

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

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Effect of Hospital and Surgeon Volume on Patient Outcomes Following Treatment of Abdominal Aortic Aneurysms: A Systematic Review
Marlow N.E., Barraclough B., Collier N.A., Dickinson I.C., Fawcett J., Graham J.C., Maddern G.J. *Eur J Vasc Endovasc Surg* 2010;40:572-9.

Objectives: This systematic review assessed the efficacy of centralisation for the treatment of unruptured and ruptured abdominal aortic aneurysms. Patient outcomes achieved by low and high volume hospitals/surgeons, including morbidity, mortality and length of hospital stay, were used as proxy measures of efficacy.

Design: Systematic review was designed to identify, assess and report on peer-reviewed articles reporting outcomes from unruptured and ruptured abdominal aortic aneurysms. No language restriction was placed on the databases searched.

Materials: Only peer-reviewed journals articles were included.

Methods: To ensure the contemporary nature of this review, only studies published between January 1997 and June 2007 were sought. Studies were included if they reported on at least one volume type and patient outcome.

Results: Twenty two studies were included in this review. In the majority of group assessments, the number of studies reporting statistical significance was similar to the number of studies reporting no statistical significance.

Conclusion: The paucity of studies reporting statistically significant results demonstrates that although this evidence exists, its potential to be overstated must also be taken into account when drawing conclusions as to its efficacy for twenty first century healthcare systems.

Open Repair for Ruptured Abdominal Aortic Aneurysm and the Risk of Spinal Cord Ischemia: Review of the Literature and Risk-factor Analysis

Pepelbosch A.G., Vermeulen Windsant I.C., Jacobs M.J., Tordoir J.H.M., Schurink G.W.H. *Eur J Vasc Endovasc Surg* 2010;40:589-95.

Objectives: Spinal cord ischemia after open surgical repair for rAAA is a rare event. We estimated the current incidence and tried to identify risk factors. We also report a new case.

Methods: Group A consisted of 10 reports on open repair for rAAA from 1980 until 2009. Only series of ≥ 100 patients were considered to estimate the incidence. Thirty three case reports from 1956 until 2009 were identified (group B). Case reports from group B were not encountered in group A. Group B patients were stratified according to the type of neurological deficit as described by Gloviczki (type I complete infarction and type II infarction of the anterior two third).

Results: Group A consisted of 1438 patients. In group A 86% were male with a mean age of 72.1 years. The incidence of post-operative paraplegia was 1.2% (range 0–2.8%). In-hospital mortality was 46.9%. Of the 33 patients of group B were 86% male with a mean age of 68.0 years. Most patients developed a type I (42%) or type II (33%) deficit. In-hospital mortality was 51.6%. No significant differences between different types were encountered.

Conclusion: Spinal cord ischemia after ruptured AAA is a rare complication with an incidence of 1.2% (range 0–2.8%).

Quality of Life Among Lower Extremity Peripheral Arterial Disease Patients who have Undergone Endovascular or Surgical Revascularization: A Case-control Study

Remes L., Isoaho R., Vahlberg T., Viitanen M., Rautava P. *Eur J Vasc Endovasc Surg* 2010;40:618-25.

Objectives: To assess the quality of life (QoL) of peripheral arterial disease (PAD) patients who have undergone either percutaneous transluminal angioplasty (PTA) only and/or one or more surgical revascularizations.

Design: A postal questionnaire study in which a case-control methodology was applied.

Materials and methods: 131 patients with PTAs (mean age 70.7, SD 10.4 yrs; range 39–89, 58% men) and 100 with surgical revascularizations (mean age 67.8, SD 10.4 yrs; range 43–91, 62% men), in 1998–2003, and their age- and gender-matched controls were studied. The mean time since the last revascularization for PTA was 2.7, SD 1.3 yrs and for operated

patients 3.5, SD 1.8 yrs. Ankle-brachial pressure index (ABI) and Mini-Mental-State Examination (MMSE) score were obtained from 70% of the patients.

