

Complex hybrid procedure of a type 1 TAAA with retroperitoneal chimney approach for TEVAR and carotid-subclavian bypass

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Abstract

Introduction: The 71-year-old patient with a symptomatic thoracic-abdominal aneurysm type 1 de Bakey (6.4 cm thoracic, 5.9 cm abdominal) and aneurysm of right iliac artery (4.2 cm) was admitted to our casualty department. Clinically she complained of chest as well as progressive back pain. The patient had an imperative will for treatment. A previously untreated pheochromocytoma and a mammary carcinoma (pT1 G2 pN0), also myocardial revascularization (LIMA/RIVA) are known as serious accompanying diagnoses. Furthermore, a pronounced PAD with bilateral subtotal occlusion of the external iliac artery existed, an interventional transfemoral approach was impossible. A supplemental blood supply of the liver by the superior mesentery artery was detected, which gave us a distal landing zone of 4 mm over stenting the coeliac trunk. We decided to perform a hybrid procedure including a left carotid-subclavian bypass essential according to the left mammarian bypass and a right aorto-profunda bypass with a side-to-side chimney functioning as sheath. Under rapid pacing the implantation of two TEVAR stent grafts with overstenting of the left subclavian artery as well as the coeliac trunk followed. Afterwards the trans-brachial subclavian plugs occlusion and controlling angiography showed successful treatment. At ICU initially stable circulatory conditions turned to increased lactic acidosis. Because of transfusion-dependent blood loss into the retroperitoneal drains, an angiography and a CT abdomen showed a pronounced retro peritoneal haematoma without an active bleeding.

Background: Only a small Type IIb endoleak was detected. In suspected of acute liver failure, due to the persistently compromised coagulation and strongly elevated liver values, upper abdomen sonography was immediately performed and showed a well perfused hepatic artery. A strongly reduced heart index of 1.5 l/m² forced a highly dosed administration of inotropics. On the second postoperative day the patient underwent a ventricular fibrillation with maximum therapy, which rapidly degenerated into an asystole. Resuscitation measures were not enhanced because of actually limited prognosis.

Method:- The financially accessible thoracic stent unites all require a 20-mm-long proximal seal zone. It is basic to get great relation all through this fragment to keep away

from endoleak or gadget relocation. Contingent upon the patient's life structures, it might be important to cover at least one of the curve branches to acquire a sufficient seal. Not inconsistently, inclusion of the left subclavian course is required to acquire a sufficient proximal seal, especially in dismemberment or horrendous aortic transection cases. At the point when this is vital, preoperative duplex ultrasound of the carotid and vertebral conduits ought to be performed, if conceivable, and thought given to performing preemptive left carotid-subclavian detour or subclavian transposition. TEVAR would then be able to be finished as a second-stage technique with embolization of the local subclavian supply route to forestall type II endoleak. On the off chance that the left carotid or innominate course would require inclusion, at that point antegrade sidestep from the rising aorta^{36 37 38} or extra-anatomic detour by means of a carotid-carotid bypass³⁹ might be essential. An endovascular way to deal with this anatomic issue has additionally been concocted that includes situation of a stent into the branch vessel corresponding to the fundamental endograft,^{40 41} and is alluded to as the snorkel, periscope, or stack procedure. This can likewise be utilized as a bailout procedure in case of accidental branch inclusion with the primary endograft.

Results: The lower risk profile of TEVAR when compared with open repair makes it the preferred modality for many patients. There is the need for ongoing surveillance, as 3.6 to 4.4% of these grafts will require secondary intervention. CTA is the modality of choice and is optimal for the diagnosis of endoleak. Noncontrast CT can also be useful if it shows ongoing shrinkage of the aneurysm sac. All in all, TEVAR has become the favored methodology for patients with thoracic aortic pathology and life systems manageable to endograft position. Sufficient seal zones, cautious preoperative arranging, and legitimate gadget measuring are basic to get a decent outcome and breaking point difficulties. Half and half methodology choices and fenestrated endografts may additionally grow the quantity of patients who can profit by this treatment methodology. Patients are observed in the ICU postoperatively, with cautious checking of their hemodynamic and neurologic test. They are typically moved to the floor by postoperative day 3 and released home inside multi week. In the event that there are any worries about endoleak dependent on the specialized parts of the case, a CTA is performed preceding release. Unite observation is performed with CTA at 1 month, a half year, and afterward every year to evaluate for satisfactory join position and endoleak.

Extended Abstract

Biography: Justus Gross is Head of the Department of Vascular Unit, Clinic for Cardio-Vascular Surgery, University Hospital Schleswig-Holstein, Germany. The main focus is set at aortic treatments, such as complete open, complete endovascular and complex hybrid procedures. Approximately 250 aortic cases are treated per year. The entire research group develops novel technologies according to stent-graft designs and finding solutions for endovascular treatment of the aortic arch.

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