15–28 days and 29–180 days. Primary outcome was 30-days combined stroke and death rate.

**Results:** In total 269 patients had complete data and were included in the analysis. The demographic and clinical data were similar in the groups The 30-day combined stroke and death rate did not differ significantly between the groups; 0% (0/12) in the group treated 0–2 days, versus 3.9% (3/76), 2.9% (2/68), and 5.3% (6/113) for the patients treated at 3–7 days, 8–14 days and 15–180 days respectively ($p = 0.759$). The 30-day stroke and death rate in the secondary analysis were also similar between groups; 3.4% (3/88), 2.9% (2/68), 6.3% (3/48), and 4.6% (3/65) respectively, ($p = 0.813$).

**Conclusion:** In this national registry study, limited by small numbers, patients that underwent urgent CAS after onset of a neurologic event had no additional risk of suffering from a perioperative complication.

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**Lessons from 500 Adverse Event Reports on SFA Stents from MAUDE Database-need for Action by ESVS?**

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**Introduction:** When a Boeing aircraft develops a problem at New York, within the next 24 hrs the whole Boeing fleet, the world over, gets an alert with initial defect report, cause and a fix. On the other hand when the trigger mechanism of delivery system of an SFA stent fails in a London Hospital, nothing similar happens. FDA mandates the manufacturers to report all adverse events within 30 days on the MAUDE database. An analysis of 500 adverse event reports on SFA stents reveals lessons for the vascular societies and calls for unified action for the sake of patient safety.

**Methods:** MAUDE database was searched for all adverse event reports on SFA stents from 01/04/2012 to 31/03/2014. Each report lists the event description, the date, patient injury, intervention if required and the manufacturer’s narrative.

**Results:** 500 SFA stent adverse reports were recorded and analysed. All known manufacturers were listed. Adverse reports from 2 stent manufacturers were significantly more than the others. A similar deployment failure was reported for over 1 year by one manufacturer. More than 1/3rd of the reported cases had either a failure in deployment of the stent or retrieval of the standard delivery system (sds). In another 1/3rd the stent was damaged after deployment-twisted, torqued, fractured, or occluded. In the remaining 1/3rd there were multitudes of problems from breakage of sds components and their retention within the patient to dislodgment.

Adverse patient effects included Acute Limb ischemia, limb loss and death. Majority required endovascular intervention, failing which an open procedure was performed in 20% of patients.

Analysis of manufacturer’s narrative rarely revealed no attributable cause, the malfunction, mal-deployment was labeled as procedure related and not device related. The manufacturer’s narrative often stated that the device met pre-release specifications and no manufacturing defect could be identified.

**Conclusion:** A review of adverse event reports form manufacturer’s clearly indicates that the adverse event was procedure related and probably due to the operator not exercising due care or not following the IFU. There is a need for the societies to take a lead in user adverse event reporting, analysis and communicating these to the centre’s on a definitive time scale in a more open and unified manner to prevent patient harm and improve outcomes.

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**Impact of Early Pelvic and Lower Limbs Reperfusion and Aggressive Perioperative Management on Spinal Cord Ischemia During Thoracoabdominal Aortic Aneurysm Endovascular Repair**


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**Introduction:** Spinal cord ischemia (SCI) is a devastating complication following thoracoabdominal aortic aneurysm (TAAA) endovascular repair. In an attempt to reduce its occurrence, we have modified our implantation protocol in January 2010 by withdrawing all large sheaths from the iliac arteries as soon as possible during the procedure. In addition, we have also modified our perioperative protocol (aggressive blood and platelet transfusion, median arterial pressure monitoring $>80$ mmHg, and systematic cerebrospinal fluid drainage except for type 4 TAAA).

**Methods:** Between October 2004 and December 2013, we have performed 204 TAAA endovascular repairs with custom made devices manufactured with branches and fenestrations to perfuse the visceral vessels. Data from all patients were prospectively collected in an electronic database. We compared the early outcomes of patients treated before (group 1, 43 patients) and after (group 2, 161 patients) modification of our implantation and perioperative protocols.

**Results:** Group 1 and 2 patients had similar comorbidities (median age at repair 70.9 years [65.2–77]), aneurysm characteristics (median diameter 58.5 mm [53–65]), and length of procedure (median 190 min [150–240]). The in-hospital mortality rate was 11.6% in group 1 vs. 5.6% in group 2 respectively (RR = 0.481 [0.17–1.36]; $p = 0.09$). The spinal cord ischemia rate was 14% vs. 1.2% (RR = 1.148 [1.016–1.296]; $p = 0.001$) respectively. If we exclude Type 4 TAAA from this analysis, the spinal cord ischemia rate was 25% (6/24 patients) in group 1 vs. 2.1% (2/95 patients) in group 2 (RR = 1.306 [1.034–1.648]; $p < 0.001$) respectively.

**Conclusion:** Early restoration of arterial flow to the pelvis and lower limbs and aggressive perioperative management significantly reduces SCI following TAAA endovascular repair. With this modified approach, extensive TAAA endovascular repairs are associated with low rates of SCI.

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**Endovascular Management of Rupture in Acute Type B Aortic Dissections**

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**Introduction:** Reports of thoracic endovascular aortic repair (TEVAR) for complicated acute type B dissection bring together a large range of clinical presentations. With a 50% of 30-day mortality rate when managed with open surgery, rupture is the most dramatic complication of acute type B dissections. We investigated the outcomes of TEVAR for acute type B dissection complicated by rupture (R-ABD) to assess the results of this particularly critical subgroup.

