

prospectively recorded in a certified institutional registry. A retrospective analysis of the registry was performed, and 103 visceral vessels treated with Gore VBX in 28 patients between July 2018 and December 2019 were found. Perioperative results were analyzed in terms of technical success, VBX-related adjunctive procedures, 30-day patency, and reinterventions. The follow-up program consisted of a computed tomography angiography scan at 1 month and yearly thereafter and duplex ultrasound examination at 3 months and every 6 months thereafter. Follow-up results were analyzed in terms of bridging stent-related patency, complications, and reinterventions.

Results: The indication for intervention was a thoracoabdominal aneurysm in 18 cases, a juxtarenal dilation in 5 patients, a pararenal aneurysm in 3 patients, a proximal para-anastomotic aneurysm after open aortic reconstruction in 1 case, and a short-neck (<5 mm) aneurysm in another patient. All patients underwent an elective intervention. In 19 cases, a fenestrated graft was placed, and in 4, a branched graft; in the remaining 5 cases, a combination of both fenestrations and branches was the configuration of choice. Overall, 55 renal arteries, 25 superior mesenteric arteries, and 23 celiac trunks were treated with Gore VBX. Technical success was 100%. Additional stent placement into a target visceral vessel to extend the distal landing zone was required in five vessels (4.9%). The asymptomatic occlusion (1/103 [0.9%]) of the VBX for a celiac trunk affected by subocclusive stenosis preoperatively was recorded 20 days after the procedure and was left untreated. No perioperative reinterventions were performed. Median duration of follow-up was 4.4 months (range, 1-14 months); no occlusion was documented. Reintervention rate was 0.9% (1/103); a type IC endoleak from a celiac trunk was diagnosed 3 months after the procedure and was treated with distal placement of another VBX stent graft into the celiac trunk, with complete resolution of the endoleak.

Conclusions: In our experience of 103 target visceral vessels, the Gore VBX stent graft guaranteed satisfying perioperative results, providing optimal delivery and adaptability into target vessels. Further investigation is needed to evaluate follow-up results, especially in terms of resistance to the continuous aortic remodeling and the pinching load related to vessel pulsatility.

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IPC07.



Italian COLT Registry: A Multicenter Experience

Paola Wiesel,¹ Isabella Patruno,¹ Serena Pisanello,¹ Sergio Zaca,¹ Michele Antonello,² Gabriele Piffaretti,³ Domenico Angiletta,¹ Raffaele Pulli,¹ ¹University of Bari, Bari, Italy; ²University of Padova, Padova, Italy; ³University of Insubria School of Medicine, Varese, Italy

Objective: The objective was to evaluate early and midterm results of elective and urgent endovascular treatment of complex thoracoabdominal aortic diseases with the custom-made multibranched COLT endograft system (JOTEC, Hechingen, Germany).

Methods: Thirteen patients (12 men and 1 woman; mean age, 72 years) were treated with the custom-made multibranched COLT endograft system from June 2018 to December 2019 in three different Italian institutions. The complex thoracoabdominal aortic diseases were divided as follows: 3 ruptured post-dissection aneurysms; 10 thoracoabdominal aortic aneurysms. One patient was treated for an impending rupture after an endoprosthesis migration. All patients were assigned to American Society of Anesthesiologists class 3 or class 4. The median aneurysm diameter was 74 mm. All procedures were performed under general anesthesia, with femoral and axillary percutaneous approach. The spinal catheter for cerebrospinal fluid drainage was used in all the elective cases. Emergent and urgent procedures were completed in one step; all the others were divided in two stages. Self-expanding covered stents were implanted as bridging stent grafts to connect the target visceral vessels (TVVs) with the main body. Balloon-expandable covered stents were used to fix the bridging stent proximally, and distal relining with bare self-expandable metal stents was employed to provide a good landing zone when a tortuous anatomy was present. The technical success was defined as the absence of type I and type III endoleak at the end of the procedure and patency of all TVVs. The presence of spinal cord ischemia, procedure-related reinterventions, presence of any type of

endoleak, freedom from reinterventions, overall survival, and 30-day mortality were also evaluated.

