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Title: OUTCOMES OF AORTIC AND MITRAL VALVE REPLACEMENT IN PATIENTS WITH RHEUMATIC HEART DISEASE

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Background & Aims: Rheumatic heart disease (RHD) is endemic in sub-Saharan Africa with Mozambique having a prevalence 30.4 cases per 1000 inhabitants. As RHD progresses, it can cause severe mitral stenosis and/or regurgitation and concomitantly can affects aortic and tricuspid valve. Surgical treatment has been reported as the best option for these cases and it's done at the Heart Institute (ICOR) in Maputo. However, until now, there has been no evaluation of its results. The objective of this study was to evaluate the outcomes of aortic and mitral valve replacement in patients with RHD.

Methods: An observational, quantitative, cross-sectional study was carried out using a secondary database. The referred database is hosted at ICOR and has registers of 21 years of valve replacement surgeries. Between 2001 and 2022, 187 patients with RHD underwent aortic and/or mitral valve replacement. Cardiac surgery was initially performed in the context international humanitarian missions by teams of foreign surgeons. From 2010 there was a gradual involvement of the Mozambican surgical team. Data collected included demographic information, clinical assessment, diagnostic exams and post-operatory results. For subgroup comparison it was calculated Chi-square and T-test. It was considered A = 0.05 and B = 0.20.

Results: 187 patients were analyzed. The mean age of the patients was 26.1 ± 0.9 years (range 7 to 67), 62 % were female. 80.2% of the patients were from southern provinces of Mozambique. About 80% of the patients were operated by Mozambican and Portuguese surgeons. The mean follow-up time was 13.6 ± 2.7 years. The most frequent procedures were mechanical mitral valve replacement (21.9%), mechanical mitral and aortic valve replacement (21.4%), mitral valve repair and mechanical aortic valve replacement (16%), aortic valve replacement (13.4%) and 9.1% mechanical mitral valve replacement and tricuspid valve repair. The mean length of stay was 17.6 ± 2.2 days, of which one in the intensive care unit for most of the patients. 19.8% of the patients had complications. The operative mortality was 5.3%. There were two early deaths (1.1%). 9.62% of the patients were lost to follow-up. About half of the patients donÂ´t take the medication correctly including warfarin.

Conclusions: The patients having valve replacements were older because whenever possible valve repair is the procedure of choice, and for some of this patients the replacement was a second (20.9%) surgery. The rate of complications was high and was mostly related to bleeding. In the context of Mozambique where there is lack of medication, trained medical practitioners and medical facilities where anticoagulation control is available, anticoagulation for mechanical valves is a struggle.