**174: APPROPRIATENESS OF VASCULAR REFERRALS TO SECONDARY CARE – AN AUDIT OF CURRENT PRACTICE**
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**Aim:** We appear to be seeing an increasing number of patient referrals without vascular disease in our one-stop vascular clinic in which patients also undergo ultrasound imaging. The aim of this audit was to attempt to quantify the appropriateness of vascular referrals.

**Method:** Consecutive vascular referrals seen in clinic were reviewed. Consultation notes and duplex scan results provided evidence of vascular disease. Referrals, in which history and examination findings clearly led to other diagnoses, as assessed by two clinicians, were deemed inappropriate. We used SIGN guidelines to assess appropriateness of claudication referrals.

**Results:** 151 consecutive vascular referrals were reviewed. 104 patients had a history suggestive of arterial disease, of which 80 were confirmed radiologically (6 of these patients had microvascular disease not evident on duplex). 47 patients did not give a vascular history, 3 of which had radiological evidence of disease. In total 60 referrals were deemed inappropriate.

**Conclusions:** Results show a high number of GP referrals have no evidence of vascular disease. Attention to clinical history and examination combined with a better awareness of UK guidelines for referral of patients with arterial disease would help increase the proportion of appropriate referrals.

**1182: IS CAROTID BLOOD FLOW AFFECTED FOLLOWING PRIMARY CLOSURE AFTER OPEN CAROTID ENDARTERECTOMY SURGERY?**

**Aims:** Open Carotid Endarterectomy (CEA) surgery has historically established itself as the gold standard for atherosclerotic carotid disease. Primary arteriotomy closure after CEA is feasible, where internal carotid diameter is maintained. We aim to determine if primary closure of carotid arteriotomies preserves carotid artery diameter post-CEA surgery.

**Methods:** 50 patients who had successful CEA surgery with primary carotid arteriotomy closure were recalled for a follow-up carotid duplex scan. Chronological cases from January 2010–December 2011 with primary closure were included. Internal Carotid Artery (ICA) patency, ICA peak velocity (m/s²), secondary atheroma formation, and symptom-free survival time were measured. Paired T-test was used for statistical analyses.

**Results:** 32 males and 18 females, median age 73 years were included. All had ICA patency, 18 had secondary atheroma formation. Median ICA peak velocity was 3.0 m/s² pre-CEA and 0.94 m/s² post-CEA. Post-CEA ICA peak velocity was significantly lower than pre-CEA (p<0.0001). There were no post-operative cerebro-vascular accidents (median 10 month follow-up).

**Conclusion:** Our study reports the successful medium-term outcome for primary carotid arteriotomy closure during CEA. One third developed post-operative atheromas, with no effect on flow pattern. Our study refutes universal patching of carotid arteriotomies and we suggest primary closure is feasible and a stroke rate. Secondary endpoints included mortality, shunt usage and operation time. Meta-analysis was carried out using weighted mean difference (WMD) and odds ratio (OR) techniques.

**Results:** The final analysis included ten studies reporting outcomes for 3470 CEA procedures, of which 1333 (38.4%) were performed by supervised trainees, and 2137 (61.6%) by consultant surgeons. There was no significant difference in stroke rate between the trainee and consultant groups (OR 0.94; p=0.790). No significant difference in mortality was found (OR 1.00; p=0.990). Trainees took 32.1 minutes longer to perform CEA (p=0.010). There was no difference in shunt usage between the groups (OR 0.98; p=0.88).

**Conclusion:** There is significant evidence to suggest that supervised trainees can safely perform CEA with equivalent short term clinical outcome to consultants, thus not compromising patient safety.

**1209: THE HIGH-RISK DIABETIC FOOT – A TWO YEAR PROSPECTIVE STUDY OF THE MULTIDISCIPLINARY TEAM INTERVENTIONS TO SAVE LEGS**

**Aims:** Intervention in high-risk diabetic foot ulceration (DFU) is challenging. Recently published UK National Diabetes Audit suggests the major amputation-rate remains high; vast numbers (>300% more than expected) are undergoing minor amputation. We aimed to assess interventional workload required in the multidisciplinary management of DFU.

**Methods:** A prospective observational study of a consecutive cohort of severe DFU patients (classified NICE grade D4) attending our multidisciplinary outpatient service was undertaken over a two-year period (2010–2012).

