

## Objectives

Aortic valve replacement (AVR) through a right anterior mini-thoracotomy (RAMT) is technically more complicated but its benefits is now well done and accepted. Suturless valves facilitates this minimally invasive approach. We describe our experience of AVR through a RAMT with the suturless Perceval (Corcym, Italy) bioprosthesis.

## Methods

From October 2017 to October 2022, a total of 152 patients underwent isolated AVR with Perceval suturless bioprosthesis via RAMT. Procedures were achieved through a small 5cm RAMT in the second. Cardiopulmonary bypass was established through the femoral vessels or subclavian artery. Preoperative diagnoses were aortic valve stenosis (n=147), insufficiency (n=4) and endocarditis, (n=1). The clinical and echocardiographic follow-up outcomes were analysed for all patients. The primary end point of the study was 30-day mortality.

## Results

Patient mean age was  $80 \pm 4$  (ranging from 66 to 92) including 86 female patients (57%) and the EuroSCORE II was  $3.8\% \pm 4.4\%$ . Mean cross-clamp and cardiopulmonary bypass times were  $49 \pm 15.1$  min and  $87 \pm 24$  min, respectively. The prosthesis sizes implanted were: S (n=32), M (n=63), L (n=35), XL (n=22). One patient needed conversion to full sternotomy because of a poor visualization of the operative field. Median intensive care unit and hospital stay were 2.1 and 9 days respectively. In 14 patients (9.21%), pacemaker implantation was needed. At discharge, 68% (n= 104) of the patients back home directly. In hospital mortality was 3.9% (n=6) and 30-day mortality was 2.6 % (n=4). The mean follow-up was  $29 \pm 12.6$  months. No moderate, or severe paravalvular leak was found perioperatively.

## Conclusion

ARV with the suturless Perceval bioprosthesis through a RAMT, is a safe and reproducible approach with well know benefits and a reduced risk of pacemaker implantation. Our single center experience demonstrate that this valve can be safely implanted via a minimally invasive approach with excellent early and intermediate outcomes and hemodynamic performance. Minimally invasive AVR through a RAMT with suturless valve is maiby real alternative to transcatheter aortic valve implantation.

