

Minimally Invasive Aortic Valve Replacement with a Sutureless Valve in Elderly

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Objective

Analysis of outcome after minimally invasive sutureless AVR in a real-world older patient population

Methods

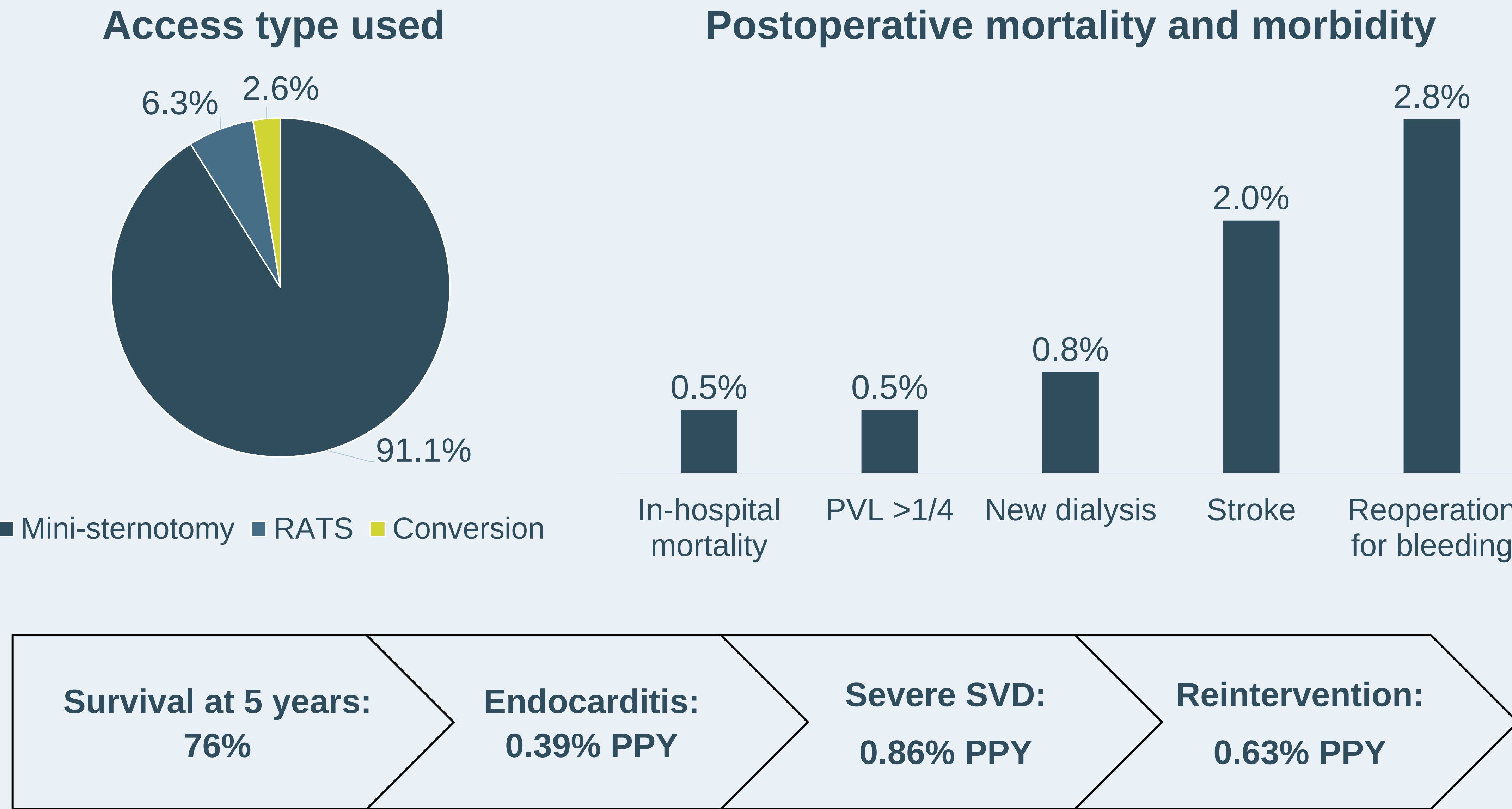
Monocentric retrospective study

Patient inclusion criteria were sutureless aortic valve replacement using the Perceval® valve and a minimally invasive approach

Patients were included between January 2007 and June 2022. During this period, both the implant sizing technique and valve type evolved.