QoL was assessed using 15D Health-related QoL instrument, Rand-36 Physical Functioning subscale, 6-item Brief Social Support Questionnaire, Geriatric Depression Scale (GDS), Self-reported Life Satisfaction (LS) score, and one 'perceived state of health' question.

Results: Patients after endovascular and/or surgical revascularization (most with ABIs 0.5–0.89 and without cognitive impairment), had similarly lower QoL, GDS and LS indicated more depression than their controls.

Conclusion: Poor QoL and depression should be thoroughly considered, alongside proper follow-up and ABI-measurements.

Upper-Limb Thrombo-Embolectomy: National Cohort Study in Denmark

Andersen L.V., Mortensen L.S., Lindholt J.S., Faergeman O., Henneberg E.W., Frost L. *Eur J Vasc Endovasc Surg* 2010;40:628-34.

Objectives: We investigated the incidence of thrombo-embolism in upper-limb and prognosis with respect to arm amputation, stroke and death.

Methods: We performed a national cohort study of individuals, aged 40–99 years, and undergoing first-time thrombo-embolism in the brachial, ulnar or radial artery in Denmark from 1990 to 2002. The data were retrieved from the National Vascular Registry and from the National Registry of Patients and the Civil Registration System. Patients were followed until 2006 to ascertain the occurrence of amputation and stroke and until 2007 with respect to death.

Results: In total, 1377 incident cases of thrombo-embolism were registered, comprising 504 (36.6%) males with a mean age of 72.0 (standard deviation (SD) 12.4) years and 873 (63.4%) females with a mean age of 77.2 (SD 11.7) years. Incidence was 3.3 (95% confidence interval (CI): 3.1–3.7) for males and 5.2 (95% CI: 4.9–5.6) for females per 100000 person-years. After thrombo-embolism, upper-limb amputation was performed in 11 (incidence 2.2%; 95% CI: 1.2–3.4) males and 31 (3.6%; 95% CI: 2.5–4.9) females. Age- and sex-specific risk of stroke was 2–16 times higher, and risk of death 3–11 times higher, than in the general population.

Conclusions: Upper-limb thrombo-embolism is associated with an increased risk of limb amputation, stroke and death.

Randomised Controlled Trial Comparing Sapheno-Femoral Ligation and Stripping of the Great Saphenous Vein with Endovenous Laser Ablation (980 nm) Using Local Tumescence Anaesthesia: One Year Results

Pronk P., Gauw S.A., Mooij M.C., Gaastra M.T.W., Lawson J.A., van Vlijmen-van Keulen C.J. *Eur J Vasc Endovasc Surg* 2010;40:649-56.

Objectives: Comparison of sapheno-femoral ligation and stripping (SFL/S) versus endovenous laser ablation (EVLA, 980-nm) in the treatment of great saphenous vein (GSV) insufficiency, using local tumescence anaesthesia.

Design: Randomised, single centre trial.

Materials and methods: Patients with GSV incompetence and varicose veins were randomised to either SFL/S or EVLA. At days 1, 2, 3, 7, 10, and 14 post-treatment, patients completed questionnaires on pain and quality of life. Recurrent varicose veins were evaluated by Duplex ultrasound (DUS) performed at 1 and 6 weeks, and 6 and 12 months.

Results: 130 legs in 121 patients were treated by SFL/S ($n = 68$) or EVLA ($n = 62$). Significantly more post-treatment pain was noted after EVLA at days 7, 10 and 14 ($p < 0.01$; $p < 0.01$; $p = 0.01$), more hindrance in mobility at days 7 ($p < 0.01$) and 10 ($p = 0.01$), and in self care ($p = 0.03$) and daily activities ($p = 0.01$) at day 7 compared to SFL/S. DUS at 1-year follow-up showed 9% recurrences (5/56) after EVLA and 10% (5/49) after SFL/S.

Conclusion: Both SFL/S and EVLA, using local tumescence anaesthesia, were well tolerated, with no difference in short-term recurrence rate. In the second week after EVLA, patients experienced significantly more pain