

Concomitant Aortic Wrapping (AW) in patients undergoing Aortic Valve Replacement (AVR) with coexistent mild to moderate ascending aortic dilatation

Background: Many aortic diameter reduction techniques have been suggested for patients with dilated ascending aorta. However, the most effective technique with the least surgical hazards is not yet determined.

Aim of work: In this study, we investigated the post-operative impact of wrapping the ascending aorta using a fashioned vascular prosthesis on the diameter of different parts of the aorta, from the aortic root up to the proximal arch.

Patient and Methods: This study included 62 patients with ascending aortic diameters of 4.5-5 cm who underwent AW and AVR at Cairo University, Fayoum University, and Beniseuf University Hospitals. Data on perioperative multi-level aortic diameters, short- and mid-term morbidity, and mortality were gathered in the period between January 2016 and June 2021.

Results: Throughout the hospital stay and the follow-up period (11.30 + 13.11 months), there were no deaths, post-operative infection, or need for re-operation among our patients. Re-exploration was needed in one patient for significant postoperative hemoglobin drop. Follow-up imaging revealed a statistically significant reduction in the diameters of the different parts of the ascending aorta and the proximal arch (P value < 0.05).

Conclusion: Ascending aortic wrapping during AVR effectively reduces dilated aortic diameter and the risk of reoperation for aneurysms or dissections.