NIGERIAN CARDIAC SOCIETY (NCS)

55th Annual General Meeting & Scientific Conference (NCS EKO 2026)

September 22–24, 2026 • Eko Hotel Convention Centre, Lagos, Nigeria

AC006

Adult Cardiology & Clinical Cardiovascular Medicine • Poster Presentation

SEX-RELATED DIFFERENCE IN ECHOCARDIOGRAPHIC PATTERN AMONG ADULT PATIENTS WITH HYPERTENSIVE HEART FAILURE IN A TERTIARY HOSPITAL, NORTHWESTERN NIGERIA.

Hamza Sabiu Mohammed (Corresponding author) Consultant Cardiologist.

Stand: POSTER #AC006 | **Venue:** Poster Exhibition Hall & Gallery - Eko Convention Centre |**Online Ref:** https://nigeriancardiacsociety.com/abstracts/AC006

Phone: +2348036873572 ADDRESS: Department of Internal Medicine, College of Clinical Sciences, Federal University Dutse FUD)/Rasheed Shekoni Federal University Teaching Hospital, Dutse. P.M.B 7200 Danmasara, Dutse, Jigawa State, Nigeria. Ringim Sadiq Hassan Department of Medicine, Rasheed Shekoni Federal University Teaching Hospital, Dutse. P.M.B 7200 Danmasara, Dutse, Jigawa State, Nigeria. Albert Oyati Address: Department of Internal Medicine, Ahmadu Bello University Teaching Hospital, Zaria. Kaduna State Mijinyawa Muhammad Sani Address: Department of Medicine, Bayero University Kano, Aminu Kano Teaching Hospital, Kano State, Nigeria and Rasheed Shekoni Federal University Teaching Hospital, Dutse, Jigawa State, Nigeria. Sani Mahmoud Umar Address: Department of Medicine, Bayero University, Kano & Aminu Kano Teaching Hospital, Kano, Kano State, Nigeria.

Introduction: Hypertensive heart failure (HHF) is a leading cause of cardiovascular morbidity and mortality in sub-Saharan Africa, yet sex-related differences in cardiac remodeling remain underexplored in Northwestern Nigeria. Methodology: This study evaluated echocardiographic patterns among adult HHF patients at Aminu Kano Teaching Hospital (AKTH). A hospital-based cross-sectional design recruited 107 patients aged ?18 years with HHF, diagnosed using Framingham criteria and a history of hypertension. Exclusion criteria included significant valvular and congenital heart disease, or primary cardiomyopathies. Data were analyzed using SPSS, with t- and chi-square tests applied; $p < 0.05$ was considered significant.

Result: The mean age was 61.7 ± 16.2 years; 56% were male. Obesity was more common in females, while smoking and ischemic heart disease predominated in males. Females reported easier fatigability and palpitations. Echocardiography revealed sex-specific differences: males had larger ventricular dimensions and lower ejection fraction, consistent with systolic dysfunction (LVEDD 55.2 ± 6.8 mm vs. 49.6 ± 5.9 mm; LVESD 38.4 ± 5.7 mm vs. 33.1 ± 5.2 mm; LVEF 42.7 ± 7.5% vs. 49.3 ± 8.1%, all $p < 0.01$). Conversely, females exhibited preserved systolic function but greater diastolic dysfunction, with significantly higher Left Atrial Volume Index (49.8 ± 9.5 mL/m² vs. 42.3 ± 8.7 mL/m², $p < 0.01$).

Conclusion: HHF patients in Northwestern Nigeria demonstrate distinct sex-related echocardiographic patterns: men are predisposed to dilated ventricles and systolic dysfunction, while women more often present with diastolic abnormalities and atrial remodeling. These findings underscore the need for sex-specific diagnostic and therapeutic strategies in HHF management.

Keywords: Hypertensive heart failure; Sex differences; Echocardiography; Left atrial volume index (LAVI); Systolic dysfunction; Diastolic dysfunction; Nigeria.