Remodeling technique of aortic valve repair with root replacement and extraaortic ring

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Objective: Aortic valve replacement (AVR) is still the most commonly used therapeutic option for patients suffering from AR. Aortic valve repair (AVRep) is an attractive alternative method, since it avoids the risks of prosthesis-related complications.[1,2] We would like to present our experience with the Yacoub root remodeling, valve sparing technique with the extraaortic expansible ring.

Patients and Methods: Between November 2014 and August 2017, a total of 49 patients (52.1±12.5) years; 18.9% female, EuroScore II of (2.4%±1%) underwent AVRep, 6 due to isolated cusp malcoaptation and 43 with associated with aortic root dilatation. Recontruction was done with the Coroneo Extraaortic Ring (27 (25-31)) and the Gelweave graft (28 (26-32)). Concomitant procedures included MVRep in three patients with TVrep in two of them, CABG in two patents and replacement of aortic arch and placement of EVITA stent graft in two patients. Echocardiography was used to determine AR severity grade pre-operatively, during immediate post-operative period (within 7 days from operation) and at early follow-up.

Results: In postoperative follow up no patients died. Freedom from reoperation was 94% (3/37) and there were 2 patients reoperated due to early postoperative regurgitation, and one because of early cardiac tamponade. A significant decrease in LV end-diastolic diameter was observed (LVEDD) (61.3/53.5 mm) with further decrease at early follow-up. At follow up none of the patients had major AR (AR 0=40, AR 1+=7, AR 2+=2).

Conclusions: We have proved that AVRep is a good alternative for patients with aortic insufficiency and leads to LV reverse remodeling with comparable results in terms of LVEDD and LVEF immediately post-operatively and at early follow.

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LITERATURE

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