but it requires special skills and long waiting time for fEVAR. Also management of type 1 endoleak is the most challenging leak to deal with. The emerging technology with endoanchors brought reasonable solution to deal with short neck using standard EVAR and to treat type 1 endoleak. **Method(s):** We will review the endoanchors registry and our experience in Saudi in using endoanchors as prophylactic to prevent and as therapeutic to treat type 1 endoleak. **Result(s):** The result from endoanchors registry and our experience is very promising. **Conclusion(s):** Endoanchors can be used as prophylactic in challenge neck anatomy to prevent type 1 endoleak and as therapeutic to treat type 1 endoleak.

OC3.6

Endovascular Treatment of Visceral Arteries Pseudoaneurysms by Covered Stents

Mohammad Elhemeily, Charles Roux¹, Marine Bravetti¹, Wafik Turki¹, Dan Toledano¹, Marine Lataud¹, Samia Boussouar¹, Alban Redheuil¹, Nour Dahbi¹, Philippe Cluzel¹

Ain Shams University, Cairo, Egypt, ¹Département d'Imagerie Cardiovasculaire et de Radiologie Interventionnelle et Thoracique, Hôpital Universitaire La Pitié-Salpêtrière, Paris, France. E-mail: m.elhemeily@med.asu.edu.eg

Background: Pseudoaneurysms of the visceral arteries are rare, but remain a therapeutic challenge given the high morbidity and mortality of the surgical treatment. We evaluated the value of their endovascular treatment by covered stents. **Method(s):** This is a retrospective, single-center study conducted from December 2015 to June 2018. All patients presenting with pseudoaneurysms of the visceral arteries (coeliac trunk, superior mesenteric and inferior mesenteric arteries and their branches) documented by cross sectional imaging were included. Endovascular treatment with covered stents was done. The pseudoaneurysm cause, site, size, distance from artery origin, the artery caliber, tortuosity, the angle between the artery ostium and the abdominal aorta, the duration of the procedure, the access site, the materials used, the technical success rate, the immediate and delayed complications at the first and last follow up were collected. **Result(s):** 21 interventions were performed on 19 patients. The majority were males with a median age of 60 years. The pseudoaneurysms were most commonly located in the hepatic arteries with liver transplantation being the most common etiology. Right femoral access was used in 9 patients and left brachial access was used in 10 patients. The median procedure time was 58 minutes. The technical success rate was 79% (15/19). Failure was due to artery dissection (3/19) or malcoaptation of the stent (1/19). The median duration before the first follow up was 45 days and 12 months before the last follow up. Complications encountered included perforation (1/19), endoleak (1/19), recurrence (1/19), partial (3/19) or complete (2/19) thrombosis. There was no procedure-related mortality. **Conclusion(s):** Endovascular treatment of visceral arteries pseudoaneurysms by covered stents is feasible, safe and effective. The brachial access is preferred in technically challenging cases due to certain anatomical factors such as increased artery tortuosity or increased distance from the artery origin.

OC3.7

Modified Pressure Cooker Technique: An Effective Way to Control Ethylene Vinyl Alcohol Copolymer Reflux in Peripheral Arteriovenous Malformations

Virendersingh Kapoorsingh Sheorain, Manju Bharath Nr

Medanta The Medicity Hospital, Gurgaon, Haryana, India. E-mail: veeru40395@gmail.com

Background: Embolization of high flow pAVMs is a technical challenge. ethylene vinyl alcohol (EVOH) copolymer is a safe and effective liquid embolic agent routinely used in intracranial AVMs and its use is recently reported in peripheral AVMs as well. Most important technical challenge during ethylene vinyl alcohol (EVOH) copolymer injection is control of reflux. Modified Pressure Cooker Technique (mPCT) is a method to prevent reflux of EVOH which is well described in intracranial AVMs, however not reported in peripheral AVMs. In Modified Pressure Cooker Technique a glue plug is created proximal to the delivery tip of detachable microcatheter in a unique way. We describe successful use of modified Pressure Cooker Technique (mPCT) in peripheral AVMs to control reflux and achieve adequate embolization. **Method(s):** Three patients with high flow peripheral AVMs were treated with ethylene vinyl alcohol (EVOH) copolymer (MENOX 18) embolization using modified Pressure Cooker Technique. We used Ultrasound guided Femoral access in all 3 cases. We used coaxial system using 7F 70 cm long Guiding sheath and intermediate catheter DAC 070. We used Combination of EVOH compatible detachable microcatheter (APOLLO 3 cm tip) and a non detachable microcatheter (Echelon 10) for nBCA glue plug creation needed for mPCT. We injected EVOH copolymer (Menox 18) via detachable APOLLO micro catheter and NBCA injection via the proximal catheter to create a glue plug to prevent EVOH copolymer reflux during injection of EVOH copolymer. **Result(s):** We achieved 100% Technical success: ethylene vinyl alcohol (EVOH) copolymer did not reflux proximal to the glued segment of the detachable microcatheter and we had safe removal of detachable microcatheter post embolisation. Satisfactory embolization of the target nidus in all. No intra-operative complications. **Conclusion(s):** Use of modified Pressure Cooker Technique (mPCT) in peripheral AVMs is: (1) Safe and effective for ethylene vinyl alcohol (EVOH) copolymer injection. (2) Prevents reflux and allows forward progression of ethylene vinyl alcohol (EVOH) copolymer into nidus. (3) Can be applied in peripheral AVMs whenever ethylene vinyl alcohol (EVOH) copolymer is used as the embolic agent.

OC3.8

Safety and Efficacy of Vascular Closure Devices in Antegrade Femoral Intervention: A Single Center Experience

Aeed Saad Alaklabi, Othman Zayed Alshehre, Juman Mohammed Alghamdi, Sulaiman Mohammad Alsharfan¹, Mohamad Arabi, Abdulrahman Jan Alvi

King Abdulaziz Medical City, ¹Security Forces Hospital, Riyadh, Saudi Arabia. E-mail: asaderm@gmail.com

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 UI Haq, Ayesha Shoukat¹

*Aga Khan University Hospital Karachi, ¹Karachi Institute 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