Background: The ability to safely achieve hemostasis is a key aspect of percutaneous vascular access. Vascular closure devices (VCDs) were designed to improve the safety of vascular closure; however this has been difficult to prove in recent studies. We present our experience with achieving hemostasis including assessing the safety and efficacy of VCDs. The aim of this study is to assess the technical success, complications and associated risk factors for achieving hemostasis in antegrade femoral punctures for infrainguinal interventions. **Method(s):** A retrospective review of all patients who underwent antegrade common femoral puncture for infrainguinal endovascular procedures between January 2016 and November 2018. Access site hemostasis was achieved either using VCD or manual compression (MC). Patient demographics, body mass index (BMI), previous ipsilateral groin punctures and surgeries, skin to vessel distance, common femoral artery (CFA) diameter, sheath size and complications were recorded. **Result(s):** A total of 175 antegrade femoral punctures were performed in 159 patients. Mean patient age was 65 years (21-102). Male:female ratio was 120:39 patients and mean BMI was 27.2 (16.24-43.79). Mean CFA diameter was 7.5 mm (3.5-12.7 mm) and mean skin to vessel distance (SVD) was 33.7 mm (9.6-20 mm). Sheath sizes utilized were 5 Fr (n=93), 6 Fr (n=66), 4 Fr (n=13), and 7 Fr (n=3). MC was used to achieve hemostasis in 46% (n=81) of patients. Angioseal was the most commonly used VCD in 43.6% (n=41), Exoseal 36% (n=34) and Proglide in 20% (n=19). Technical success in the VCD group was 92.5% (n=87). Six patients experienced complications (VCD=4; MC=2) including groin hematoma, pseudoaneurysm, distal thromboembolism and arterial perforation. **Conclusion(s):** In our experience, vascular closure devices are effective and safe in antegrade arterial procedure with limited number of complications. A larger study is required to compare vascular closure devices in antegrade punctures.

OC3.9

To Determine Efficacy of Bilateral Inferior Petrosal Sinus Sampling in Differentiating Cushing Disease from Ectopic Cushing Syndrome

Muhammad Azeemuddin, Shahmeer Khan, Raza Sayani, Tanveer Ul Haq, Ayesha Shoukat[1]

Aga Khan University Hospital Karachi, [1]Karachi Insitutute of Medical Sciences, Karachi, Pakistan.
E-mail: shahmeer.khan@aku.edu

Background: ACTH dependent cushing syndrome is further divided into cushing disease and ectopic cushing syndrome. Bilateral inferior petrosal sinus sampling (BIPSS)is a reliable tool in differentiating these two entities specially in cases where MRI findings are equivocal. **Method(s):** This is a retrospective study which includes all patients who underwent BIPSS at department of radiology AKUH with clinical diagnosis of ACTH dependent cushing syndrome. Histopathology correlation is considered gold standard. **Result(s):** In total 23 patients underwent bilateral inferior petrosal sinus sampling from 2006-2017, out of these 1 patient was excluded from the study on the basis of inadequate sampling 11 patients had no MRI or histopathology correlation. In the remaining 11 patients 8 were diagnosed as Cushing disease on BIPSS and proven to have pituitary adenoma on histopathology while 3 patients diagnosed with peripheral source of ACTH were diagnosed on histopathology to have bronchial carcinoid. **Conclusion(s):** In our study sensitivity of bilateral inferior petrosal sinus sampling was found to be 100 %. Although with advent of dynamic weighted MR imaging with pituitary protocol the utility of BIPSS has declined over time due to the invasive nature of the procedure however it is still a reliable test in cases where MRI findings are equivocal and inconclusive.

OC3.10

Femoral-Popliteal versus Long Superficial Femoral Artery Stent

Maher Hamish, Terri-Ann Russell

Northampton General Hospital, Northampton, UK.
E-mail: mhamish@doctors.org.uk

Background: The aim of this cohort study is to compare two modalities of treating long occlusion in the superficial femoral artery as a cause for critical leg ischemia; angioplasty with stenting vs a femoral-popliteal bypass and the rate of limb salvage and intervention needed to maintain patency. **Method(s):** We retrospectively obtained and reviewed data on all patients at the northampton general hospital with severe peripheral vascular disease who had long SFA stents during a 3 year interval commencing from April 1 2014 to march 31st 2017 and compared the patency and the need for a secondary intervention to a group of patients who had a femoral popliteal bypass during this same time period. All patients involved in this study were patients with severe peripheral vascular disease failing best medical management or presenting with evidence of critical limb ischaemia with evidence of tissue loss or rest pain. Best medical management entails patients being on a statin, an antiplatelet, having good control of hypertension and diabetes and smoking cessation advice. All patients had an arterial duplex assessment before and surveillance after an intervention to assess disease severity and patency respectively. Femoral-popliteal bypass procedure included patients who had either above or below knee bypass as well as patients who had a vein or a prosthetic used for the conduit. Primary patency was calculated from the time of the initial intervention until the time that there was occlusion. For patients who developed a significant stenosis and needed an intervention to maintain patency they were referred to as assisted primary patency and was calculated from the time of initial procedure to the time of occlusion. **Result(s):** Femoral-popliteal bypass of the 28 patients who had a femoral-popliteal bypass procedure, 22 were males and 6 females. The mean age of patients in this audit was 72.1 years. The youngest patient to have this procedure was 49 years old and the oldest being 92 years of age and almost half of this cohort (46.4%) were over the age of 75 years. Of the 28 patients that were operated on 2 died in hospital or within 30 days of having the operation, hence leaving only 26 patients in the surveillance population. All the patients who died were over the 78 years of age. 20 (86.95%) patients in this study had the long saphenous vein used for their bypass conduit while 3 (13.05%) patients had PTFE. **Conclusion(s):** Of a group of patients who share similar demographics the patency rate of femoral popliteal bypass was superior to that of long SFA stents 74% vs 56%. For both groups however, the need for a second intervention to maintain primary patency was similar