Results: Technical success was achieved in 85% of procedures; 52 TVVs were involved, and 2 TVVs (1 celiac trunk and 1 right renal artery) were embolized in urgent settings. No cases of spinal cord ischemia or aorta-related mortality were recorded. We registered two early deaths, one on postoperative day 6 and the other after 10 days due to myocardial infarction. Two late deaths, after 2 months and 4 months, were related to cerebral hemorrhage and pneumonia. The mean follow-up was 6 months. No type I or type III endoleaks and no bridge stent occlusion were recorded. Freedom from reinterventions was 100%. The estimated survival rate was 79.1%.

Conclusions: The use of the COLT stent graft in thoracoabdominal disease appears to be feasible and safe in elective and urgent settings. The use of self-expanding covered stents as bridging stent grafts, combined with a proximal fixing with balloon-expandable covered stents and a selective distal relining, seems to provide good early and midterm results. Long-term follow-up is necessary to confirm these results.

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Predictive Factors for Major Complications During Surgical Conversion After Failed Endovascular Aneurysm Repair: 15-Year Multicenter Experience

Sandro Lepidi,¹ Andrea Xodo,² Francesco Squizzato,² Domenico Milite,³ Stefano Bonvini,⁴ Diego Cognolato,⁵ Reinhold Perkmann,⁴ Michele Antonello,² ¹University Hospital of Cattinara, Trieste, Italy; ²Padova University, Padova, Italy; ³S. Bortolo Hospital, Vicenza, Italy; ⁴Santa Chiara Hospital, Trento, Italy; ⁵S. Bassiano Hospital, Bassano del Grappa, Italy

Objective: The aim of this study was to report the 15-year experience with open conversion (OC) after failed endovascular aneurysm repair (EVAR) to identify predictors of perioperative mortality and complications.

Methods: A multicenter retrospective study was carried out of consecutive patients undergoing OC after EVAR from five referral centers of the same geographic area between April 2005 and November 2019. Indications for treatment and demographic, anatomic, intraoperative, and postoperative data were collected on a prospectively maintained database. Primary end points were 30-day mortality and major adverse events (MAEs), including severe cardiac, renal, and respiratory complications. The secondary end point was midterm mortality.

Results: OC was performed in 93 patients (89 men [95.7%] and 4 women [4.3%]) during the study period; 58 underwent elective surgery, 11 had an urgent treatment (within 24 hours), and 24 patients underwent emergency surgery. Median time from EVAR implantation to OC was 55 months (0-215 months), and 36 (38.7%) patients underwent at least one surgical or endovascular additional procedure from the endograft implantation date to the conversion event. The most common indications for OC were endoleaks ($n = 46$ [49.5%]), followed by aortic rupture ($n = 18$ [19.5%]), stent graft thrombosis ($n = 13$ [14.0%]) and graft infection ($n = 8$ [8.6%]). Sixty patients (64.5%) had a complete endograft removal, whereas 31 patients (33.3%) had semiconversion; two patients (2.1%) had, respectively, aortic banding and lumbar artery ligation. Suprarenal clamping was required for 74 patients (79.6%), with a median renal clamping time of 23.9 ± 10.5 minutes. Overall 30-day mortality was 15.0%, and MAEs rate was 25.7%. Age (odds ratio [OR], 1.26; 95% confidence interval [CI], 1.08-1.58; $P = .01$), secondary procedures after standard EVAR (OR, 11.89; 95% CI, 1.22-238.48; $P = .05$), and renal clamping time >30 minutes (OR, 14.32; 95% CI, 1.68-241.40; $P = .02$) were independent predictors of MAEs on multiple logistic regression (Table). Suprarenal endograft fixation, late or immediate OC, indication for OC, and other clinical variables were not independently associated with MAEs or mortality. Overall survival at 3 years was, respectively, 80.4%, 78.7%, and 57.4% for elective, urgent, and emergency surgery (Fig).

Conclusions: OC is associated with significant 30-day mortality and morbidity. Secondary procedures after standard EVAR would seem to