

# Fate of the moderately diseased aorta; a single center experience.

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## Abstract

**Background** The fate of the aorta after tube graft replacement remains unclear as is the future of aortic dilatation in patients receiving other cardiac operations. We investigated the evolution of aortic dilatation after non aortic cardiac operations and the dimensions of the root and arch after ascending aorta replacement. **Methods** From 252 patients with aortic dilatation operated from January 2010 to June 2019, 160 were followed with computed tomography angiography. Two groups were formed according to the initial operation received. Group I (n=36) included patients with a dilated aorta, unreplaced during different indication cardiac surgery. Group II (n=124) included patients receiving tube graft aorta replacement with or without aortic valve replacement. Mean preoperative and follow-up diameters of the different aortic segments were compared in both groups using the two sided paired t-test for repeated measurements. **Results** 18 patients died during follow-up, with one death occurring during reoperation for a false aneurysm of the distal anastomosis on the aortic arch. There was no other re-operation for aortic aneurysm, rupture or dissection. In group I the aortic arch diameter increased slightly, while the rest of the aortic segments remained stable. In group II the aortic root diameter decreased slightly while the aortic arch remained stable. **Conclusion** Ascending aorta replacement with a tube graft remodeled the aortic root and did not allow progressive dilatation of the aortic arch. In patients with moderate ascending aorta dilatation, the unreplaced ascending aorta and aortic root remained relatively stable but the aortic arch increased slightly during followup.

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