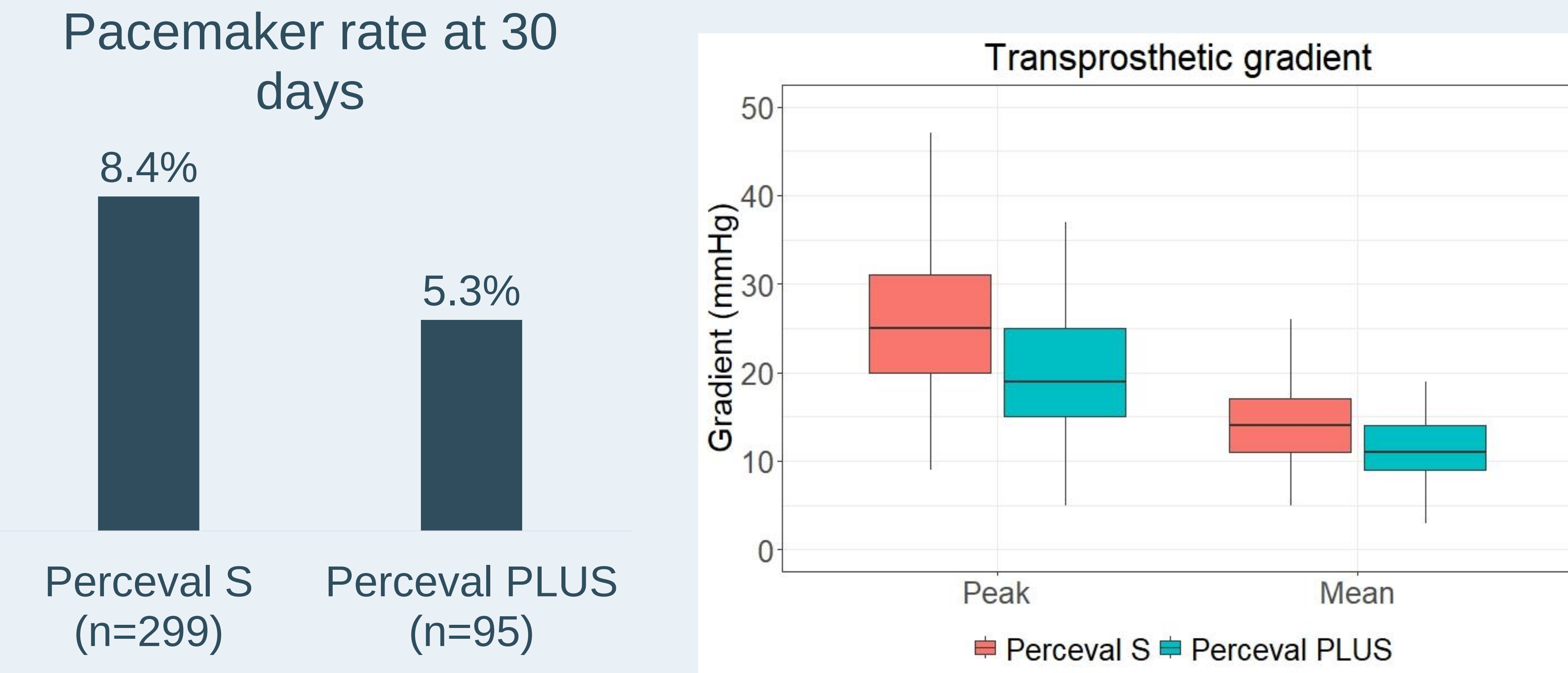
Results

In total, 394 patients received a sutureless valve via MICS. The median age of this population was 80 years (75 – 83) with 51% octogenarians. The median EuroSCORE II was 2.5% (1.7 – 3.7). Nearly all patients were treated for a single aortic valve replacement (97.7%). Procedure times were short with a median cardiopulmonary bypass time of 61 (51 – 72) min. and cross-clamp time of 38 (32 – 45) min.



Evolutions in valve use

In 2017, an implant sizing shift was introduced and in 2020, the Perceval PLUS. Both changes influencing pacemaker implantation rate and transprosthetic gradients.



Conclusion

In an older patient population, we still observe very low rates of major postoperative complications with 0.5% in-hospital mortality after minimally invasive sutureless AVR. Pacemaker rate and hemodynamic performance improved with the valve evolutions, further improving patient outcome.