

**Endovascular pulmonic ‘Bentall procedure’ as tailored treatment strategy in a ruptured and dilated pulmonic homograft of a patient with congenital heart disease following Ross operation**

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**Introduction:** Due to signs of severe right heart failure a 31-year old female patient was hospitalized. The patient had known for Shone complex after ROSS and mitral valve replacement with a history of 5 open-heart surgeries. Computertomography revealed a ruptured and severely dilated, 21-years old pulmonic homograft with substernal and sternal bleeding. Due to the ruptured homograft with substernal bleeding an alternative strategy for the dilated homograft has do be developed to prevent high risk surgery.

**Methods:** In order to cover the perforation a self-expanding stentgraft in the enlarged right-ventricular outflow tract and ruptured homograft was performed. As no stent-grafts with the desired diameter and length are commercially available, 34mm wide and 77mm long covered Zenith TBE was modified on a side-table during the procedure. The stent-graft was partially deployed through the Captor-valve out of the peel-away sheath. The fabric was shortened using electrocautery between the mid- and the distal stent, thereby shortening the stent-graft to a length of 52mm. The distal fixation of the stent-graft was replaced using 2 5/0 monofilament sutures that were attached to stainless steel triggerwire controlling the distal fixation. The surgeon-modified covered stent-graft was then reloaded and implanted with full coverage of the 15mm perforation. Finally an Edwards Sapien 3 valve was inserted via a 16Fr e-sheat and anchored within the Zenith TBE.

**Results and Conclusions:** Tailored modifying of a self-expandable aortic stent graft opens an alternative for treatment of severely enlarged and perforated homograft to prevent high risk surgery.