

Selected Abstracts from the March Issue of the European Journal of Vascular and Endovascular Surgery

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Prognostic Value of Preoperative Border-zone (Watershed) Infarcts on the Early Postoperative Outcomes of Carotid Endarterectomy after Acute Ischemic Stroke

Jean-Baptiste E., Perini P., Suissa L., Lachaud S., Declémy S., Mahagne M.H., Mousnier A., Hassen-Khodja R. *Eur J Vasc Endovasc Surg* 2013;45:210-7.

Objectives: To evaluate the prognostic value of cerebral border-zone infarctions (watershed infarctions) on the early postoperative outcomes of patients undergoing carotid endarterectomy (CEA) after acute ischemic stroke (AIS).

Methods: Sixty-six (66) patients with symptomatic carotid stenosis (SCS) that underwent ipsilateral CEA after AIS from January 2007 to March 2012 were included in this study. They were divided into two groups according to the topographic patterns of the stroke: group 1, Territorial Cerebral Ischemic Strokes (TCIS) caused by emboli of carotid origin; group 2, cerebral border-zone infarctions (CBZI) related to an SCS associated with hemodynamic impairment. All data was collected in a prospective database and analyzed. Outcome measures included postoperative neurological morbidity and 30-day mortality.

Results: Forty-three (43) patients (65.15%) experienced TCIS and were included in group 1, 23 patients (34.85%) had a CBZI and were included in group 2. There were no postoperative deaths. The postoperative neurologic morbidity rate was significantly higher in the CBZI group (22% vs. 2%, $p = 0.02$). Multivariate analysis demonstrates that CBZI was the only independent predictive factor of neurologic morbidity after CEA for AIS related to an SCS. Furthermore, the risk of postoperative neurologic morbidity remained significantly higher for patients with CBZI after adjustment for age, sex, initial NIHSS scores, and associated contralateral carotid occlusion (HR: 0.059, 95% CI 0.004–0.85; $p = 0.03$).

Conclusion: CBZIs, compared to TCIS, were associated with a higher neurological complication rate during the postoperative period after CEA for SCS in cases of AIS. Further studies are required to better define the timing and the best treatment modality for patients with CBZI related to an SCS in order to reduce associated procedural complications.

Challenging the Evidence for Pre-emptive Coil Embolisation of the Internal Iliac Artery during Endovascular Aneurysm Repair

Stokmans R.A., Willigendael E.M., Teijink J.A.W., Ten Bosch J.A., van Sambeek M.R.H.M., Cuyper Ph.W.M. *Eur J Vasc Endovasc Surg* 2013;45:220-6.

Objectives: We retrospectively analysed the results of a strategy in which coverage of the internal iliac artery (IIA) during endovascular aneurysm repair (EVAR) was routinely performed without coil embolisation.

Methods: From January 2010 until May 2012, 32 patients (96.9% men; mean age 73.0 years, range 52–89 years) underwent EVAR with stent grafts extended into the external iliac artery (EIA), all without prior coil embolisation. Aneurysm morphology was determined on preoperative computed tomography (CT) images. During follow-up, patients were interviewed about buttock claudication, and the occurrence of endoleaks and evolution of aneurysm diameter were recorded.

Results: At baseline, the mid-common iliac artery (CIA) diameter was 33.5 ± 16.8 mm and seven patients presented with ruptured aneurysms. Mean follow-up was 14.3 ± 7.4 months. There were eight deaths, none related to IIA coverage. Buttock claudication occurred in seven (22.6%) patients, which persisted after 6 months in two cases of bilateral IIA coverage. No Type-I or -II endoleaks occurred related to IIA coverage. Aneurysm growth was not observed.

Conclusion: Endovascular treatment of aortoiliac and iliac aneurysm without pre-emptive coil embolisation of the IIA appears safe and effective. No IIA-related endoleaks or re-interventions occurred in our series. This approach saves operating time, contrast load and costs and may reduce complications. However, a larger population and longer follow-up is required to confirm our findings.

International Variations in AAA Screening

Stather P.W., Dattani N., Bown M.J., Earnshaw J.J., Lees T.A. *Eur J Vasc Endovasc Surg* 2013;45:231-4.

Introduction: Abdominal aortic aneurysm (AAA) screening programmes reduce AAA-related mortality and are cost-effective. This study aims to assess the state and variability of AAA screening programmes worldwide.

Methods: Data were obtained from an international expert group convened at the 34th Charing Cross Symposium as well as government websites and published reports on screening programmes.

Results: Six countries are in the process of implementing national AAA screening programmes, with Italy still performing screening trials. There is wide variability in inclusion criteria between countries with the majority screening only men in their 65th year, however 3 programmes include women, 2 programmes only include patients with high cardiovascular risk, and 2 trials are also screening for hypertension and lower limb atherosclerosis. Surveillance intervals vary between screening programmes, with the most common regimen being to vary the surveillance interval depending upon aneurysm size, however the optimum surveillance interval in terms of decreasing mortality and cost effectiveness remains uncertain.

Discussion: International dissemination of current AAA screening programme outcomes is required to inform developing programmes about optimum screening intervals, benefits of surveillance of the subaneurysmal aorta, and screening for other cardiovascular disease.

Nationwide Experience of Cardio- and Cerebrovascular Complications During Infringuinal Endovascular Intervention for Peripheral Arterial Disease and Acute Limb Ischaemia

Nordanstig J., Smidfelt K., Langenskiöld M., Kragsterman B. *Eur J Vasc Endovasc Surg* 2013;45:270-4.

Objectives: Endovascular treatment for peripheral arterial disease (PAD) is increasingly used and also continuously applied to more severe vascular pathology. Only few studies report on systemic complications during these procedures, but it is important to address these risks. We report the results of a recent national audit on cardio- and cerebrovascular complications after endovascular procedures for PAD.

Methods: Data from the Swedish Vascular Registry (Swedvasc) were retrieved on all infringuinal endovascular procedures performed between May 2008 and December 2011. A total of 9187 cases were analysed regarding the prevalence of myocardial infarction and major stroke within 30 days post-intervention.

A literature review in PubMed and Cochrane databases was conducted.

Results: The risk of myocardial infarction was 0.3% in intermittent claudication, 1.2% in critical limb ischaemia and 1% in acute limb ischaemia. Corresponding risk of major stroke was 0.4%, 0.3% and 1.4%. Thrombolytic therapy was associated with a threefold risk of major stroke.

Only a few studies relevant to the subject were found during the literature review.

Conclusions: In this population-based study we found a low risk of cardiac complications, but catheter-administered thrombolytic therapy entailed a non-negligible risk of major stroke.

Superior Two-year Results of Externally Unsupported Polyester Compared to Supported Grafts in Above-knee Bypass Grafting: A Multicenter Randomised Trial

Vriens B.H.R., van Det R.J., Meerwaldt R., van der Palen J., Gerrits D.G., Zeebregts C.J., Geelkerken R.H. *Eur J Vasc Endovasc Surg* 2013;45:275-81.

Objectives: The aim of this study was to compare externally supported thin wall knitted polyester (P-EXS) and externally unsupported