Endovascular Repair of a challenging neglected impending rupture carotid pseudo-aneurysm with carotid-jugular AV fistula

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Disclosure

Speaker Name:
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I do not have any potential conflict of interest
• A 28 years old smith

• Had a work accident where an iron shrapnel penetrated his neck

• He had a surgery where wound was debrided and closed after haemostasis with no attempt to extract the iron fragment
Presentations

• He Presented to our OPD two months later with a Pulsatile swelling in the front of the neck with a thrill

• Over stretched scar in the overlying skin

• Patient also complained of ipsilateral headache and congested neck veins
Investigations

- Labs:
  - CBC
  - Kidney functions
  - Bleeding profile

- Imaging:
  - CTA of the neck revealed the following images
Decision was made

For Endo-vascular repair
Pre- interventional

Patient was admitted in the same day of the procedure
New labs were requested
Pre interventional medications
Procedure

- In Angio suite under local anesthesia
- Right femoral access
- Initial 7F regular Sheath exchanged with a Long sheath
- Standard 0.35 Terumo wire and 5F Bern Catheter were used to negotiate the lesion
- An 8x60 mm balloon expandable covered stent (LifeStream from BARD) was deployed successfully
Post Procedure

• Patient was transferred back to regular ward
• He was vitally stable, fully conscious and in good condition
• Thrill disappeared and swelling became less tense
• Had no complains
• Discharged in the morning after neurological assessment and checking the access site.
• Patient was kept on dual antiplatelet for six months then lifelong clopidogrel
• Early Follow up period went uneventful
Six months Follow Up

- Complete disappearance of the symptoms
- The swelling, thrill and congested neck veins had gone
- Back to his normal life
Six months Follow Up

- CTA revealed complete disappearance of the Aneurysm and the av fistula while the Big Iron shrapnel was still lying peacefully in place.
- However, there was a stenosis at the top end of the stent (neo-intimal hyperplasia).
- Carotid Duplex showed a 50% stenosis
- Patient is to continue on medical treatment and a 3 months follow up.
Penetrating carotid artery injury occurs in 4.9 to 6% of penetrating neck trauma. Penetrating carotid can be highly lethal if left untreated, approaching a mortality rate of 100%.
Law et al (2015) documented a similar case report in which they concluded that the endovascular stenting of carotid pseudo-aneurysm is an acceptable and less invasive treatment option.
Conclusions

- Early Diagnosis (CTA screening) of Carotid injury in penetrating neck trauma is very important and significantly decrease associated morbidity and mortality.

- Carotid artery stenting is a very efficient and safe mode of treatment.

- Post stenting neo-intimal hyperplasia remains a problem that may affect the mid and long term outcome of endovascular carotid injury repair.
Thank you
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