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Title: CLINICAL PROFILE AND ECHOCARDIOGRAPHY FEATURES OF PATIENTS WITH RHEUMATIC HEART DISEASE: SINGLE-CENTRE RETROSPECTIVE STUDY IN INDONESIA

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Background & Aims: Rheumatic heart disease (RHD) remains a major public health issue in developing countries. Comprehensive data regarding patient characteristics are critical in planning optimal treatment. This study aimed to evaluate the clinical profiles and echocardiography features of RHD patients.

Methods: This was a hospital-based retrospective study in General Hospital M. Djamil, Padang Indonesia. We retrieved relevant data from patients diagnosed with RHD between January 2019 and March 2023. Patient characteristics and echocardiographic features were collected retrospectively from medical records and hospital information systems.

Results: One hundred and eighty patients were diagnosed with RHD, predominantly female (71.1%) and younger age (mean ± standard deviation, 43.48 ± 12.13). Atrial fibrillation (AF) was the most frequent rhythm disorder in these patients (82.8%). A combination of shortness of breath, chest pain, and fatigue were the most symptoms of RHD patients (53.3%) with 61.7% of rehospitalization cases. Infective Endocarditis (IE) was diagnosed in 2 patients (1.1%). Echocardiography data showed most of the patients (66.1%) had preserved left ventricular (LV) ejection fraction and more than half of the patients had good right ventricle (RV) contractility (tricuspid annular plane systolic excursion >17 mm). Half of RHD patients had multivalve lesions involving mitral, tricuspid, and aortic valves. A combination of mitral stenosis (MS), mitral regurgitation (MR), aortic regurgitation (AR), and tricuspid regurgitation (TR) was the commonest lesion (14.4%) followed by MS, MR, TR (11.7%) and isolated MS, MR (10.6%). Overall, the mitral valve (either isolated or combined) was the most affected (97.78%). Thrombus was found in 10.6% of cases. These findings might be related to incidents of stroke or transient ischemia attack (TIA) cases in this study (8.3%). Low rates of balloon mitral valvuloplasty (10%), valve surgery (2.8%), and compliance with secondary prophylaxis (26.1%) were significant challenges.

Conclusions: Characteristics of RHD patients in this study were predominantly female, younger age, high prevalence of AF, and rehospitalization. Echocardiography findings showed the patient had preserved LVEF and good RV contractility. A combination of mitral stenosis, mitral regurgitation, aortic regurgitation, and tricuspid regurgitation was the most observed condition of valve lesions in RHD.