Beyond valve replacement: Rethinking prosthetic heart valve care

To the Editor: We read with great interest the article by Sumaraj and Meel[1] describing the clinical and echocardiographic profile of patients with prosthetic mitral valves managed at a tertiary centre in Johannesburg. This important contribution provides much-needed contemporary data from a setting where rheumatic heart disease remains prevalent and long-term outcomes after valve replacement are not yet fully characterised.[2] Several findings deserve particular attention. Despite relatively young age and preserved functional class in most patients, there was a high burden of atrial fibrillation, residual biventricular dysfunction and strikingly subtherapeutic anticoagulation control. These observations highlight a fundamental challenge in low- and middle-countries (LMICs): outcomes after valve replacement are strongly influenced not only by surgical success, but by long-term follow-up systems that are often fragmented or under-resourced.

Current international guidelines, including the ESC/EACTS Guidelines for the management of valvular heart disease and the ACC/AHA Guideline for the Management of Patients With Valvular Heart Disease, provide comprehensive, evidence-based recommendations for prevention, prosthesis selection and follow-up.[3,4] However, these guidelines are largely derived from high-income settings, and may not be fully adaptable to the realities faced in LMICs. The Sumaraj and Meel study underscores this gap. For example, although mechanical prostheses remain widely used in younger patients with rheumatic disease, the persistently poor quality of anticoagulation control raises legitimate concerns about long-term safety and thromboembolic risk in environments where international normalised ratio (INR) monitoring, patient education and access to care are inconsistent.

Equally important are the role of prevention and the timing of intervention. The high prevalence of persistent atrial fibrillation and ventricular dysfunction suggests late presentation and delayed surgery, reinforcing the need for stronger upstream strategies focused on rheumatic heart disease prevention, early detection and timely referral. Moreover, the low rate of concomitant procedures such as maze surgery and tricuspid annuloplasty, despite guideline recommendations, reflects both system-level constraints and the challenge of translating guideline-directed care into practice.

Follow-up after valve replacement emerges as a critical determinant of outcomes. Structured programmes for anticoagulation management, endocarditis prevention and optimisation of guideline-directed medical therapy for heart failure are essential, yet remain difficult to implement in many LMIC contexts. These disparities exemplify broader inequities in cardiovascular healthcare, where patients face lifelong risks after surgery without the necessary infrastructure to mitigate them.[5]

In this regard, the authors' work strongly supports the need for locally generated data to inform context-sensitive strategies. Rather than uncritical adoption of international guidelines, LMICs require adaptive models of care that balance evidence-based recommendations with feasibility, resource availability and population-specific risks. Future longitudinal and interventional studies from such settings will be crucial to refine valve selection, follow-up protocols and preventive strategies tailored to local realities.

This study is therefore a valuable step toward addressing the evidence gap, and should stimulate further research and policy initiatives aimed at reducing global disparities in valvular heart disease outcomes.

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