

Letter to the Editor: Longer-Term Outcomes after Bicuspid Aortic Valve Repair In 142 Patients.

Roomi Raja ¹ and Satesh Kumar²

¹Ziauddin University

²Shaheed Mohtarma Benazir Bhutto Medical College

April 4, 2022

Title Page:

Title: Letter to the Editor: Longer-Term Outcomes after Bicuspid Aortic Valve Repair In 142 Patients.

Article Type: Letter to the Editor

Correspondence: 1. Roomi Raja

Contact No: +92-3342946940. Email: Romirajagoindani@Yahoo.Com

Institute: Ziauddin University Karachi

Address: Hemilton Courts Block G-1 Flat 408 Near Teen Talwar Clifton Karachi

Co-Authors: 2. Satesh Kumar

Contact No: +92-3325252902. Email: Kewlanisatish@Gmail.Com

Institute: Shaheed Mohtarma Benazir Bhutto Medical College Liyari, Karachi

Address: Parsa Citi Garden East, Karachi

Word Count: 335

Letter:

To the Editor:

We have reviewed the article entitled “Longer-term outcomes after bicuspid aortic valve repair in 142 patients” by mojyan safari MD et al.¹ with great enthusiasm. We were fortunate to review this valuable article which was informative and productive. We acknowledge the prime conclusion of the study that bicuspid aortic valve repair is associated with fewer postoperative clinical complications and the long-lasting durability of the valve. However, few concerns arise, which masks the findings of the study.

Firstly, conducting a study with having a small number of participants could alter the authenticity of the study. The authors should have reflected on taking a large sample size as fewer participants may modify the study’s findings. For example, a 2011 study decided to include 316 patients to achieve the study’s authenticity.² Secondly, sex differences have also been found to have an impact on the findings of the study. The author’s in their study have included only the male sex hence neglecting the female sex. Whereas a 2015 study highlighted that females tend to have more extended postoperative hospital stays and receive a maximum number of postoperative blood products.³

Moreover, as established, smoking is highly associated with increased chances of contributing to vascular atherosclerotic plaque and calcification on the aortic valve, which can be a potential reason for complicated longer outcomes in bicuspid aortic valve repair patients. Therefore, the authors should have widened their inclusion criteria and included smoking as one of the participant variables since ignoring patient characteristics may affect the study's outcome.⁴ Lastly, this single-centered study comes up with numerous concerns regarding its findings. To overcome this issue, the authors should have included participants from multiple centers and locations because of the impact of different races and socioeconomic populations on the study. For illustration, a 2011 study included participants from the whole of Olmsted country diagnosed with bicuspid aortic valve and appear authentic.⁵

Finally, more studies must be conducted on patients with bicuspid aortic valves to improve the prognosis and potentially reduce longer-term complications.

References:

- 1-** Safari M, Monsefi N, Karimian-Tabrizi A, Miskovic A, Van Linden A, Zacek P, Moritz A, Walther T, Holubec T. Longer-term outcomes after bicuspid aortic valve repair in 142 patients. *J Card Surg.* 2021 Dec;36(12):4645-4651. doi: 10.1111/jocs.16006. Epub 2021 Sep 21. PMID: 34547142.
- 2-** Aicher D, Kunihara T, Abou Issa O, Brittner B, Gräber S, Schäfers HJ. Valve configuration determines long-term results after repair of the bicuspid aortic valve. *Circulation.* 2011 Jan 18;123(2):178-85. doi: 10.1161/CIRCULATIONAHA.109.934679. Epub 2011 Jan 3. PMID: 21200006.
- 3-** Andrei AC, Yadlapati A, Malaisrie SC, Puthumana JJ, Li Z, Rigolin VH, Mendelson M, Clennon C, Kruse J, Fedak PW, Thomas JD, Higgins JA, Rinewalt D, Bonow RO, McCarthy PM. Comparison of outcomes and presentation in men-versus-women with bicuspid aortic valves undergoing aortic valve replacement. *Am J Cardiol.* 2015 Jul 15;116(2):250-5. doi: 10.1016/j.amjcard.2015.04.017. Epub 2015 Apr 18. PMID: 25983125.
- 4-** Svensson LG, Al Kindi AH, Vivacqua A, Pettersson GB, Gillinov AM, Mihaljevic T, Roselli EE, Sabik JF 3rd, Griffin B, Hammer DF, Rodriguez L, Williams SJ, Blackstone EH, Lytle BW. Long-term durability of bicuspid aortic valve repair. *Ann Thorac Surg.* 2014 May;97(5):1539-47; discussion 1548. doi: 10.1016/j.athoracsur.2013.11.036. Epub 2014 Mar 27. PMID: 24680032.
- 5-** Michelena HI, Khanna AD, Mahoney D, Margaryan E, Topilsky Y, Suri RM, Eidem B, Edwards WD, Sundt TM 3rd, Enriquez-Sarano M. Incidence of aortic complications in patients with bicuspid aortic valves. *JAMA.* 2011 Sep 14;306(10):1104-12. doi: 10.1001/jama.2011.1286. PMID: 21917581.