# Seven-year follow-up of Perceval sutureless bioprosthesis for aortic valve endocarditis.

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We carefully read the recent paper by Singh al. (1) on long-term follow-up of sutureless Perceval aortic valve in the case of calcified homograft.

Similar to the authors of the article we report the case of a 77-year-old man who underwent at the age of 56 aortic root replacement for aortic valve endocarditis with the implantation of cryopreserved 27 mm homograft. At age 69 years he presented a recurrence of endocarditis causing severe valve regurgitation. During the operation on the operative field, we report an infection limited to the leaflets while the rest of the homograft was spared from the infection. For this reason and considering all the risks related to the removal of the homograft and aortic root re-replacement, we preferred to remove the homograft valve leaflets leaving the incorporated homograft in place, and implanting a Perceval bioprosthesis (Livanova Group S.p.A., Saluggia, Italy) XL size.

The postoperative course was uneventful. The patient was periodically evaluated with regular echocardiographic controls. At the moment, the patient lives with his wife. He is in good clinical condition, with NYHA functional class I, and no other symptoms are reported. The last TTE (performed in August 2021) shows a mean transprosthesis gradient of 12 mmHg without paravalvular leaks and normal ejection fraction (57%), no infective or embolic episodes were reported during the 7 years and three months follow-up time.

Our experience is a great support to the case previously presented by Singh al. (1) regarding the use and durability of the Perceval stentless prostheses. Infective aortic endocarditis represents a great challenge in cardiac surgery. The consequent clinical setting is associated with high in-hospital morbidity and mortality, ranging from 15% to 30% in the case of native valve endocarditis (2).

Moreover, in the case of prosthetic valve endocarditis (PVE), the mortality is even higher, between 4% and 30% if surgically treated, and from 24% to 46% if not surgically treated (3). The surgical procedures needed are often technically complex, scarcely reproducible, and highly dependent on surgeons' skills.

Moreover, sutureless bioprostheses could represent an acceptable alternative to other substitutes as reproducible solutions in very complex settings as aortic valve endocarditis or severely calcified homograft.

Up to now, despite it being clearly demonstrated that sutureless bioprostheses provide excellent hemodynamic results, little is known about the long-term outcomes and freedom from reintervention.

In this context, the exceptionality of this case report is that, to the best of our knowledge, this is the first report of mid-term durability of Sutureless aortic bioprosthesis used to treat infective aortic valve endocarditis in high-risk patients.

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