Interesting carotid duplex case

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Introduction

- This case represents an unusual duplex finding of an infected carotid artery aneurysm
Presentation

• A 63 year old women who denies history of trauma or percutaneous interventions to the right neck area.
• The patient underwent dental work two days prior to onset of symptoms.
• These symptoms included right sided neck pain, sore throat and rigors with a fever of 103.7F.
The CTA of the neck revealed Pseudoaneurysm at the right carotid bifurcation measuring approximately 1.4 cm (AP) by 1.6 cm (TV) by 3.0 cm (SI) and moderate luminal stenosis of the proximal internal carotid arteries bilaterally.
In a transverse plane, the right carotid bifurcation was aneurysmal (1.5cm AP x 2.0 cm Trans) with significant mural thrombus in the bulb.
There was no evidence of pseudoaneurysm on focused Doppler interrogation
The carotid duplex study demonstrated 50-69% internal carotid artery stenosis bilaterally, with a large ulcerated plaque in the right carotid bulb.
An ultrasound image of the right and left carotid bifurcation
Diagnosis and treatment

- Resection of mycotic aneurysm of carotid artery with bypass from the common carotid to internal carotid artery utilizing greater saphenous vein.
- Broad-spectrum antibiotic therapy.
- Cultures from the aneurysm were positive for Group B streptococcus. No fungi were present.
- Operative findings confirmed a mycotic aneurysm of the right carotid bulb.
CTA of the neck showed no evidence of recurrent mycotic aneurysm during 1 month follow-up
Comparative images
Conclusion

- The findings on the carotid duplex study that included:
  - diffusely dilated intimal medial thickness
  - aneurysmal dilatation of the carotid bulb
  - lucent abnormality surrounding the carotid bulb
References

- *Pseudomonas aeruginosa* Causing a Right Carotid Artery Mycotic Aneurysm After a Dental Extraction Procedure
Mark C. Knouse, MD; Robert G. Madeira, MD; Victor J. Celani, MD
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Thank you