054: THE USE OF HUMAN CADavers AND VIRTUAL REALITY SIMULATION IN ENDOVASCULAR TRAINING: A QUESTIONNAIRE OF PATIENT AND PROFESSIONAL OPINION
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Aim: To establish the opinion of patients and clinicians on the use of virtual reality simulators (VRS) and human cadavers (HC) for endovascular training.
Methods: Experts in interventional cardiology, radiology and vascular surgery rated their agreement to statements regarding endovascular simulation (HC and VRS) through an online questionnaire. Patients’ views on endovascular simulation training were also sought.
Results: 100 professionals completed questionnaires. < 25% were aware of endovascular HC training, none had first hand experience, five (5.6%) disagreed with its use. All candidates were aware of VRS, 80.9% had first hand experience. Many expressed interest in HC stating concerns regarding the realism of VRS. 107 patients (50 non-vascular, 57 vascular*) responded. All patients agreed with HC training. Patients declared greater confidence in doctors trained on HC versus VRS (p < 0.000).
Conclusion: These are the first recorded opinions of professionals and patients regarding endovascular simulation training. Endovascular professionals question the suitability, appropriateness and feasibility of endovascular HC training, yet few are wholly satisfied with VRS. Patients appreciate the need for adjunctive simulation training, but harbor mistrust in computer technology. Enhanced patient education is required to maintain confidence and trust. * non-vascular patients have no history of vascular disease

057: TYPE II ENDOLEAKS: LOW RISK OF RUPTURE AND HIGH RISK OF TREATMENT FAILURE
David Sidloff, Philip Stather, Eddie Choke, Matt Bown, Robert Sayers, University of Leicester, Leicester, UK.
Aim: To assess the risk of rupture and determine the benefits of intervention for the treatment of type II endoleaks after endovascular abdominal aortic aneurysm repair.
Method: A systematic review was performed according to PRISMA guidelines. Outcome data including incidence, spontaneous resolution, sac expansion, interventions, success, and complications were recorded.
Results: 32 non-randomised retrospective studies were included, totalling 21,728 patients, 1515 type II endoleaks and 392 interventions. This analysis reveals type II endoleaks have an incidence of 10% with 32.3% spontaneously resolving. 14 ruptures were reported (incidence 0.9%), from which 80% did not have concurrent sac expansion. Analysing interventions, 28% were unsuccessful. Translumbar embolization had a higher success rate compared to transarterial embolization (TL18.1% vs TA62.5% P = 0.024) with fewer persistent endoleaks (TA36% Vs TL19% P = 0.0396). Transarterial embolizations had a higher associated number of complications (TAIO vs TL0% P = 0.0426).
Conclusion: This review has revealed that rupture secondary to an isolated type II endoleak is rare (<1%) and that over a third occur in the absence of sac expansion. Nearly a third of all interventions for the treatment of type II endoleaks fail, however a translumbar intervention has a higher success rate with a lower risk of complications.

058: AN EVALUATION OF OUR EARLY EXPERIENCE OF PERCUTANEOUS EVAR USING THE PROSTAR® XL DEVICE
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Introduction: There is a trend towards less invasive procedures in all areas of surgery. It is suggested that the use of percutaneous closure devices for endovascular procedures that require larger seat sizes may have a positive impact on patient outcomes.
Methods: A retrospective review of our endovascular logbook was undertaken from which all patients who received a Prostar® XL device were identified and data collected.
Results: 96 Prostar® XL devices were deployed. Mean skin to common femoral artery (CFA) depth was 31.3mm, all but 5 patients had some degree of CFA calcification. The median length of stay was 4 days. 4 patients went on to develop groin haematomas postoperatively; all of these were treated conservatively. The Prostar® XL cut through the CFA in one patient and this required repair. 80% of complications were in the first 15 cases.
Conclusion: No long-term complications in our series can be attributed to the percutaneous approach for EVAR. We believe that US-guided puncture can overcome problems associated with CFA calcification and that the depth from skin to CFA has no impact on morbidity. The use of low profile devices (<16F) and operator experience have a positive impact on outcomes with the Prostar® XL device.

0564: TEMPORAL ARTERY BIOPSY – TOO MANY TOO LATE?
Ruth Graham, Lourdsamy Selvam, West Wales General Hospital, Carmarthen, UK.
Aim: To show Temporal artery biopsy(TAB) rarely influences patient management, and that we should use the American College of Rheumatologists (ACR) criteria (Score ≥ 3 sensitivity 93.5%, specificity 91.2%) to identify which patients require biopsy to diagnose Temporal Arteritis(TA).
Methods: All patients who underwent a TAB at our institution (01/01/2008-31/12/2011) were identified using histopathology records. Patient case notes, histopathology and haematology records were reviewed to determine the dates of diagnosis, biopsy and corticosteroid therapy and the initial ACR score.
Results: Of the forty-three patients identified full data was available on thirty-seven (13M:24F). The average age was sixty-eight (range 26-79). At presentation thirty-five patients were over 50, eighteen had an ESR >50, twenty-one had temporal tenderness and twenty a localised headache meaning nineteen (51%) patients had an initial ACR score ≥3. Prior to biopsy 70% (27) had corticosteroids. The average time from diagnosis to biopsy was thirty-one days. There were only two positive biopsies (initial ACR score was 3 in both cases).
Conclusions: TAB has a place in the diagnosis of TA but rarely influences patient management. The ACR score should be used to diagnose and initiate treatment in temporal arteritis. If biopsies are required a fast-track surgical referral is recommended.

