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PREDICTORS OF DEGENERATIVE VALVULAR HEART DISEASE: INSIGHTS FROM KANO

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Background: Degenerative valvular heart disease (DVHD) is an emerging contributor to cardiovascular morbidity and mortality in Nigeria, particularly among middle-aged and elderly populations. Despite its growing burden, data on prevalence and predictors in sub-Saharan Africa remain limited. This study evaluated the prevalence, echocardiographic patterns, and independent predictors of DVHD among patients referred for echocardiography at Aminu Kano Teaching Hospital, Kano.

Methodology: A hospital-based cross-sectional study was conducted among 258 patients aged ?45 years. Cases with echocardiographic evidence of DVHD (n = 129) were age- and sex-matched to controls without DVHD (n = 129). Sociodemographic, clinical, laboratory, ECG, and echocardiographic data were collected. Logistic regression was used to identify independent predictors.

Results: DVHD prevalence was 15.8%. The most frequent lesions were aortic sclerosis (90.6%), aortic regurgitation (72.1%), mitral regurgitation (66.7%), mitral annular calcification (36.4%), and aortic stenosis (9.4%). Independent predictors included hypertension (OR 4.0), urban residence (OR 3.0), elevated total cholesterol (OR 2.7), and low HDL cholesterol (OR 5.0; OR 6.0 for degenerative AR). Additional associations were long-standing diabetes and hypertension, smoking exposure, and obesity indices. Mitral annular calcification correlated with high fasting glucose and increased body weight.

Conclusion: DVHD is common among middle-aged and elderly Nigerians, with echocardiographic patterns strongly linked to atherosclerotic risk factors and urbanization. Integrating DVHD screening into non-communicable disease programs, alongside risk factor control and routine echocardiography in high-risk groups, is essential.

Keywords: Degenerative valvular heart disease; Echocardiography; Prevalence; Predictors; Aortic sclerosis; Mitral regurgitation; Hypertension; Nigeria