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New Predictive Models for Morbi-Mortality in Heart Failure Patients with Mildly-Reduced Ejection Fraction

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Heart failure with mid-range ejection fraction (HFmEF) has recently gained attention, but its clinical understanding, especially regarding morbidity and mortality, is limited. No studies have been conducted in our country to assess the clinical and prognostic profiles of HFmEF.

Objectives: The primary goal was to analyze short- and medium-term cardiovascular morbidity and mortality (1 year) in patients with HFmEF (ejection fraction 40-49%). Secondary objectives included establishing an epidemiological profile of patients with HF across the three subgroups (HFpEF, HFrEF, HFmEF), comparing cardiovascular outcomes at one year, and identifying mortality predictors in the HFmEF group.

Methods:A 26-month prospective, observational, single-center study was conducted (Nov 2019-Jan 2023) on 204 patients with HFmEF, selected from a cohort of 447 chronic heart failure (CHF) patients. Patients were categorized by ejection fraction (HFrEF ≤40%, HFpEF ≥50%, HFmEF 41-49%). The study involved descriptive and survival analyses, assessing cardiovascular death and rehospitalization predictors, clinical and echocardiographic changes, and their prognostic implications. Kaplan-Meier and Cox proportional hazards models were used for 1-year outcomes.

Results: The mean age was 60 ± 14 years, with a male predominance (sex ratio 2.2). Cardiovascular mortality was 2.5% at 6 months and 5.9% at 1 year. Key prognostic factors for survival were chronic renal failure, elevated blood glucose, high pulmonary vascular resistance, low sphericity index, significant mitral insufficiency, and resistance to diuretics. Rehospitalization rates for HF were 2.5% at 6 months and 8.3% at 1 year, with diabetes, anemia, high left atrial volume, and poor longitudinal strain as predictive factors.

Conclusion: HFmEF remains poorly understood, with a challenging prognosis, particularly for high-risk patients. Early identification and secondary prevention programs are critical to improving outcomes.

Biography

Bencheboub Izzeddine work as a senior lecturer in cardiology and have been working within the framework of the Collaborative Research Group in Cardiology and Oncology (CORCG), Faculty of Medicine Benyoucef Benkhedda University since 2018. To date, research has concentrated on heart failure in the western part of Algeria. In course of this work he have acquired some useful experience which he intend to share at this heart failure congress. He believe that his experience in clinical practice and academic research will complement the discussions and development of the current problems in the specified topic

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