

Hospital, by the senior author were included. Data was collected from statistics department, theatre database, discharge registry, ICU and HDU register and patient clinical notes. Study end-points included operative time, shunt use, perioperative stroke, 30 day mortality, restenosis and re intervention.

**Results:** 114 cCEA procedures were undertaken from July 2008 to December 2011, while 63 eCEA performed during Jan 2012 to July 2014. Results are shown in Table 1. Intra-arterial shunts were used in 19 % of cCEA and 1.6% of eCEA cases. Patients were followed postoperatively by Duplex imaging. Death and stroke rate in both groups was 0 %. Operative time for eCEA was significantly less than the cCEA. There were 5 restenosis in cCEA and only one in eCEA (range 20 to 70%).

**Conclusion:** eCEA is safe and effective technique for carotid endarterectomy. It significantly reduces the operative time with low re-stenosis rate.

## VASCULAR PHYSIOLOGIST ABSTRACTS

### Experiences of Vascular Surgeons in the Diagnosis of Peripheral Arterial Disease

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**Background:** Peripheral arterial disease (PAD) has a prevalence of between 10–25% in the over 55's, increasing with age, with 70%–80% of affected individuals asymptomatic. Up to 50% of PAD can be missed on routine examination alone. Therefore identification and appropriate management of this high risk group is essential. PAD is a significant indicator of the severity of atherosclerotic disease in other vascular beds and is associated with increased risk of cardiovascular and cerebrovascular disease.

**Aim:** Vascular Consultants are the most important constituent in the diagnosis of peripheral arterial disease. As such the aim of this study was to ascertain the experiences of vascular consultants in this process with the objective of identifying elements of the process which can be improved upon. This will result in greater efficiencies of resources for vascular consultants and a streamlined more expedient deliver of service for the patient.

**Method:** 43 Vascular Consultants were anonymously surveyed. Results were collected via Survey Monkey & hard copy. 22 completed surveys returned.

**Conclusions:** The experiences of respondents are varied. Generally referral information is adequate. However, it may be of little consequence as most will reorder an in-house test in any event. Vascular services are primarily obtained in a dedicated laboratory in a public hospital. However, there seems to be a diverse range of providers being utilised. That said the vast majority of respondents do not believe results from other institutions. Importantly 50% of respondents rate the diagnostic vascular service as excellent with 20% rating it average or below average.

Interestingly 82% of respondents suggest that PAD surveillance should be done by GP's, but how many discharge patients back to their GP?

### Duplex Ultrasound — An Invaluable Tool in Pregnancy

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Though computed tomography angiography (CTA) remains the gold standard for arterial imaging duplex ultrasound has many advantages including;

- Lack of radiation
- Cost and
- Repeatability

We present a case report of a 35-year old lady with a history of von Willebrand's disease who presented at 32 weeks gestation with left knee pain and a pulsatile swelling. Duplex ultrasound revealed a left 2.5cm popliteal artery pseudoaneurysm with significant thrombus. Due to her pregnancy she underwent an MR angiogram which confirmed a 2.4cm left popliteal aneurysm but CTA was recommended for full evaluation. Duplex ultrasound was used to outrule concomitant aneurysms.

A decision was made not to perform a CTA and the patient was followed up with weekly duplex ultrasounds to monitor the size of the popliteal aneurysm during the rest of her pregnancy. Over the next five weeks her aneurysm increased in size to 3cm. She was delivered at 37 weeks by elective caesarean section and underwent a CTA 6 weeks later and this confirmed a left popliteal pseudoaneurysm which was later stented.

Duplex follow-up reveals a widely patent popliteal stent with exclusion of the pseudoaneurysm.

### Carotid Duplex Ultrasound Performed Immediately Post Carotid Endarterectomy Predicts Outcome at Two Years

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**Introduction:** Carotid endarterectomy (CEA) has proven benefit in stroke prevention. The aim of this study was to determine the long-term benefit of the post-operative colour duplex ultrasound (CDU) in a follow-up programme.

**Patients and Methods:** All patients who underwent CEA for both symptomatic and asymptomatic carotid artery stenosis between the 1st January 2007 and 31<sup>st</sup> of December 2008 were included. All patients were enrolled in a standard post-operative surveillance programme, which included a CDU within 2 days post operatively, at 6 months and at 2 years. All scans were performed by one of four

senior vascular technologists using a linear 9MHz transducer and grading based on velocities according to international guidelines.

**Results:** A total of 167 (102 male) patients with a mean ( $\pm$ SD) age of  $69.5 \pm 8.06$  years were included. There was no age difference based on gender. 130 (77.8%) completed their full 2-year follow-up programme. 76 patients had right-sided CEA and 91 left-sided. 101 had a widely patent ICA post-CEA, with appearance of residual stenosis (expressed as %) in 23 (50–69%), 3 (70–80%) and 3 occluded. At 6 months this proportion changed to 88, 23, 5, 3 patients and at 2 years 85, 37, 4, 4 patients respectively. No re-stenosis patient became symptomatic or had re-intervention. Therefore, in 105 patients the carotid appearance immediately post-operatively and at 2 years did not change. Contralaterally, 64 had a stable carotid plaque, 5 showed progression, while 23 improved.

**Conclusion:** Carotid Duplex Ultrasound performed immediately post-operatively predicts the outcome at 2 years.

### Ultrasound Tips for Endovenous Thermal Ablation of Varicose Veins

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**Abstract:** Endovenous thermal ablation is a minimally invasive ultrasound-guided technique for treating varicose veins. Good imaging optimises venous access, reduces skin punctures and prevents damage to the vein wall by failed access attempts. This poster will address the knowledge learnt over the past 2,000 procedures and will offer advice to those embarking on ultrasound-guided procedures.

Topics covered will include:

- Equipment and Control Settings
- Pre-operative imaging and vein suitability
- Peri-operative imaging including access, tip placement, tumescence and treatment
- Post-procedure check

Optimal imaging leads to an easier procedure and hopefully better long-term results.

### TCPO2 and its Role in a Diabetic Foot Protection Clinic

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**Background:** Transcutaneous oximetry, tcpO<sub>2</sub>, is a local non-invasive measurement reflecting the amount of oxygen that has diffused from the capillaries through the epidermis to an electrode at a measuring site. It provides instant continuous information about the body's ability to deliver oxygen to the tissue which is a predictive factor for spontaneous healing.

**Aim:** The primary motivation for this project / study is to validate the additional information provided by a tcpO<sub>2</sub> exam. This information will be assessed with a view to improved decision making surrounding the need for revascularisation procedures being performed. The aim here is to reduce the percentage of major amputations in the diabetic group in particular through improved treatment planning.

**Method:** Patients are recruited either via direct referral from a multi disciplinary foot protection clinic or via the vascular team while they are a current inpatient in the hospital receiving treatment for a foot ulcer.

All patients have tcpO<sub>2</sub> recorded in the vascular laboratory for 20 minutes. If the recorded tcpO<sub>2</sub> measurement is < 40mmHg the patient proceeds to an oxygen challenge test for a further 10 minutes before a second tcpO<sub>2</sub> reading is taken. All measurements are taken from a standardised anatomical site.

**Conclusions:** Study ongoing.

Interim results indicate that there are two specific groups of interest.

- 1) Reduced TBI's with a normal TcpO<sub>2</sub> result
- 2) Normal TBI with a reduced TcpO<sub>2</sub> result

Further analysis is ongoing.