

Letter to the Editor: Minimally invasive aortic valve repair using geometric ring annuloplasty

Bilawal Nadeem¹

¹King Edward Medical University

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Correspondence : 1. Bilawal Nadeem

Contact: +92-3137562580 Email: bilawal.ranjha@gmail.com

Institute: King Edward Medical University, Lahore

Address: Mianwal Ranjha Dera Allah Wadhaya Tehsil and District Mandi Bahauddin, 50400

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To the Editor,

I read the article "Minimally invasive aortic valve repair using geometric ring annuloplasty" by Joshua N. Baker MD et al.¹ with enthusiasm. It was helpful to understand this manuscript, and the author's efforts should be commended. In conclusion, geometric ring annuloplasty appeared to be safe and effective for use in minimally invasive aortic valve repair, including the full spectrum of the valve and proximal aortic pathologies. However, I believe it is necessary to state additional points that would supplement the brilliance of this article and add to the preceding information.

To begin, significant concerns arise due to the study's retrospective nature due to the significant risk of bias in the patient's history and documentation, which resulted in unjustifiable outcomes. Furthermore, only a small number of people were included in the study, reducing the sample size and power of the study, which may have influenced their results. Furthermore, the authors did not provide better operative images such as views over leaflet repair techniques, detailed view of annuloplasty ring placement and suture fixation procedures to better understand this surgical technique, which might have been a crucial strength if the authors had also put forward this information. However, a 2015 study by Domenico Mazzitelli et al.² imparted a splendid graphical and realistic perspective of this procedure. Cardiovascular procedures, as previously stated, are associated with considerable hemodynamic preoperative and postoperative problems, providing more information for future evaluation of this approach. As a result, the authors should have described the procedure's varied problems and results. For instance, 2014 research included annular diameter, ring diameter, leaflet prolapse,

and other treatments such as ascending aortic aneurysm replacement, remodeling root aneurysm repair, and pericardial leaflet extension, and Systolic gradient and valve area.

Finally, valve-sparing root surgeries' long-term results and reproducibility have improved with time. This is partly due to the development of surgical techniques to treat and repair the AV cusps and address the annulus. According to current medical evidence, AV repair is safe, reduces valve-related mortality compared to prosthetic valve replacement, improves the quality of life, and has a life expectancy comparable to the general population. Researchers are exploring less invasive techniques to do annuloplasty and other heart valve surgeries by employing longer, narrow tubes. The majority of aortic valves can now be reconstructed with adequate outcome measures attributable to the application of a pathoanatomic approach to aortic insufficiency. According to new research, the restoration of inadequate aortic leaflets might be associated with lower surgical mortality, fewer valve-related problems, and improved survival.

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