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Commentary: It is not yet time for the sunset of aortic valve surgery!

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The encouraging results reported from various randomized clinical trials (RCTs) and observational studies have spread great enthusiasm in the use of transcatheter aortic valve implantation (TAVI) for high-risk patients. To date, many centers have been investing economic resources and time in research for using TAVI also for patients at intermediate risk^{1,2} and, even, at low risk.³ However, how effective and safe it will be to include those intermediate-risk and low-risk patients in a therapeutic course with TAVI rather than surgical aortic valve replacement (SAVR) is still a much debated topic. It should be noted that SAVR still offers valid results for intermediate-risk patients⁴⁻⁶ both at short and long term, and the TAVI procedural costs are certainly greater than those of SAVR.⁷

In this issue of *JTCVS*, Muneretto and colleagues⁸ focused on the clinical effects on intermediate-risk patients who had undergone TAVI compared with SAVR, using sutureless prostheses for the latter. They conducted a multicenter propensity score-matched retrospective study and analyzed the outcomes in two paired groups of 291 patients who had undergone TAVI or SAVR.⁸

The authors reported a clear advantage of SAVR compared with TAVI in terms of 30-day mortality (1.4% vs 5.5%), permanent pacemaker implantation (5.5% vs 10.7%), peripheral vascular complications (0% vs 7.9%), and infections (1% vs 5.1%). The SAVR group had a significantly greater incidence of major bleeding (4.8% vs 0.1%) and transfusions (35.7% vs 13.7%). At 5-year follow-up, the SAVR group had a lower incidence of mortality (16.1% vs 28.9%), paravalvular leakage (1.3% vs 9.8%), stroke (1.4% vs 5.3%), and permanent pacemaker implantation (7.3% vs 16.1%). From the analysis of these data, it could

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CENTRAL MESSAGE

Transcatheter aortic valve implantation in intermediate-risk patients is gathering great enthusiasm. However, the conflicting clinical results still require further clinical studies.

be speculated that TAVI is affected by negative clinical results in intermediate-risk patients and that it could seem inferior to the conventional surgical approach. A recent meta-analysis highlighted better 5-year survival after SAVR compared with TAVI,⁹ and some meta-analyses of RCTs of low-risk patients have yielded conflicting results.¹⁰⁻¹²

The recent 5-year follow-up data from the PARTNER-2 investigators¹³ reported no significant differences in terms of the incidence of death from any cause or disabling stroke. However, the rehospitalization rate and composite outcome of “mortality from any cause, any stroke, or rehospitalization” were significantly greater for the TAVI patients.¹³ Moreover, aortic valve reintervention was more frequent in the TAVI than in the SAVR group and this could be correlated with a greater rate of aortic valve regurgitation in the TAVI patients. These data could support the message from Muneretto and colleagues,⁸ who have firmly stated that TAVI is affected by suboptimal results in intermediate-risk patients. However, the patients included in their multicenter study had a much lower incidence of several preoperative risk factors than patients included in the PARTNER-2 and SUR-TAVI trials.^{2,14} Therefore, it can be assumed that all the patients included in the study by Muneretto and colleagues⁸ had undergone a careful selection process by the heart team before being offered one therapy rather than another, unlike the patient selection in the two cited RCTs.

In conclusion, the key message from Muneretto and colleagues⁸ is that SAVR should be the first choice compared

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with TAVI for intermediate-risk patients. It is not yet time for the sunset of SAVR!

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Commentary: The role of sutureless aortic valves in the transcatheter aortic valve replacement era

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CENTRAL MESSAGE

Sutureless valves are an attractive alternative to surgical aortic valve replacement (SAVR) in the transcatheter era. However, little clinical benefit has been demonstrated compared to SAVR.

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In this issue of the *Journal*, Muneretto and colleagues¹ present a multi-institutional, retrospective study of intermediate-risk patients undergoing surgical aortic valve replacement (SAVR) with sutureless valves (SVs) or