

**Background:** With the advent of central lines, pacemakers, and defibrillators upper extremity, deep venous thrombosis (DVT) is increasingly common. An upper extremity DVT has about 5%–10% chance of becoming a pulmonary embolism (PE). Catheter-related thrombi result in PE more frequently than primary upper extremity DVT. Several reports of fatal PE due to upper extremity DVT had been documented. Langan and Greenfield demonstrated in 1985 that superior vena cava (SVC) filters could safely be deployed in dogs. To date, a total of 127 cases are documented in literature. **Methods:** Forty-two patients with acute upper extremity DVT and anticoagulation therapy from January 1, 2014, to June 30, 2015. Four patients underwent percutaneous placement of SVC filter for prevention against PE. Follow-up chest radiographs were used to detect filter migration, dislodgment, and fracture. Pulmonary pressure after filter insertion was recorded. Patients were followed up clinically for evidence of SVC syndrome and PE **Results:** No complications such as filter migration, dislodgment, and fracture occurred (median follow-up 12 weeks). No patients developed clinical evidence of PE or SVC syndrome (median follow-up 15 weeks). **Conclusion:** Percutaneous filter placement in SVC is a safe and effective method in the prevention of symptomatic PE due to acute upper extremity DVT.

### P503

#### Use of the Transbrachial Approach with Regular Radial Sheath as an Alternative Method in the Management of Aortoiliac Occlusive Arterial Diseases

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**Background:** The best way to manage peripheral artery disease remains an unresolved issue. In recent years, endovascular therapy (EVT) has made remarkable advances, resulting in better outcomes in a variety of settings. Aortoiliac bifurcation lesions present various difficulties in treatment, and the therapeutic method remains controversial. In addition, while some reports have examined EVT outcomes in aortoiliac bifurcation lesions, there are few analyzing the influence of lesion morphology and stent configuration. **Methods:** Seven patients admitted to Shaq Almandine and El Amria hospitals; during the period July 1, 2016–April 30, 2017 with chronic bilateral lower limb ischemia (aortoiliac occlusive disease). After clinical evaluation, Doppler and CT angiogram transbrachial approach had been chosen using regular radial sheath. Follow-up after 1 day, 1 week, and 3 months **Results:** Five male patients and 2 females, with a mean age of 62.2 years underwent left transbrachial approach using 6 Fr. radial sheath. Follow-up revealed patent stents in all patients after 3-month period using Duplex study **Conclusion:** Radial sheath is a safe, unique, and cheap method for transbrachial approach, more friendly for arch manipulation and does not affect the pushability during the procedure

### P504

#### Subarachnoid Hemorrhage in Young Adults in the KSA

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**Background:** The aim of this study is to review a series of aneurysms occurring in young adults all of which presented with subarachnoid hemorrhage (SAH). **Methods:** This was a retrospective review of prospectively collected data from January 2014 to 2017. Any patient with an aneurysmal SAH was included in the study. We excluded nonaneurysmal SAH and fusiform aneurysms. Parameters of location, size, complexity and mode of therapy, and clinical course were reviewed. Chi-square contingency analysis was used with significance below 0.05. **Results:** A total of 96 patients harboring 114 aneurysms were reviewed. A total of 30 patients harboring 36 aneurysms were aged between 18 and 36 years (31.5%). Two out of three were anterior circulation and one out of three were posterior circulation aneurysms. 60% were male and 40% were female, and 50% of males died due to SAH compared to 25% of females. Nine patients suffered a rebleed (30%) and six of those died. Twenty out of 27 patients developed vasospasm and 3 died early due to a rebleed. Fifteen out of 27 patients were coiled, and no significant difference in outcome was observed whether with coiling or clipping. **Conclusion:** Microsurgical or endovascular obliteration of the aneurysms produced equal results in the young adults presenting with SAH. Maintaining aggressive medical/international normalized ratio therapy during vasospasm is a key to preserving good outcome. Rebleed is a key factor in poor outcome and death. This group of SAH patients deserves further study in terms of their genetic influences which might alter the recommendation for longitudinal follow-up for each patient and the screening of their families.

### P505

#### Bare Metal Stent for Central Venous stenosis/occlusion in Hemodialysis Patients: 5-year follow up study

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**Background:** The aim of this study is to analysis the effectiveness with patency rate of percutaneous bare metal stent for central venous stenosis/occlusion in patients who are undergoing hemodialysis. **Methods:** Totally 1016 central venous interventional procedures were performed in 891 patients during recent 10-year period. Four hundred and twenty-five subclavian (occlusion: 97, stenosis: 328) and 591 innominate (occlusion: 156, stenosis: 435) venous steno-occlusions were enrolled in this study. The follow-up period was 2 weeks–77 months (mean: 14.8 months). Technical success, complications, and long-term patency were evaluated as well as the statistic difference between

