

Penetrating carotid artery injury

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A 27-year-old male presented with a left cervical pulsative mass after penetrating trauma with a knife. No external bleeding was observed despite the presence of an open skin incision over the sternocleidomastoid muscle. Urgent Computed Tomography Angiography (CTA) revealed a partial transverse transection of the left common carotid artery (CCA) and the adjacent internal jugular vein (IJV) surrounded with a cervical hematoma due to gross extravasation from both vessels (Figure). In operating theatre, after a standard open approach for carotid endarterectomy, the CCA and IJV were clamped. The CCA was totally transected at the injury site, trimmed and re-anastomosed in an end-to-end fashion. The IJV was primarily sutured, and the hematoma was evacuated. The postoperative care was uneventful, and the patient was discharged on the 4th postoperative day. She was prescribed single antiplatelet and antibiotic treatment.

Carotid artery injury is a rare event, which may manifest as a true or false aneurysm, arteriovenous fistulae, dissection or thrombotic occlusion. It can result from blunt or penetrating trauma, atherosclerosis, infections, iatrogenic interventions, fibromuscular dysplasia or from more innocent causes as minor neck trauma, coughing or vomiting, chiropractor manipulation or prolonged telephone usage with flexion of the neck. Common symptoms include cervical pain, a pulsatile (or non-pulsatile) neck mass, carotidynia, hoarseness, dysarthria, headache, syncope, Horner's syndrome or cranial palsy. In most cases intervention is warranted to prevent rupture, exsanguination or cerebral embolization. Depending on CTA findings, alternative treatment options include open repair with primary suturing or end-to-end anastomosis, endovascular repair with insertion of bare or covered stents and embolization with coils in bleeding side branches. In many cases blunt dissections or thrombotic occlusions may be treated conservatively with antithrombotic therapy.

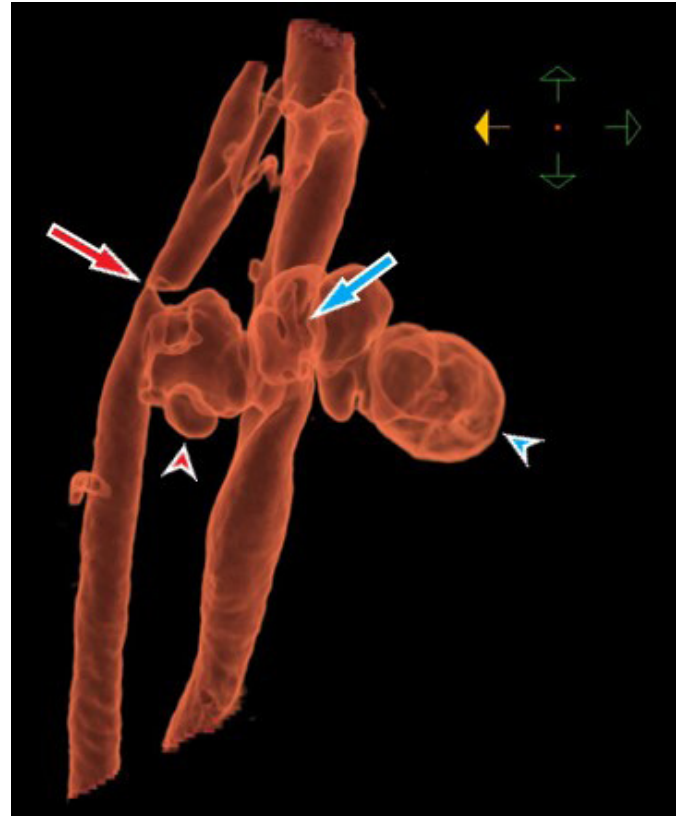


Figure: An urgent Computed Tomography Angiogram (CTA) with 3D VRT reconstruction of the cervical vessels depicted almost complete transection of left common carotid artery (red arrow), with formation of a traumatic pseudoaneurysm (red arrowhead). Additionally, a concurrent traumatic rupture of the left internal jugular vein (blue arrow), with formation of a similar traumatic pseudoaneurysm is also depicted (blue arrowhead).

CONFLICT OF INTERESTS

None

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