AC008

Adult Cardiology & Clinical Cardiovascular Medicine • Poster Presentation

ECHOCARDIOGRAPHIC ASSESSMENT OF RIGHT VENTRICULAR FUNCTION IN STABLE ADULT SICKLE CELL ANAEMIA PATIENTS

Ibeh C.C1,3, Okwara C.C1, Ujunwa F.A2,3, Njoku P.O1,3 Oguanobi N.I1,3, Ike S.O1,3 1.Department of Medicine, University of Nigeria Teaching Hospital Enugu 2. Department of Paediatrics, University of Nigeria Teaching Hospital Enugu 3. National Postgraduate Medical College of Nigeria

Stand: POSTER #AC008 | **Venue:** Poster Exhibition Hall & Gallery - Eko Convention Centre |**Online Ref:** https://nigeriancardiacsociety.com/abstracts/AC008

Background: Sickle cell anaemia (SCA) causes intravascular haemolysis, ischaemic reperfusion injury and progressive multiple end-organ dysfunction including ventricular dysfunctions and pulmonary hypertension (PH). Echocardiography can be used to detect subclinical features of these myocardial derangements in SCA patients. Objective: To assess the right ventricular systolic and diastolic functions in adult patients with SCA.

Methodology: This was a hospital-based cross-sectional echocardiographic study conducted from March 2023 to February 2024. Through a simple random sampling method, 113 adult SCA patients were recruited, and age, sex-matched with haemoglobin AA controls drawn from UNTH community. Data of the demographics and preliminary investigations were recorded. Right ventricular parameters TAPSE, S?, E/A ratio, E/E? and pulmonary artery systolic pressure were obtained. Data was analysed using SPSS version 26.0.

Results: The mean TAPSE was 25.6 ± 4.9 mm, and the mean peak systolic velocity of the tricuspid annulus (S'), 16.3 ± 3.0 cm/s, were higher in patients compared to controls, 22.8 ± 3.9 mm and 14.2 ± 2.6 cm/s, respectively (p = 0.001). Mean values of right E/A ratio, 1.7 ± 0.4, and E/E' ratio, 4.7 ± 1.7, in patients were significantly higher compared with controls, 1.6 ± 0.2 and 4.6 ± 1.1, respectively. Prevalence of right ventricular diastolic dysfunction was 22.1% and higher in SCA patients. About 15.9% of SCA patients had pulmonary hypertension.

Conclusion: The prevalence of right ventricular diastolic dysfunction was 22.1% in SCA patients in Enugu. Routine echocardiography screening is recommended for SCA patients.

Keywords: Sickle cell anaemia, echocardiography, right ventricular dysfunction, pulmonary hypertension.