Objective Intraoperative Assessment of AV Fistula Creation by Surgical Residents Does Not Correlate with Subjective Technical Skills Evaluation

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Objectives: Assessment of surgical resident technical skills has been historically performed by subjective faculty evaluations (SFE) that are provided to the resident in a delayed fashion. In an effort to improve the accuracy and the feedback of technical skills, we instituted an objective intraoperative skills assessment (OISA) for arteriovenous fistula creation (AVF). The purpose of this study was to determine the correlation of SFE assessments with the OISA.

Methods: Categorical third year general surgery residents were objectively evaluated by a single faculty during the creation of arteriovenous fistulas (AVF). Types of technical errors were explained and demonstrated to the resident prior to starting the AVF. The AVF was created using a standardized arteriotomy. Each technical error made was recorded in real time, as was the time needed to complete the anastomoses. The OISA report was provided to the resident immediately after the AVF. Concurrently, the SFE of technical skill were collected for the same residents over the postgraduate (PG) year 1-3. Pearson correlation coefficients were generated for comparisons of OISA and SFE.

Results: An OISA was performed for 42 AVF performed by five PGY 3 residents. Mean anastomosis time was 20.5 minutes. Mean number of technical errors per AVF was 17.2. The same 5 residents had a total of 185 SFE assessments during their PG year 1-3, including 33 in the PG year 3, with a mean score of 7.1 (scale 1-9). The SFE failed to correlate with either the time of anastomosis or the number of errors in the OISA (R = −0.01 and 0.07, respectively).

Conclusions: SFE of residents technical skill does not correlate with OISA performed during the creation of AVF. Technical skills established in our OISA study provide an objective method to give immediate feedback to residents and to track improvement, both increasingly vital components in the evaluation of surgical trainees.

Erosion of Central Venous Stent into Neck: A Case Report and Literature Review of Complications with Central Venous Stent


Endovascular stents are being increasingly deployed throughout venous system. One of most common applications is in endovascular treatment of central venous stenosis. Though effective, a few complications are recognized, typically perforation, migration, thrombosis and reoclusion. We report a case of a 37-year-old male who presented with erosion and migration of central venous stent into neck, resulting in chronic wound. Imaging studies demonstrated that the distal portion of the stent terminated in the right innominate vein and SVC. It remained patent with rich venous collaterals formed around it. Distal portion eroded through subclavian vein into neck, resulting in skin necrosis, chronic wound and wound infection. Surgical management involved neck dissection, excision of migrated portion of the stent, wound debridement, delay wound closure and reconstruction with omohyoid muscle flap to cover the closed end of remaining stent and tissue defect. We reviewed current literature on central venous stent related complications. To our best knowledge, this represents the first report of an extraluminal central venous stent erosion into neck causing chronic neck wound. Creative surgical excision and reconstruction with neck muscle flap resulted in satisfactory outcome in the management of this complication.

Multimodal Therapy in the Treatment of a Venolymphatic Malformation of the Axilla and Chest Wall in an Infant

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Objectives: Vascular malformations are normally benign, but in rare cases they can cause challenging and potentially life-threatening complications. Preliminary evidence suggests the mammalian target of rapamycin (mTOR) inhibitor sirolimus may be effective in the treatment of vascular malformations. We present a staggered multimodal approach to the treatment of a very large complex symptomatic venolymphatic malformation in a female infant.

Methods: We report the case of a female infant suffering from restricted arm mobility and severe consumptive coagulopathy associated with a massive venolymphatic malformation of the axilla and chest wall. We planned a novel combination of surgical debulking followed by sirolimus therapy. Immediate and follow-up CT imaging and physical examinations were used to assess the diseased burden over time. The severity of coagulopathy was monitored with platelet count and fibrinogen level measurements.

Results: The patient underwent planned partial surgical resection of the mass at approximately 5.5 months of age, and sirolimus therapy was initiated after her wounds healed at 7 months of age. CT imaging was consistent with reduced diseased burden after surgery (Fig. A) and during the course of sirolimus therapy (Fig. B, after three months of therapy). Hematologic measurements reached and maintained normal levels without the support of blood products at 12 months of age, and normal limb functionality was...