**EVAS and ChEVAS in treatment of the failed EVARs**

Marwan Youssef, MD, Fritz Dünschede, MD, Bernhard Dorweiler, MD, PhD, and Christian F. Vahl, MD, PhD

Department of Cardiothoracic and Vascular Surgery, Medical Center of the Johannes Gutenberg-University Mainz, Germany

**Purpose:** We report on alternative approach to exclude the endoleaks type Ia/III after EVAR using the EndoVascular Aortic Sealing (EVAS), either alone or in combination with Chimney grafts (ChEVAS).

**Methods:** Between Mars 2014 and April 2016, 12 patients (all men, median age 79 years) were presented because of progression of an abdominal aortic aneurysms after EVAR (median aneurysm size: 7.85 cm; range: 6.5-13 cm). Endoleak type Ia was the predominant cause in 9 patients, followed by endoleak type III (type a and b) in 3 patients. 7 patients were treated on emergent/urgent basis (2 contained ruptures and 3 symptomatic).

All patients received relining with Nellix grafts. If an adequate proximal landing zone (at least 10 mm) was present, two Nellix grafts were implanted infrarenal to exclude the endoleaks in 3 patients (2 EL type III and 1 EL type Ia).

In the case of lacked proximal landing zone, Chimney grafts were used to preserve the renovisceral vessels (9 patients).

**Results:** The technical success was 100%. 25 Nellix grafts were used (1 patient 3 Nellix). In total, 23 renovisceral vessels were revascularized with Chimney grafts as following: 1-Vessel-ChEVAS: 1 patient; 2-Vessel-ChEVAS: 4 patients; 3-Vessel-ChEVAS: 2 patient; 4-Vessel-ChEVAS: 2 patients.

The postoperative CTA-controls revealed satisfactory results. The perioperative complications included transient 1 renal insufficiency and 1 renal hematoma. One old patient with coexisted COPD and contained rupture died 4 weeks postoperatively because of multi organ failure.

During the follow up period (median 12 months; range 6-25 months), there were no CG occlusions, no endoleaks and no reinterventions were required.

**Conclusions:** Our initial experience demonstrates that EVAS is feasible and effective in treatment of endoleaks Type Ia and III after EVAR. Further studies with larger cohorts and follow up periods are of course warranted to corroborate these results.

Marwan Youssef, Head Division of endovascular Surgery, University Medical Center, Mainz, Germany, Marwan.youssef@unimedizin-mainz.de