Endovascular Treatment of an Iatrogenic Extracranial Carotid-Jugular AV Fistula

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Introduction: Cervical trauma is notoriously difficult to treat, because of a complex anatomy in a narrow anatomic space. Zone II cervical vascular injuries, open surgical repair is the norm due to its feasibility, ability to explore other cervical structures and relatively low risks when compared to other proximal or distal locations.

Methods: Patient clinical charts and imagiologic studies were retrospectively consulted.

Case Report (1):
- 56-year-old male; ICU due to septic shock with acute renal failure.
- Inadvertent right CCA puncture during an attempt place IJV dialysis catheter.
- Sudden hemodynamic and ventilatory deterioration.
- Ultrasound: CCA–IJV AV fistula. Allowed precise location marking, vessel diameter measurement and proximal and distal seal lengths.
- Right femoral access. UFH. Selective catheterization of the innominate artery, marking the fistula and carotid branches, deployment covered stent-graft 9x38 mm (Advanta V12). 25 min, 20mL contrast.
- Immediate relief of the hemodynamic and ventilatory burden of the fistula;
- Nevertheless, he was unable to withstand the severity of his underlying pathology and died after a prolonged hospitalization.

Figure 1: Intraoperative digital subtraction angiographies. Panel A: angiographic marking of the fistula and common carotid side branches. Panel B: Final angiography after deployment of the covered stent-graft, showing fistula exclusion and carotid branches patency, without any complications.