**Methods:** A review of consecutive TEVAR for R-ABD in two tertiary centers was performed using prospectively maintained database.

**Results:** Between 2000 and 2014, 24 patients (mean age 68 years; 14 males) underwent TEVAR for R-ABD. Sixteen (67%) were in shock (Systolic blood pressure $<80$ mmHg) before surgery and 20 required chest drainage for hemotherax. Proximal entry tear was in zone 2 in 7 (29%) and 3 in 17 (71%). Five patients required coverage of the left subclavian artery for adequate proximal
Dipeptidyl Peptidase-4 Inhibitor Alogliptin Prevents Further Dilatation of Abdominal Aortic Aneurysm Through Anti-oxidant and Anti-inflammatory Effect in Rats

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Introduction: Dipeptidyl peptidase-4 inhibitor alogliptin has been proved to prevent abdominal aortic aneurysm (AAA) formation. However, the mechanism of alogliptin on aneurysm development has not been sufficiently investigated. The objective of this study was to determine how alogliptin prevents further dilation of AAA development mimicking clinical setting.

Methods: The AAA model induced with intraluminal elastase and extraluminal calcium chloride was created in 42 rats. Forty-two rats were divided into 3 groups: a low-dose of alogliptin group (Group LD; 1 mg/kg/day), a high-dose group (Group HD; 3 mg/kg/day), and a control group (Group C, water). Alogliptin administration by gastric gavage once per day was started on 7 days after aneurysm formation. The AAA dilatation ratio was calculated to evaluate alogliptin preventive effect.

Results: On day 14, ROS expression and 8-OHdG positive cells in aneurysm walls were decreased by alogliptin treatment (ROS expression: 4.4 ± 0.6 in Group C, 3.2 ± 0.1 in Group LD, and 2.7 ± 0.3 in Group HD, p < 0.001; 8-OHdG-positive cells: 167.4 ± 6.9 cells in Group C, 102.7 ± 19.9 cells in Group LD, and 64.7 ± 2.7 cells in Group HD, p < 0.001). Western blot analysis showed decrease ERK levels in treatment groups compared with control group. The treatment significantly reduced mRNA expression of MMPs, TNF-α, and MCP-1 in aneurysm walls. Immunohistochemical staining for CD68 demonstrated the decrease of macrophage infiltration in aneurysm wall with treatment groups. On day 28, the aortic wall in groups LD and HD were less dilated, and had higher elastin content than those in Group C (Dilatation ratio: 199.2 ± 10.8% in Group C, 170.0 ± 4.4% in Group LD, and 155.1 ± 2.3% in Group HD, p < 0.001).

Conclusion: Alogliptin treatment starting after aneurysm formation inhibits further dilation in rat model through anti-oxidant and anti-inflammatory effect. Inhibition of ERK activation by reducing oxidative stress prevented inflammatory response and matrix degeneration, resulting in prevention of the aortic dilatation.

High Frequency of AAA in the North of Sweden Not Explained by Higher AAA Prevalence Among Siblings or Smoking

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Introduction: The frequency of Abdominal Aortic Aneurysm (AAA) is higher in the north region of Sweden compared to the south with a 38% higher incidence for AAA in men. Smoking is less common in the north and can subsequently not be responsible for the increased risk. A strong hereditary trait has been suggested as an explanation to the regional differences in disease pattern. Organized screening for AAA in siblings is currently not arranged in either region. Our aim was to investigate if siblings to AAA-patients in the north part of Sweden have a higher prevalence of AAA compared to siblings in the Stockholm region (mid).

Methods: All patients treated for AAA between Jan 2008—Aug 2012 at two hospitals covering a large county of the north were screened for siblings (n = 483). The living siblings residing in the north were offered an ultrasound scan of the abdominal aorta preceded by a structured telephone interview regarding health and medications. Ultrasound was performed by one validated examiner using both LELE and OTO-technique. The result of the ultrasound-examination was compared to the previously published results of the prevalence of AAA in siblings in Stockholm (mid Sweden).

Results: 379 siblings were included of which 8 had undergone aortic repair and 8 had a known AAA under surveillance. 363 were screened with ultrasound. The prevalence of AAA in all siblings was 34/379 (10%, brothers 14%, sisters 6%). There was no difference in the prevalence of AAA in siblings from north compared to mid region (p = 0.75). Smoking was as common in both regions among siblings with AAA.

Conclusion: Our data do not support a strong hereditary trait for AAA in the north part of Sweden compared to other regions. The results reinforce the importance of developing structured screening protocols for first degree relatives to AAA patients, since the prevalence in siblings is strikingly high as compared to the prevalence of AAA in the general population.

Autologous Alternative Veins Do Not Provide Better Mid-term Outcomes than Prosthetic Conduits for Below Knee Bypass When Great Saphenous Vein is Unavailable

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Introduction: Ipsilateral, single segment great saphenous vein (GSV) remains the optimal conduit for below knee bypass to treat critical limb ischemia. There is a need to better define the benefit of alternative autologous vein (AAV) segments over contemporary prosthetic conduits in patients in whom GSV is not available.

Methods: Patients who underwent bypass to below-knee targets for chronic arterial occlusive disease between 2007—2011 were retrospectively reviewed and categorized in three groups: GSV; AAV (small saphenous veins, arm veins or spliced vein segments); Prosthetic. The primary outcome was graft patency (primary, assisted primary, secondary). Secondary outcome was limb salvage. Cox regression models were used to assess the effect of baseline predictors. Results were considered statistically significant when p-value was <0.05.