0569: RESULTS OF SIX YEARS OF ENDOVENOUS LASER ABLATION (EVLA) FOR THE TREATMENT OF RECURRENT VARICOSE VEINS
Andrew McAvoy, Jade Myers, Rhodri Jenkins, Mandy Taylor, Frank Mason, Southport District General Hospital, Southport, UK.
Varicose vein (VV) recurrence occurs in up to 20% of patients following open surgery. ‘Re-do’ VV surgery is technically challenging and complication rates approach 40%. Aim: Our aim was to examine the recurrence and complication rate of patients undergoing EVLA as a treatment for recurrent VV following previous surgery at a District General Hospital.
Methods: We included all patients since 2006 who underwent EVLA for recurrent VV following previous surgery. We examined recurrence rates and complications following this procedure.
Results: There were 80 EVLA procedures performed for VV recurrence following previous surgery over the 6 year period. The complication rates amongst this group of patients is shown below. Wound infection: 0%; Altered sensation: 0%; Deep Vein Thrombosis: 0%; Phlebitis: 4%; Bleeding: 0%; Overall: 10%; Post-treatment duplex scanning was performed in 32 patients. 75% of patients had no residual reflux in the treated vein.
Conclusions: The overall complication rate following EVLA as a ‘re-do’ treatment for VV was 10%. Early recurrence rates are 25%. EVLA has a low complication and recurrence rate when compared to ‘re-do’ surgery.

0589: THE ROLE OF PALMAZ STENT-GRAFTS IN EVAR
Claire McManus, Stephen Badger, Julie Reid, Royal Victoria Hospital, Belfast, Northern Ireland, UK.
Background: Palmaz stenting helps proximal fixation in unfavourable aneurysm necks. The study aimed to evaluate complications associated with Palmaz stent-grafts.
Methods: Patients undergoing elective or emergency EVAR repair using a Palmaz stent-graft between January 2001 and December 2011 were reviewed. Morphological aneurysm changes were prospectively recorded.
on the endovascular database at 1, 3, and 12 months and annually thereafter. Changes in these measurements were calculated for each group. Results: Pajmal stent-graft was used during 22 elective and 19 emergency EVARs (17 elective and 10 emergency patients were included for analysis). Throughout follow-up, the suprarenal diameter became greater in the elective group (4.65±5.11mm vs. 2.2±4.13mm;p=0.30) as were the top neck (5.06±5.24mm vs. 4.6±6.02mm;p=0.76) and bottom neck diameters (5.94±6.53 vs. 3.11±4.26mm;p=0.34). Aortic sac regression was higher in emergency patients at 12 months (3.71±2.03mm vs. 3.79±7.02mm;p=0.08) and at 24 months (13±13.29mm vs. 4.36±9.61mm;p=0.23). Open re-intervention occurred in 20% of emergency patients for proximal type 1 endoleaks, with another 20% for stent-graft migrations. Re-intervention in elective patients (18%) was for persistent type 2 endoleaks. Conclusion: The complication rates, particularly in emergencies show that Pajmal stenting provides only a short-term solution in EVAR. This should influence patient selection as secondary procedures are more likely.

0603: PERSISTENT SCATIC ARTERY ANEURYSM: A PLEA FOR ATTENTION AND PROPOSAL FOR MANAGEMENT
Nigel Day 1, Andrew Currie 1, Keith Jones 2, Kingston Hospital, London, UK; 2 St George’s Hospital, London, UK.
Aim: This article reviewed published evidence on the identification and management of persistent sciatic artery aneurysms.
Methods: Systematic literature review was undertaken using Medline, EMBASE and Cochrane Database of Systematic Reviews up to December 31st 2012. A free text search using “persistent sciatic artery”, “persistent sciatic artery aneurysm”, “complete PSA” and “incomplete PSA” was performed. All papers identified were screened and the search enhanced with manual bibliography review.
Results: 49 relevant studies were identified. PSA has an incidence of 0.025%-0.04%. PSA aneurysms, though usually asymptomatic, may present with a gluteal mass or distal embolization and ischaemia. Investigation is most commonly performed by angiography, although non-invasive methods show surgical planning advantages. Management is guided by anatomical determination of the complete or incomplete forms. For the complete forms, where the PSA supplies distal limb blood supply, this entails exclusion of the aneurysm and vascular reconstruction with open or endovascular techniques. Incomplete forms, where the PSA is present with intact normal circulation, normally require simple aneurysm exclusion only.
Conclusion: Vascular specialists should be aware of this rare, often asymptomatic vascular anomaly as it can complicate common vascular emergencies. Timely surgical or endovascular interventions are vital due to the high risk of aneurysmal dilatation.

