and femoral vein ($n = 1$). Nine cases were performed under local and 3 under general anesthesia. Single-lumen endoluminal balloon dilatation is done in eight cases and double-lumen dilatation in four cases. Low profile 0.018" or 0.014" balloons ranging from 5–8 mm were used. **Results:** All catheters were removed safely without any minor or major adverse events. In one case, the catheter was shredded completely but removed over the balloon with no complications. **Conclusion:** Minimally invasive endoluminal balloon dilatation of tunneled dialysis catheter is a safe and effective technique for removing embedded catheters.

OC402

Management of Arterial Injuries Related to Central Venous Access: A Single Institution Experience

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Background: Retrospectively identify the types of arterial injuries related to central venous access and management techniques with long-term outcomes. **Methods:** Between January 2007 and November 2017, a total of 20 patients (13 females) were included with a mean age of 63 (28–89 years) and mean body mass index of 25.75 (13.3–36.5). Venous access procedures included central venous catheter (CVC) placement, dialysis line insertion, or endovascular venous procedures. The study excluded patients who had arterial injuries related to arterial access, such as postarterial line placement, postangiography, or percutaneous coronary interventions. **Results:** Iatrogenic arterial injuries occurred after attempted venous access procedures into the common femoral vein ($n = 18$) and subclavian vein ($n = 2$). Injuries were related to CVC placement ($n = 5$), temporary dialysis catheter ($n = 14$), and inferior vena cava filter insertion ($n = 1$). Nine patients had transarterial venous catheter insertion complicated by active bleeding from pseudoaneurysm and arteriovenous fistula. Other injuries included isolated fistula ($n = 3$), isolated pseudoaneurysm ($n = 4$), isolated branch injury ($n = 2$), and intra-arterial insertion ($n = 2$). Endovascular management was done with stent-graft placement ($n = 14$), embolization of bleeding vessel ($n = 2$), thrombin injection for pseudoaneurysm ($n = 2$), or by compression/conservative management ($n = 2$). Technical success was achieved in 100%. One patient required repeat angiography and embolization of isolated branch following stent-graft placement to control bleeding fistula and pseudoaneurysm. Clinical success was achieved in all patients. Procedure-related complications included puncture site hematoma ($n = 1$), partially occlusive thrombus/spasm of the deep femoral artery after stent graft placement. Six patients (33%) died in <30 days after the procedure (3–20 days) from other comorbidities. Three additional patients (16%) died during the same admission of the procedure (38–114 days). In 7 out of 14 patients, who survived after stent-graft placement, there were no reported complaints related to possible stent stenosis or occlusion at mean follow-up time of 5 years (50 days–8.64 years). **Conclusion:** Despite technically successful endovascular management of arterial injuries related to

venous access in critically ill patients, mortality rate remains high due to other comorbidities. Allowing for the small sample size, stent-graft placement for arterial injuries in this cohort of patients appears to be an effective option with high long-term patency rate.

OC403

Port a Cath Insertion by Interventional Radiologists Tips and Tricks

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Background: Modern chemotherapeutic management depends on repeated and safe access to the venous system for the delivery of drugs, fluids, and blood products and the periodic monitoring of the effects of treatment. Peripheral veins are rapidly destroyed by repeated venipuncture and by long-term chemotherapy. The long-term venous access devices (VADs) have helped to overcome the need for repeated peripheral or central venous puncture. One frequently employed type of venous access system is the Port-A-Cath system. The Port-A-Cath is a totally implantable VAD in which a conventional central venous catheter is attached to a subcutaneous injection port usually on the chest wall. The usage of ports for a wide variety of indications has also brought a wide spectrum of complications that are well documented in the existing literature. **Methods:** Two hundred and ninety patients were reviewed retrospectively in a 5 years' period (2011–2016) for the site of insertion, the type of the port the proper port function and the potential complications. **Results:** The results were in favor of low incidence of complications with some precautions (11.6%) as regard the insertion technique. **Conclusion:** Port a cath is an excellent auxiliary device for patients receiving regular chemotherapy conditioning that proper steps for insertion are followed

OC404

Effectiveness of Inferior Vena Cava Filter Departmental Follow-Up Form to Improve Filter Retrieval Rates: a Single-Center Experience

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Background: Inferior vena cava (IVC) filter is a device inserted in patients who are prone to develop pulmonary embolism (PE) and deep venous thrombosis (DVT). PE and DVT are one of the most common medical conditions present in patients who have venous thromboembolism. Venous thromboembolism begins as DVT in the lower limbs which detaches and travels through IVC. The clot ends up as PE blocking the heart and lung circulation. One in 10,000 people are diagnosed with PE and increases to 5 in 1000 by the age of 80 annually. PE leads to hypopnea, chest pain, tachycardia, and in severe cases heart failure, loss of consciousness, and death. In the United States, 25%–40% of