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Abstract

Echocardiographic abnormalities in chronic hemodialysis patients

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Abstract

Introduction: Cardiovascular abnormalities are prevalent and often insidious in individuals with renal insufficiency, significantly contributing to mortality and morbidity among hemodialysis patients. Echocardiography plays a crucial role in detecting these abnormalities early, allowing for tailored interventions. This study aimed to assess the prevalence of echocardiographic findings in chronic hemodialysis patients.

Methods: This descriptive study was conducted at the cardiology department of Ibn Rochd University Hospital from July 2022 to December 2023. Forty-two chronic hemodialysis patients were included, selected from ambulatory echocardiography consultations or cardiac hospitalizations. Transthoracic echocardiography examinations were performed.

Results: Forty-two participants (25 women, 17 men) with an average age of 45.34 ± 13.4 years were enrolled. Left ventricular hypertrophy (LVH) was the most common abnormality, affecting 54.7% of the cohort. Valvulopathy was identified in 41% of cases, with 10% showing valve calcifications. Left ventricular dilatation was present in 29.8% of participants. Pulmonary arterial hypertension was detected in 9% of cases, and pericarditis in 3.2%. The mean systolic ejection fraction (EF) was 51.52 ± 6.02%, with 10.4% displaying systolic dysfunction of the left ventricle.

Discussion: Our findings corroborate global research, underscoring LVH as the predominant anomaly. Echocardiography emerges as indispensable in identifying these abnormalities, guiding tailored interventions to mitigate cardiovascular risk in hemodialysis patients.

Conclusion: Echocardiography proves invaluable in diagnosing cardiac anomalies non-invasively, offering precision and reproducibility. Given the high prevalence of cardiac-related mortality in hemodialysis patients, its integration into clinical management protocols is imperative for improved patient outcomes.