the location of steno-occlusions, the existence of diabetes mellitus, and the history of central catheter. **Results:** Stents were implanted in 294 patients in 1016 procedures. All but one of the procedures was technically successful (99.7%). The one patient with an unsuccessful procedure was due to incomplete stent expansion. Two stent migrations were occurred as major complication without other. The primary patency rate for 6, 12, 24, and 36 months was 44%, 18%, 5%, and 2%, respectively (mean: 7.9 months). Repeat interventions, including additional balloon angioplasty and stent placement, were required in 172 patients (average: 2.54). There was no statistic difference except the history of central catheter ( $P = 0.0128$ ). The secondary patency rate for 6, 12, 24, 36, 48, and 60 months was 80%, 67%, 42%, 37%, 30%, and 20%, respectively. **Conclusion:** Percutaneous central venous stent implantation in hemodialysis patients is useful in patients with suboptimal angioplasty and it was safe and effective to restore the hemodialysis function. However, repeat interventions are usually required to prolong the stent patency.

### P506

#### Successful Implementation of Electrocardiographic-Guided Peripherally Inserted Central Catheter Placement by a Nurse-Lead Peripherally Inserted Central Catheter Placement Team

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**Background:** The use of electrocardiographic guidance has been shown to be safe and effective for the placement of peripherally inserted central catheters (PICCs). The goal of this study was to evaluate the Sherlock 3CG tip confirmation system (TCS) in the placement of PICCs (using chest radiographs as the golden standard) and then to successfully implement use of the Sherlock to reduce the utilization of chest radiographs for PICC positioning at our institution. **Methods:** From January to June 2017, we analyzed the positions of PICCs placed with the Sherlock 3CG TCS. A chest radiograph performed after each PICC placement was interpreted by four independent observers. A catheter tip located within the superior vena cava (SVC) or cavoatrial junction was considered successful placement of PICC. The study comprised a total of 130 PICC placements. Exclusion criteria included atrial fibrillation, atrial flutter, or atrial dysrhythmias. Fifty-one PICC placements were included in the first phase of trial. PICC training in Phase 1 included 1-h training by the company Rep. 1 h online course. Hands-on training for tip confirmation was not mandatory to start the PICC insertion. Seventy-nine PICC placements were comprised Phase 2 of the trial. This time the hands-on training was made mandatory. **Results:** Results of Phase 1 were not satisfactory, with 82% of PICCs placed in the SVC or cavoatrial junction. Results of Phase 2 were considered satisfactory, with 96% of PICC placements into the SVC or cavoatrial junction. **Conclusion:** The Sherlock 3CG TCS is an effective device for guiding PICC placement to the SVC or cavoatrial Junction. Sufficient educational training is important to achieve a successful transition from radiographic confirmation to usage of the Sherlock 3CG TCS. This device will generally eliminate

the need for radiographic confirmation of PICC placement in our patient population, except for patients with atrial fibrillation, atrial flutter, or atrioventricular junctional arrhythmic patients.

### P507

#### Incidence of Finding Abdominal Aortic Aneurysm in Abdominal Computed Tomography Scan and its Implication on its Prevalence in Saudi Arabia

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**Background:** In Saudi Arabia, the number of thoracic and abdominal aortic aneurysms (AAAs) treated does not exceed 200/year. For a population of over 30 million, this number is far below international standards. The lack of studies on incidence of AAA in the gulf has left many questioning whether AAA is massively underdiagnosed or whether the prevalence is inferior to international standards. We designed a study to estimate the prevalence of AAA in our region. **Methods:** This was a retrospective review of all abdominal computer technologies (CTs) done from January 1, 2011, to December 31, 2016, in our hospital. We included all male patients at age 65–75 years in whom a CT was done for reasons other than diagnosing and managing aortic aneurysms. All external aortic diameters of 3 cm or more were considered positive for AAA. **Results:** The total number of reviewed CTs was 2032. The mean age was  $69.8 \pm 3.1$  years and the mean aortic size was  $1.9 \pm 0.3$  cm. There were 2026 cases (99.7%) with sizes  $<3$  cm and the mean age was  $69.8 \pm 3.1$  years. There were six cases (0.3%) with sizes  $\geq 3$  cm and the mean age was  $72.3 \pm 3.1$  years. The only statistically significant factor for AAA was age, 69.8 versus  $72.3 \pm 3.1$  years ( $P = 0.0433$ ). **Conclusion:** Based on our data, the number of AAA in our population is inferior to most international screening programs. This low incidence could explain the far inferior number of diagnosed AAA in our population, and there are a number of scientific theories to support this result. However, these data are from a tertiary referral center, and many risk factors for AAA were not available. A pilot screening program in the nonhospital population would provide more robust evidence on the need of an AAA screening program.

### P508

#### Endovascular Treatment of Aneurysms of the Popliteal Artery

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**Background:** Arterial aneurysms of the lower limbs account globally 16% of arterial aneurysms, 70% of which are located in the popliteal arteries. Their prevalence is at 1% increasing with age. It usually falls within the context of an