valve deterioration likely will become less common as mitral valve-in-valve implants become the preferred approach for high-risk patients. For many patients, this appears to be a lower-risk procedure with acceptable early hemodynamic results.³ Time will tell, but hopefully a 59-year-old treated with a bioprosthetic valve may consider a valve-in-valve intervention 15 or more years later, and that second implant will last the rest of the patient's life span. Alternatively, for low-risk patients, a conventional reoperation still may be the best choice. With a mobile anterior leaflet and pure MR, maybe repair is the best answer, especially for younger patients. I intend to be very cautious and probably will not repair valves that are stenotic. A failed repair is less successfully treatable with a valve-in-ring

procedure at this time. Over the years, I've noticed that patients don't appreciate early repair failures.

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Commentary: To replace or not to replace? The big question and how to find the answer

Shwe OO, MBBS, MRCS,^a and
Vito D. Bruno, MD, PhD^b

In the latest issue of the *Journal*, Brescia and colleagues¹ have approached a delicate subject: replace or repair a rheumatic mitral valve (RMV)? For degenerative mitral valve disease, there is large evidence and overall consensus on the fact that valve repair is better than replacement. Certainly, every modern mitral valve surgeon approaches a degenerative mitral valve regurgitation with a repair in mind and would try to avoid a replacement in most of these valves. However, the treatment for RMV disease differs according to the pathology of the valve and even the geographic regions. Starting from

Shwe OO, MBBS, MRCS (left), and Vito D. Bruno, MD, PhD (right)

CENTRAL MESSAGE

Rheumatic mitral valves can be repaired, but only in selected cases and every detail counts.

From the ^aBristol Heart Institute, University Hospital of Bristol NHS Foundation Trust; and ^bBristol Medical School – Translational Health Science, University of Bristol, Bristol, United Kingdom.

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Address for reprints: Vito Domenico Bruno, MD, PhD, Bristol Medical School – Translational Health Sciences, University of Bristol, Research Floor Level 7, Bristol Royal Infirmary, Upper Maudlin St, BS2 8HW, Bristol, United Kingdom (E-mail: Vito.D.Bruno@bristol.ac.uk).

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this background, the authors have retrospectively analyzed their data on RMV comparing 2 different eras with a primary composite outcome of death, reoperation, and severe valve dysfunction.¹ Their hypothesis is that a change in approach of the anterior leaflet (AL) had a significant impact on the results: indeed, around 2009 their surgical approach to RMV changed and included a systematic echocardiographic and intraoperative assessment specifically dedicated to the AL. This new approach altered the operative decision-making process,

leading to a lower threshold for replacement when the AL was rigid or calcified (70% repair rate in era 1 vs 33% in era 2).¹ This process was successful, as the operative era 1 was the strongest independent predictor of the primary outcome. These results are very important and confirm a very recent propensity-matched report that supports the evidence that RMV repair in selected patients is superior to mitral valve replacement.² The study from Brescia and colleagues,¹ although not representing the largest series of RMV, clearly defines an effective method of planning the surgical strategy that is not influenced by the presence and degree of mitral valve regurgitation alone. Similar to previous articles,³ there was no significant difference in mortality between mitral valve repair group and replacement group, although it has to be acknowledged that vast majority of the reoperations were related to repairs. This tells us that repairing rheumatic valves could be difficult in certain cases and that is why we see a slight benefit for the replacement group in terms of composite outcome, although not statistically significant.

It has to be recognized that some limitations are present in this study. One important limit of the study is related to the longer follow-up of era 1 that might have affected the number of events simply because the patients of this era had a longer period of exposure. Moreover, one factor impacting on the primary outcome was the presence of preoperative atrial

fibrillation, and we can see that era 1 had a significant greater number of patients with this concomitant disease. Therefore, some preoperative differences and time-related characteristics might have affected the results of the study, but despite these limitations, the study proposes a novel approach to RMV surgical planning and can guide us in determining which patients would benefit the most from a repair. At the end of the day, this all we want to know when treating RMV, and this study is an important addition to the current knowledge on this topic. In conclusion, we congratulate with the authors for the nice study and the relevant work done in improving their decision-making process and therefore the indication for replacement: the benefits for the patients are already evident, and an important lesson has been learned.

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