

ABSTRACT

AIMS: Rheumatic heart disease (RHD) accounts for over a million premature deaths annually; however, there is little contemporary information on presentation, complications, and treatment. **METHODS AND RESULTS:** This prospective registry enrolled 3343 patients (median age 28 years, 66.2% female) presenting with RHD at 25 hospitals in 12 African countries, India, and Yemen between January 2010 and November 2012. The majority (63.9%) had moderate-to-severe multivalvular disease complicated by congestive heart failure (33.4%), pulmonary hypertension (28.8%), atrial fibrillation (AF) (21.8%), stroke (7.1%), infective endocarditis (4%), and major bleeding (2.7%). One-quarter of adults and 5.3% of children had decreased left ventricular (LV) systolic function; 23% of adults and 14.1% of children had dilated LVs. Fifty-five percent (n = 1761) of patients were on secondary antibiotic prophylaxis. Oral anti-coagulants were prescribed in 69.5% (n = 946) of patients with mechanical valves (n = 501), AF (n = 397), and high-risk mitral stenosis in sinus rhythm (n = 48). However, only 28.3% (n = 269) had a therapeutic international normalized ratio. Among 1825 women of childbearing age (12-51 years), only 3.6% (n = 65) were on contraception. The utilization of valvuloplasty and valve surgery was higher in upper-middle compared with lower-income countries. **CONCLUSION:** Rheumatic heart disease patients were young, predominantly female, and had high prevalence of major cardiovascular complications. There is suboptimal utilization of secondary antibiotic prophylaxis, oral anti-coagulation, and contraception, and variations in the use of percutaneous and surgical interventions by country income level.