

# Letter to the Editor “Long-term outcomes of aortic root replacement for endocarditis”

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## *TITLE PAGE:*

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## **Letter:**

To the Editor,

We have reviewed the article ”Long-term outcomes of aortic root replacement for endocarditis” by Wojnarski CM et al.<sup>1</sup>with substantial interest. The author’s work is highly appreciated, and their efforts are highly striking. We agree with the primary conclusion of the study that when replacing aortic root in the presence of endocarditis, either with homograft or stentless bioprosthetic root can provide longevity up to 15 years. However, some concerns arise regarding the sustainability of the study.

Firstly, it was a single-centered study, drawing out various concerns regarding its rationale. To address this issue, the authors of this study should have conducted a multi-centered study and included participants from various locations, as different races and socioeconomic statuses may have an impact. For illustration, a 2016 study included patients from 47 different sites, including Europe, North America, and South America;

thus, their conclusions appear legitimate. The authors were thus able to explain various discrepancies in their findings.<sup>2</sup> As established, intravenous drug users are at risk for developing *Staphylococcus aureus* and candida infection, which could be the potential reason for valve endocarditis and septicaemia as a complication. Therefore, the authors should have broadened their inclusion criteria since neglecting the patient variables may influence the study's conclusion. Furthermore, a number of complications and their management could be clarified. For representation, a 2019 study chose to include the history of intravenous drug abuse and preoperative sepsis as characteristics of patients that reinforced their study and supported their results.<sup>3</sup>

Furthermore, conducting a study with a small sample size could influence the power of the study. Therefore, the authors should have considered including the large sample size, as the less number of participants may influence the study's outcome. As an illustration, a 2016 study opted to review a total of 1820 patients to increase the potency and efficacy of the study.<sup>4</sup> Additionally, gender differences have also been associated with variations in study outcomes. They included only the female sex. On the other hand, a 2019 study demonstrated that men are associated with an increased risk of endocarditis-related complications in patients undergoing aortic root arthroplasty.<sup>5</sup> Finally, further studies with different approaches should be carried out to achieve a good prognosis in patients with endocarditis and valve replacement. This could provide specific guidelines to avoid poor results and maximize the safety of this process.

## References:

1. Wojnarski CM, Chodavadia PA, Barac YD, Armstrong JL, Vekstein AM, Haney JC, Gaca JG, Chad Hughes G, Glower DD. Long-term outcomes of aortic root replacement for endocarditis. *J Card Surg*. 2021 Jun;36(6):1969-1978. doi: 10.1111/jocs.15472. Epub 2021 Mar 2. PMID: 33651483.
2. Regueiro A, Linke A, Latib A, Ihlemann N, Urena M, Walther T, Husser O, Herrmann HC, Nombela-Franco L, Cheema AN, Le Breton H, Stortecky S, Kapadia S, Bartorelli AL, Sinning JM, Amat-Santos I, Munoz-Garcia A, Lerakis S, Gutiérrez-Ibanes E, Abdel-Wahab M, Tchetché D, Testa L, Eltchaninoff H, Livi U, Castillo JC, Jilaihawi H, Webb JG, Barbanti M, Kodali S, de Brito FS Jr, Ribeiro HB, Miceli A, Fiorina C, Dato GM, Rosato F, Serra V, Masson JB, Wijeyesundera HC, Mangione JA, Ferreira MC, Lima VC, Carvalho LA, Abizaid A, Marino MA, Esteves V, Andrea JC, Giannini F, Messika-Zeitoun D, Himbert D, Kim WK, Pellegrini C, Auffret V, Nietlispach F, Pilgrim T, Durand E, Lisko J, Makkar RR, Lemos PA, Leon MB, Puri R, San Roman A, Vahanian A, Søndergaard L, Mangner N, Rodés-Cabau J. Association Between Transcatheter Aortic Valve Replacement and Subsequent Infective Endocarditis and In-Hospital Death. *JAMA*. 2016 Sep 13;316(10):1083-92. doi: 10.1001/jama.2016.12347. PMID: 27623462.
3. Sultan I, Bianco V, Kilic A, Chu D, Navid F, Gleason TG. Aortic root replacement with cryopreserved homograft for infective endocarditis in the modern North American opioid epidemic. *J Thorac Cardiovasc Surg*. 2019 Jan;157(1):45-50. doi: 10.1016/j.jtcvs.2018.05.050. Epub 2018 Jun 4. PMID: 30285921.
4. Mangner N, Woitek F, Haussig S, Schlotter F, Stachel G, Höllriegel R, Wilde J, Lindner A, Holzhey D, Leontyev S, Mohr FW, Schuler G, Linke A. Incidence, Predictors, and Outcome of Patients Developing Infective Endocarditis Following Transfemoral Transcatheter Aortic Valve Replacement. *J Am Coll Cardiol*. 2016 Jun 21;67(24):2907-8. doi: 10.1016/j.jacc.2016.03.588. PMID: 27311532.
5. Butt JH, Ihlemann N, De Backer O, Søndergaard L, Havers-Borgersen E, Gislason GH, Torp-Pedersen C, Køber L, Fosbøl EL. Long-Term Risk of Infective Endocarditis After Transcatheter Aortic Valve Replacement. *J Am Coll Cardiol*. 2019 Apr 9;73(13):1646-1655. doi: 10.1016/j.jacc.2018.12.078. PMID: 30947917.