**Results:** During the study period, 42 patients (57.5%) required inpatient admission. There were 85 inpatient admissions in total; two-thirds involved interventions. A large proportion of patients underwent more than one intervention (38.1%). Two-year amputation rate was low (minor 15.1%, major 4.1%). Revascularisation by endovascular (39.2%) or open surgery (13.7%) were most commonly performed. An endovascular-first approach was predominant and angioplasty was often distal (crural 76.1%, SFA 19.0%, CFA 4.8%). Orthopaedic procedures (19.6 %) involved wide-vascular complexity and surgical technique (debrideaments 40.0%; MTIP/JP fusions & excisions 30.0%; metatarsal resections 20%; Tibio-talo-calcaneal fusions 10.0%). 40.0% of patients undergoing orthopaedic procedures also underwent revascularisation.

**Conclusion:** Management of the high-risk diabetic foot requires multiple admissions and interventions. Good results can be achieved with a multidisciplinary approach.

**1216: MULTIDISCIPLINARY MANAGEMENT OF THE HIGH-RISK DIABETIC FOOT: A TWO-YEAR STUDY OF THE OUTPATIENT WORKLOAD REQUIRED IN ACHIEVING POSITIVE OUTCOMES**

**Aims:** Diabetic foot ulceration (DFU) patients have a greater risk of cardiovascular complications, with >20% annual risk of major amputation or death. 50% DFU patients undergoing amputation survive a further two years. NICE guidelines recommend multidisciplinary approach to improve outcomes. We report the multidisciplinary outpatient-workload and resource utilization necessitated in achieving positive outcomes.

**Methods:** A prospective observational study of a consecutive cohort of severe DFU patients (classified NICE grade D4) attending our multidisciplinary outpatient service was undertaken over a two-year period (2010–2012).

**Results:** 73 patients had active foot ulceration. During the two-year study period, 10 patients died (13.7%), mostly from cardiovascular complications; two patients (20%) had amputations. Overall two-year amputation-rate was low, with 11 minor (15.1%) and 3 major (4.1%) occurring. In total, 49.3% patients experienced ulcer healing. There were 3675 multidisciplinary foot-care outpatient appointments (82.3% of all specialty). The majority of the outpatient investigation burden was due to blood-tests (59.0%); one-third of patients had >20 wound-swabs performed.
Conclusion: An integrated multidisciplinary diabetic foot-care service and care pathways have reduced limb loss and mortality, but this involves a significant inpatient and outpatient workload. Detailed reporting is necessary for clinical quality and improvement purposes and future health economic studies.

1272: ENDOVASCULAR ANEURYSM REPAIR VIA CAROTID ARTERY ACCESS: A Viable Alternative? Kirtan Patel 1, Vamsee Bhrugubanda 1, Andrew Choong 2, 1 Imperial College School of Medicine, London, UK; 2 Outer North West London Regional Vascular Unit, Northwick Park Hospital, London, UK
Aims: To present a systematic review of endovascular aneurysm repairs utilising the carotid artery for access
Methods: Review methods were according to the Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) guidelines. Literature from five electronic databases was searched. Studied outcomes included mortality, stroke, spinal cord ischaemia (SCI), contraindications to traditional access, adjuncts for cerebral perfusion and intraoperative cerebral monitoring.
Results: 11 studies representing 12 patients were eligible for analysis. The mean age was 64.5 with a male: female ratio of 3:1. 30-day mortality was 8.3%(1/12) with the same patient suffering SCI. The stroke rate was 0%(0/12). In 75%(9/12) of cases, traditional access was contraindicated by iliac disease and the remainder because of an existing ligated aortic stump (8.3%) or the need to access the ascending aorta (6.7%). 83%(10/12) of patients were unfit for open procedure. 50%(6/12) of patients were considered for subclavian/axillary access with data unavailable for the remainder. Of those considered, 50%(3/12) had vessels too small and the remainder conduits for pre-existing grafts or occluded.
Conclusion: Although there is a relative paucity of literature, this study demonstrates when traditional endovascular access is impossible and an open procedure contraindicated, carotid artery access is a viable alternative with excellent 30-day survival and low rates of neurological sequelae.

