

the vein from the adjacent artery whether carotid or femoral; after proper sterilization, the transducer center was placed over the center of the vein. Cannulation is then performed using classic Seldinger technique. **Results:** Cannulation was successful in 98.2% of cases. Right IJV was always attempted first followed by left IJV followed by either femoral with no preference. There was no significant difference in technical success between the two groups. Carotid puncture happened in nine cases, eight neonates, and one pediatric patient in whom the catheter was applied to the artery and developed a transient ischemic attack after antibiotic injection to the artery which resolved spontaneously. One case developed hemopneumothorax treated by chest tube application and also resolved. **Conclusion:** Ultrasound-guided CV line is rather safe and feasible compared with published series on blind technique with higher overall success and a lower rate of complications.

OC104

Fistula Access Site Hemostasis: a Sticky Solution to a Bloody Problem

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Background: Histoacryl (glue) is well established as an agent for hemostasis for small subcutaneous lacerations and wounds in the emergency department. We translate this well-established technique into the interventional radiology world, using it for achieving hemostasis of hemodialysis arteriovenous fistula (AVF) access sites after percutaneous interventions. We audit the effectiveness, safety, and patient acceptability of this technique to conventional suturing closure methods. **Methods:** We carried out an audit of the use of skin adhesives (Histoacryl®) to close fistula access sites versus conventional surgical suturing in our large tertiary care center where there is a variety of different preferred techniques on wound closure. Thirty-nine procedures were performed on 33 patients who underwent percutaneous intervention of failing or thrombosed AVFs. In total, there were 39 access sites. Postprocedure hemostasis was achieved using Histoacryl® on 25 access sites, while surgical suturing was used for 14 access sites. Procedure details, including time to hemostasis, size of access sheath, dose and time of heparin administration, immediate complications, and patient self-reporting numeric pain intensity scale (0–10), were all recorded. **Results:** Histoacryl® group had a mean pain rating of 0.4 (standard deviation [SD] 0.7), and the suturing group had a mean pain rating of 2.6 (SD 0.7). Meantime to achieve hemostasis was 92 s in the Histoacryl® group (range: 20–601 s) and 198 s in the suture group (range: 58–361 s). No immediate complications were reported in either group. **Conclusion:** This audit has shown that Histoacryl® offers a fast, technically simple, device/suture-free, and painless technique for acquiring hemostasis after AVF intervention.

OC105

Sandwich Technique for Complex Aortoiliac Aortic Aneurysms

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Background: Common iliac artery (CIA) aneurysm is commonly associated with abdominal aortic aneurysm in about 40% of patients. It is preferable to preserve the internal iliac artery (IIA) whenever feasible. Intentional occlusion of an IIA during endovascular aortic repair (EVAR) results in new-onset buttock claudication and erectile dysfunction in ~28% and 17% of patients, respectively, and bilateral internal iliac occlusion is associated with increased risk of pelvic ischemic complications. Buttock claudication symptoms may improve over time but persist in more than half of affected patients 1 year after EVAR and can have a significant negative effect on patient quality of life. Fortunately, the more serious and potentially life-threatening complications of colon ischemia, pelvic necrosis, and spinal cord injury are less common, affecting ~1% of patients. **Methods:** There are many endovascular techniques to preserve the IIA. The most common one is using iliac branch endoprosthesis. However, in emergency situation, sandwich technique using parallel graft can be done easily. Unfortunately, no sizing formula has been used to determine the size of the parallel graft. Using mathematical calculation, we came up with specific formula to help in the sizing of the chimneys and decrease Type III endoleak. **Results:** Area of CIA graft = Area of EIA + Area of IIA ($\pi cc = \pi EE + \pi II$) = $(CC = EE + II)$ (Radius of CIA: C radius of EIA: E radius of IIA: I). Also we have to add 4 mm the fabric thickness $E = 10/2 = 5$ mm $I = 8/2 = 4$ mm. So, $CC = 25 + 16 = 41$ C = 6.4 mm. CIA graft has to be $6.4 \times 2 + 4 = 16.8$ mm CIA graft has to be $6.4 \times 2 + 4 = 16.8$ mm **Conclusion:** We feel this formula for sizing the chimneys for iliac aneurysms will decrease the Type 1b endoleak.

OC106

Management of the Left Subclavian Artery with Thoracic Endovascular Aortic Repair

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Background: The thoracic endovascular aortic repair (TEVAR) for aortic aneurysm and dissection has shown its superiority to open surgery. In 26%–40% of patients, the proximal sealing zone beyond the left subclavian artery (LSA) had inadequate length that led to LSA coverage. The practice guidelines in this situation to decide about the revascularization are based on low-quality evidence, and there is limited literature that guides us to optimal revascularization techniques. The purpose of this study was to compare outcomes of LSA coverage during TEVAR without and with revascularization using different surgical techniques. **Methods:** We performed a single-center retrospective cohort study of 80 patients who underwent TEVAR from 2008 to 2017. The LSA was covered to obtain an adequate proximal landing zone, and a selective LSA revascularization by subclavian-carotid transposition and chimney technique was employed. Stroke, spinal cord ischemia, upper extremity ischemia, vertebrobasilar insufficiency, primary patency of revascularization, and nerve injury were compared. **Results:** The origin of the LSA was covered in 11/80 patients and revascularization in 10/80 patients. Median follow-up was 46 months in the covered group and 36 months in revascularized group. There were no major complications in LSA covered group and only some local