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Title: The Clinical Profile of Rheumatic Heart Disease at a Tertiary Care Hospital in Indonesia: An Observational Study

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Background & Aims: Rheumatic heart disease (RHD) contributes significantly to cardiovascular morbidity and mortality in developing countries. In 2015, Indonesia became one of the countries with the largest estimated numbers of cases of RHD. However, investigations concerning RHD in Indonesia are still limited. This study aims to elaborate on the clinical and echocardiographic characteristics of RHD at a tertiary care hospital in Indonesia.

Methods: This observational study evaluated patients’ data obtained from the Valvular Heart Disease Registry of Dr. Sardjito General Hospital, Yogyakarta from May 2014 to August 2022. Patients with evidence of definite RHD based on the World Heart Federation (WHF) criteria were enrolled as participants. Clinical and echocardiography profiles were collected on the first admission of the patients.

Results: A total of 777 patients participated, with a mean age of 44.81 ± 12 years old, most of which were females (69.2%) in the 40-49 years-old group (30.2%). The Mitral valve was the primarily affected body part, in which mitral stenosis was discovered in 94.3% of all cases. Mixed mitral and aortic valve disease (MMAVD) was the commonest pattern (56.7%), followed by mixed mitral valve disease (MMVD) (28.7%) and pure mitral stenosis (12.1%). The most complications were secondary pulmonary hypertension (86%) and atrial fibrillation (73.7%). Most of the patients (72.59%) did not get any intervention, while only 11.2% of the patients got Percutaneous Transvenous Mitral Commissurotomy (PTMC), and 26.3% of the patients got open heart surgery for mitral or aortic valve replacement. From 2014 until 2022, the all-cause mortality of patients with RHD is 13%.

Conclusions: Rheumatic heart disease affects the female adult population predominantly and almost half of it are young people at their productive age. Mixed mitral and aortic valve disease (MMAVD) was the commonest pattern and RHD caused major cardiovascular complications. The severity of RHD cases in Indonesia suggests that patients seek help after the onset of advanced disease and life-threatening complications. Therefore, early detection and prophylaxis is urgently needed to reduce the burden of the disease.