0630: ASSESSING THE QUALITY OF ONLINE INFORMATION FOR PATIENTS WITH CAROTID DISEASE
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Aim: Controversy exists relating to carotid endarterectomy and coarctation of the carotid artery stenting (CAS). We aimed to assess the quality of online information relating to both.
Methods: The GoogleTM search engine was searched for “carotid endarterectomy” and “carotid stenting”. The first 50 webpages returned were assessed. The Gunning Fog Index (GFI) and Flesch Reading Ease Score (FRES) were calculated to assess readability. The LIDA tool (Minervation Ltd, Oxford, U.K.) was used to assess accessibility, usability and reliability.
Results: Regarding CEA, 20% (n=10) of the webpages returned were from peer reviewed sources with 34% (n=17) posted by hospitals or health services. Comparatively, for CAS, 40% (n=20) were peer reviewed with 16% (n=8) posted by hospitals or health services. Regarding CEA, the GFI and FRES indicated poor readability at 14.84 and 42.38 respectively. For CAS page web page assessment suggested further reduced readability with a GFI of 15.91 and FRES score of 36.01. The LIDA score demonstrated that reliability and accessibility of information was greater than usability for online users.
Conclusion: Websites providing information on carotid disease management must be made more readable, reliable and usable. Online information currently available to patients regarding CAS is significantly more difficult to read and comprehend than CEA.

0653: REVIEW OF POST-OPERATIVE ANTICOAGULATION IN THE SURGICAL MANAGEMENT OF ARTERIAL EMBOLIC DISEASE
Martha Nixon, Marcos Kostalas, Keith Gomes-Pinto, John Taylor, David Williams. Northern Devon Healthcare NHS Trust, Barnstaple, UK.
Introduction: There is no guidance on post-operative anticoagulation after embolectomy. The purpose of this study was to review the use and outcomes of low molecular weight heparin (LMWH) and unfractionated heparin (UFH) following embolectomy.
Methods: Retrospective case review of patients undergoing embolectomy from December 2009 - December 2012 was performed.
Results: 33 patients were included. 20 femoral, 5 brachial, 4 popliteal, 2 iliac and 2 graft embolectomies were performed. Anticoagulation prior to surgery included heparin (n=16, 48%), cloxane (n=4, 12%), or nothing (n=13, 39%). Intra-operatively heparin (n=24, 73%) or nothing (n=9, 27%) was given. Post-operatively LMWH (n=20, 61%), heparin (n=9, 27%), aspirin/clopidogrel (n=3, 9%) or nothing (n=1, 3%) was given. Patients were discharged on warfarin (n=21, 64%), aspirin (n=5, 15%), clopidogrel (n=2, 3%), cloxane (n=3, 9%), rivaroxaban (n=1, 3%) or nothing (n=1, 3%). The overall complication rate was 33% (including haematoma, wound infection, amputation, claudication and death), 67% for those on heparin post-operatively compared to 25% on cloxane. Mortality was 30% with average time to death of 9 months.
Conclusion: This study has shown that cloxane is a suitable and possibly superior alternative to UFH. The authors had been surprised by the mortality in this group of patients.

0681: ARE REFERRAL DELAYS CONTRIBUTING TO LIMB LOSS IN DIABETIC PATIENTS?
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A root cause analysis (RCA) was performed for major amputations (MA) in diabetic patients to identify preventable causes for limb loss. Data was collected retrospectively using HES codes for Diabetes and MA (above knee/through/knee/below knee) and analysed using the London Diabetes Network RCA tool for MA.
20 diabetic patients underwent MA between 1st April 2010 and 31st March 2012. Median time from initial onset of symptoms (I0S) to any secondary care review was 12 weeks while median time from IOS to diabetic foot multidisciplinary team (DFMDT) review was 17 weeks. 6 patients (30%) had no DFMDT clinic review before MA. 16 patients (80%) underwent inpatient vascular imaging. Median interval from admission to vascular imaging was 1 day (1-64). 10 patients (50%) underwent revascularisation (Endovascular therapy n=4 / Surgical bypass n=3 / Endovenous Therapy and Surgical Bypass n=3). Median time from IOS to revascularisation was 70 days (2-1080) and median time from hospitalisation to revascularisation was 1 day (1-64). The 30-day post-MA mortality was 15%. Our RCA highlights significant delays in referral to the DFMDT in this cohort with adverse limb salvage outcomes. The need to refer promptly to the DFMDT should be stressed to carers in the community.