

Challenges in sutureless aortic valve implantation with minimal invasive technique

Dear Editor,

When the topic is minimally invasive, sutureless aortic valve replacement, we are highly interested, as all cardiovascular surgeons would. We have read with interest the article entitled: "Minimally invasive aortic valve replacement with sutureless bioprosthesis through right minithoracotomy with completely central cannulation—Early results in 203 patients" by Sef et al.¹

For sutureless aortic valve implantation; the higher transverse aortotomy is required to be located approximately 0.5 cm above sinotubular junction or 3.5 cm above the aortic annulus.^{2,3} The level of transverse aortotomy to be at least 2.5 cm above the sinotubular junction is quite high. This aortotomy level restricts the exposure area for valve resection, decalcification, removing debris, and implantation of a prosthetic valve. On the other hand, selective cardioplegia delivery into the coronary ostia and protection of the coronary ostia during the procedure may get harder through an aortotomy at this level.

It is plausible to use del nido cardioplegia with minimally invasive technique as mentioned in the article. Transesophageal echocardiography guidance for antegrade cardioplegia could also be relevant, and retrograde cardioplegia could be implemented in addition to the antegrade cardioplegia.⁴ While on the subject of myocardial protection, it should be mentioned that the use of normothermia is quite risky for procedures with a mean cross-clamp time of 35 (24–76) min.

Finally, the authors did not elaborate on the fact that if any of the patients required pacemakers following the operation.⁵

We congratulate the authors with regard to their valuable study which presents the early results of sutureless aortic valve implantation with minimal invasive technique. We are looking forward to hearing the authors' opinions on these matters.

Yours sincerely

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