

# LESS INVASIVE TAILORED HYBRID PROCEDURES IN CARDIAC SURGERY

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In an elderly population, many patients are suffering from multiple cardiovascular problems at different locations. Age and multimorbidity are limits for conventional open heart surgery. New hybrid interventions are offering tailored treatment options also for this growing group of patients: patients with cerebrovascular disease and status post stroke are frequently also suffering from degenerative aortic valve disease. One such tailored hybrid procedure consists of a typical endarterectomy of the affected carotid artery, mostly under local anesthesia, followed by a catheter based aortic valve replacement via a vascular graft anastomosed to the patients common carotid artery, which contains the necessary ports for the transcatheter aortic valve implantation (TAVI) and avoids major interferences with carotid flow. We have performed this procedure in four patients, among them one with a bilateral endarterectomy. All of them were discharged home without new neurologic pathologies. This procedure will be demonstrated in detail. Many elderly patients are referred to us for a TAVI procedure but preoperative investigations reveal further significant cardiac pathologies such as coronary artery disease with severe left main or diffuse triple vessel involvement, further valvular disease or even congenital defects. In a novel hybrid approach, we address the other pathologies in the typical open fashion and finally insert a TAVI valve under direct vision via a small mini aortotomy. So the aortic valve replacement does add no more than ten minutes to the cross clamp time and such, even complex operations may be performed in very old and multimorbid patients with a reasonable risk, as demonstrated in already more than 20 patients.

**Conclusion:** With new tailored hybrid approaches, individual complex cardiovascular pathologies in elderly and multimorbid patients can be treated with an acceptable risk and good results

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