Aim: Medical honey is used for wound management in NHS hospitals, especially on vascular surgical wards, but does available evidence support this? A best evidence topic on the use of honey was written according to a structured protocol. The clinical question addressed was: In patients with chronic venous leg ulcers (CVLUs), does the use of medical grade honey as compared to standard wound therapy improve clinical outcomes?
Method: A total of 299 papers were identified using the reported search protocol, of which five articles represented the best evidence to answer the clinical question. The authors, journal, date and country of publication, patient group studied, study type, relevant outcomes and results of these papers are tabulated.
Results: Two of the five studies were randomised controlled trials with contradictory conclusions: one supporting the use of honey and the other suggesting there is no additional benefit. The other three studies supported the use of honey, but these were of lower grade evidence and had numerous methodological faults.
Conclusions: Therefore, the clinical bottom line is that there is no conclusive evidence that honey improves outcome in patients with VLU, and until more robust RCTs are conducted, its benefit should be considered unproven.

1295: TEMPORAL ARTERY BIOPSY: SIZE DOES NOT MATTER (A completed audit cycle) Sarantonos Kaptanis 1, Constantine Hallkias 2, Joanne Perera 1, Nadine Caton 1, Lida Alarcon 1, Stella Vig 1, 1 Croydon University Hospital, London, UK; 2 Hammersmith Hospital, London, UK
Aim: Giant cell arteritis (GCA) is a large and medium vessel systemic vasculitis. Temporal artery biopsy (TAB) can establish the diagnosis, however a negative biopsy does not exclude it. It has been suggested that TAB length should be at least 1 cm to improve diagnostic accuracy.
Method: Retrospective audit. 149 patients who had 151 temporal artery biopsies from April 2006 to February 2012 were identified from pathology and theatre records (first cycle). 23 patients from March 2012 to Sept 2012 (second cycle).
Results: In total, there were 23 positive biopsies (13.2%), 142 negative (81.6%) and 9 insufficient samples (5.2%). Regarding size of biopsy, mean was 0.73 cm for positive samples and 0.65 cm for negative ones (t-test: P= .229 NS). 0.08 cm is not considered a clinically significant difference. 108 patients fulfilled all 3 ACR criteria prior to biopsy (62%), and only 4 patients changed ACR score from 2 to 3 after biopsy. Average biopsy size increased from 0.65 to 0.7 in the second cycle.
Conclusion: There is no clear benefit in harvesting specimens longer than 0.6 cm post-fixation and corticosteroid treatment should not be delayed in anticipation of the biopsy, however harvesting specimens according to the guidelines is feasible.

1310: ANGIOPLASTIES MAY BE SAFELY PERFORMED AS A DAYCASE PROCEDURE Jonathan Stokes, Esther Platt, Aled Jones, David Birchley. Royal Devon & Exeter, Devon, UK
Aim: With centralisation of vascular surgery and increasing pressure on hospital beds, services must be streamlined. Angiograms are often day case procedures but angioplasties involve overnight observation. This study was performed to determine whether day case angioplasties are safe in principle.
Method: This was a retrospective analysis of 100 consecutive angiogram/plasty patients in 2012. Length of stay and post procedure events were evaluated.
Results: 47 angiograms and 53 angioplasties were performed. 28% patients were admitted for overnight stay following angiogram; over a third (38%) for further urgent surgical management. One patient required admission following a myocardial infarction during the procedure.
Conclusions: In principle, elective day case angioplasty is safe for selected, low risk patients who have an uncomplicated procedure. We propose implementation of a day case pathway with simultaneous prospective audit to ensure ongoing continuous evaluation of safety.

Aim: To analyse our 10 years of experience in the management of VAs. Methods: Retrospective analysis of a prospectively maintained database between 2002 and 2012 was performed excluding renal artery aneurysms. Case notes and radiology results were also reviewed.
Results: Total of 23 VAs identified; 16 true and 7 pseudo-aneurysms. 12(52%) were male, average age 69 years (47-93y). 9(39%) patients symptomatic, 14(61%) VAs were discovered incidentally. 7(30%) were splenic, 30% were pancreaticoduodenal, 4(17%) were hepatic. 9% aneurysms were related to chronic pancreatitis, 4% due to infective endocarditis, 13% post ERCP. 4% post splenectomy (pseudo-aneurysm). 12 patients were treated endovascularly (10 embolization, 2 covered stents) and 2 with open surgery. All aneurysms except 1 (surgery abandoned due to high risk of haemorrhage) had primary technical success (93%). In-hospital survival rate was 93%, with 1 peri-operative mortality of a ruptured VAA treated by embolization. 1 patient following embolization and another due to stent migration identified with re-expansion of their aneurysms (17%). 5 patients were treated conservatively and 5 entered into a surveillance programme. Estimated five-year aneurysm related complication free survival rate was 51.4%
Conclusion: Our study demonstrates VAs can be treated using endovascular techniques with low peri-procedure mortality and morbidity.