with appropriate drug and receive

Correspondence to: Mazou N Temgoua, Department of Internal Medicine and Sub-Specialties, Medicine and Biomedical Sciences, University of Yaoundé I, Yaounde, Cameroon, Email: neurotemgoua@yahoo.fr

Received date: January 06, 2021; **Accepted date:** January 19, 2021; **Published date:** January 26, 2021

Citation: Temgoua MN, Boombhi J, Tochie JN, Kingue S (2021) Clinical Features of Heart Failure with Preserved Ejection Fraction in a Sub-Saharan Africa Population. J Clin Trials. 11:449.

Copyright: © 2021 Temgoua MN, et al. This is an open access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

symptomatic treatment like diuretics for congestive state to alleviate symptoms of heart failure.

The study's main limitations were the fact that the study was done in one Sub-Sahara Africa country, Cameroon. Hence, this implies cautious generalization of the findings of Jerome Boombhi and colleagues [3] because the same situation may not apply to other sub-Sahara Africa country. Also the authors have not included patient with mid-range EF to understand their clinical features. But patients with HFmrEF have generally been included in trials of HFpEF [5,6]. Nonetheless, the publication authored by Jerome Boombhi and colleagues [3] is a rare study in the African setting and may constitute preliminary work or a reference for future research works.

CONFLICT OF INTEREST

None

REFERENCES

1. Lippi G, Sanchis-Gomar F. Global epidemiology and future trends of heart failure. AME Med J. 2020;5.

2. Seferovic PM, Ponikowski P, Anker SD, Bauersachs J, Chioncel O, Cleland JGF, et al. Clinical practice update on heart failure 2019: Pharmacotherapy, procedures, devices and patient management. An expert consensus meeting report of the heart failure association of the european society of cardiology. Eur J Heart Fail. 2019;21(10):1169-1186.

3. Boombhi J, Bele A, Temgoua N M, Hamadou B, Tochie JN, Tchapmi D, et al. Comparative analysis of the clinical presentations, cardiovascular & laboratory findings & treatment of heart failure with preserved & reduced ejection fractions in cameroon: A multicenter cross-sectional study. J Integr Cardiol. 2020;1-9.

4. Sharma K, Kass David A. Heart failure with preserved ejection fraction. Circ Res. 2014;115(1):79-96.

5. Ponikowski P, Voors AA, Anker SD, Bueno H, Cleland JGF, Coats AJS, et al. 2016 ESC Guidelines for the diagnosis and treatment of acute and chronic heart failure: The task force for the diagnosis and treatment of acute and chronic heart failure of the European Society of Cardiology (ESC) developed with the special contribution of the Heart Failure Association (HFA) of the ESC. Eur Heart J. 2016;37(27):2129-2200.

6. Agbor VN, Essouma M, Ntusi NAB, Nyaga UF, Bigna JJ, Noubiap JJ. Heart failure in Sub-Saharan Africa: A contemporaneous systematic review and meta-analysis. Int J Cardiol. 2018;257:207-215.