at a rate of approximately 21%. The incidence of diabetes mellitus was significantly higher in the fem-pop group and appears to significantly affect graft patency and the need for another intervention, as 83% of patients with graft stenosis needing angioplasty were diabetic. Diabetes mellitus also seem to affect stent patency as 40% of patients who needed repeat angioplasty in the long SFA stent group had diabetes, however more significantly in the fem-pop population. There appears to be no obvious correlation between the type of blood thinner used and the maintenance of patency in the group with long SFA stents. Overall, 50% of patients with long SFA stents needed a second intervention to maintain primary patency while only 30% of patients who had fem-pop bypass needed another intervention to maintain patency of the conduit. It also apparent that majority of SFA occlusions in this audit occurred within the first 6 months of deployment.

OC3.11

Superficial Facial High Flow Vascular Malformations Treated by Onyx Embolization: Is There a Need for Surgery after Percutaneous Occlusion

Mohamed Amine Habouchi, Abdelmadjid Habba, Mounir Tabouche, Chafa Aimeur, Sidahmed Faraoun, Boudjema Mansouri

University Hospital of Bab El Oued, Algiers, Algeria.
E-mail: aminehabouchi@gmail.com

Background: Arteriovenous malformations (AVMs) and fistulas (AVFs) are rare vascular disorders, in which embolization is the first line treatment frequently associated to an adjunctive surgery for superficial and facial localizations. The aim of this study was to report our experience in embolization of high flow peripheral AVMs with onyx. **Method(s):** 5 women and 4 men were treated by percutaneous embolization with onyx, in our institute from January 2016 to June 2017 for superficial facial high flow vascular malformation. 3 patients were treated for acute bleeding and 6 patients for esthetic purpose. Patients were followed at 1, 3 and 12 months. Clinically symptoms, bleeding and esthetic improvement were assessed. **Result(s):** During this period we have embolized in our department 1 AVFs (Houdart type I) and 8 AVMs: 6 type ii and 2 type III (Houdart classification). Complete occlusion of the malformation in one session was achieved in 5 patients, and 1 patient needed a second session. 2 patients suffered from bruits which had totally disappeared immediately after embolization. Bleeding was controlled in all patients, and esthetic improvement was achieved at one month in 3 patients (labial AVM), and the 3 other at 3 months. None of our patients underwent surgery after embolization. No major complications were recorded. **Conclusion(s):** Onyx embolization for superficial facial high flow malformation is an effective and safe therapy, could be an option for first and only line treatment in non-complex lesions.

OC3.12

Surfacer® Inside-Out® Access Catheter System: Setting Back the Clock for Dialysis Patients?

Asim Khwaja, Yasir Suliman[1], Mohamed Almarzooqi, Iman Alshamsi, Moatasiem Bukhari[1], Amin Eltahir, Emad Khater, Shahabaz Patil[1]

Sheikh Khalifa Medical City, [1]Mafraq Hospital, Abu Dhabi, UAE.
E-mail: akhwaja@seha.ae

Background: Central venous occlusion is a serious cause of patient morbidity in hemodialysis patients which limits formation of upper extremity vascular access. The Surfacer® Inside-Out® Access Catheter System (Merit Medical, USA) is a device that aims to restore access to right atrium through occluded central veins. We review the first five patients treated with Surfacer® in GCC. **Method(s):** All patients were approved by a multi-disciplinary team. Utilizing right femoral vein approach, a 10 French sheath was advanced to the occlusion in SVC or right innominate vein (RIV) under fluoroscopy. The Surfacer® Catheter was advanced through the occlusion and the needle guidewire was externalized in the right supraclavicular region. A peel-away sheath was pulled into the central venous system over the externalized guidewire as the Surfacer device was retracted. Next, a tunnelled hemodialysis catheter was placed through the peel-away sheath into the SVC. **Result(s):** Inclusion criteria were RIV or SVC occlusion with patent right femoral and iliac veins. Patients with active infection or bleeding diathesis were excluded. All patients had history of multiple failed AV accesses and failed attempts at endovascular recanalization of the occlusion using conventional techniques. All had RIV occlusion and one additionally had a left innominate vein and superior vena cava occlusion. Technical success rate was 100%. One patient had minor post-procedure bleeding at the catheter site that stopped after suturing. The tunnelled catheter was converted to a HeRO Graft® (Merit Medical, USA) in two patients, after 10 and 188 days. In the remaining patients, their original catheter remained functional 220 days post-procedure. **Conclusion(s):** The Surfacer® Inside-Out® Access Catheter System allows access into the right atrium through occluded central veins to facilitate creation of long term arteriovenous access or convert femoral to jugular access and maintain viability of secondary veins.

OC3.13

Percutaneous Retrograde Access for Recanalization of Occluded Arteries in Thromboangiitis Obliterans (Buerger's Disease)

Behlul Igus, Ali Fırat

Baskent University Istanbul Hospital, Istanbul, Turkey.
E-mail: dr.bigus@gmail.com

Background: Thromboangiitis obliterans (TAO) or Buerger's disease is a non-atherosclerotic peripheral vascular disease, which affects mainly young male smokers before the age of 45, especially in low socioeconomic regions. The aim of the