LEARNING OBJECTIVES

(1) Describe risk factors for carotid artery dissection.
(2) Discuss the clinical presentation and key clinical findings in giant cell arteritis.

CASE PRESENTATION

- 72-year-old mother with Von Willebrand Disease (vWD) with previous hematomas, recent dental maxillary bone grafting, presented with:
  - 5 days of progressive left neck pain and swelling
  - Left eye visual change of “dark rain”
  - New left sided-headache
  - No fevers, jaw, or mouth pain. No trauma or chiropractic manipulation.
  - No tobacco, alcohol, substances.
  - Afib. BP: 160s/80s. HR: 90s. Saturation intact.
  - Exam: Moderate swelling and tenderness over the left carotid. Tender, prominent left temporal artery.
Complete neurologic exam was normal.

LABS AND IMAGING

- 24.0\% 10.9\% 558\% 135\% 98\% 17\% 136\% 3.1\% 22\% 0.8\%
- Differential: 79% neutrophils, CRP 16.9 (ULN 0.8) ESR 71 (ULN 40). Baseline hgb 11-12.

Imaging: Initial neck CT angiography: left carotid hemorrhage vs. dissection.
Repeat CTA: atypical soft tissue density around the left common and internal carotid. No dissection. Hematoma with active extravasation from a smaller vessel, and not from the carotid artery.

DIFFERENTIAL DIAGNOSIS and WORK-UP

Atypical peri-carotid soft tissue

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Abscess / Phlegmon

- Recent dental bone grafting
- Leukocytosis
- Elevated inflammatory markers
- Resolved post-op symptoms
- No fevers
- Maxillofacial MRI CT chest to evaluate mediastinal involvement

Inflammation eg. vasculitis

- Demographic
- Elevated inflammatory markers
- No prior autoimmune syndromes
- Evaluate other differentials first

HOSPITAL COURSE

Initial concern for acute carotid dissection or bleed → aggressive blood pressure control with clevidipine infusion. After imaging, clinical stability, transitioned to PO antihypertensives.

Evaluation results:

- Maxillofacial MRI without osteomyelitis.
- CT chest with circumferential thickening of the ascending aorta, aortic arch, and bilateral carotid arteries consistent with a large vessel vasculitis.
- Autoimmune serologies negative.
- A temporal artery biopsy was deferred due to lack of sensitivity, clinical diagnosis of giant cell arteritis (GCA), and vWF higher risk of bleeding.
- She was treated with steroids and symptomatically improved with down-trending inflammatory markers.

EMERGENCY: CAROTID DISSECTION

Clinical presentation: neck pain (in 90%), ischemic stroke (50%), Horner syndrome (25%)

Risk factors: trauma (roller-coasters, chiropractors), connective tissue diseases

Management: blood pressure control. If stenosis or stroke, may need emergency stenting or tPA.

Complications: ischemic stroke from distal thromboembolic events and carotid occlusion.

GIANT CELL ARTERITIS (GCA)

Rarely causes carotid dissection.

Epidemiology:

- Caucasian, Female
- Age in the 70s
- 40-50% of patients have PMR

Clinical presentation:

- Headache (66%)
- Jaw claudication (50%)
- Acute unilateral blindness (15-20%)

Diagnosis: Temporal artery biopsy, though insensitive due to skip-pattern of GCA. CTA chest-neck for other involved vessels or temporal artery ultrasound by experienced operators may aid in diagnosis.

Management: Steroids prevent vision loss. Prednisone 60mg daily for 2-4 weeks then slow taper.