AMSER Case of the Month: December 2019

Left anterior neck mass enlarging over the past month

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Patient Presentation

- HPI: One month of increased size of a lump in the anterior neck superficial to the left collarbone. Occasional choking sensation. No difficulty breathing or swallowing. Painful to touch and movement of neck. Patient states she otherwise feels well. She denies fever, shortness of breath or other masses.
- PMH: A-fib, breast cancer in remission s/p bilateral mastectomy, chemotherapy, and radiation, diastolic CHF, Liver cirrhosis without ascites, type 2 diabetes, hypertension , hyperlipidemia, & hypothyroidism
- PSH: Bilateral knee arthroplasties (2000/2010), Bilateral mastectomy (2008), left femur cephalomedullary nail (2017), right ankle open reduction internal fixation (2017), lumbar laminectomy L2-4 (2018)
- Physical Exam: Large 4 centimeter area of tenderness and swelling at the left sternoclavicular joint. Area is fluctuant and well circumscribed. No overlying cellulitis. Oropharynx clear. No stridor. Normal breathing effort and breath sounds.

Pertinent Labs

- No lab tests were ordered upon initial presentation

What Imaging Should We Order?

Select the applicable ACR Appropriateness Criteria

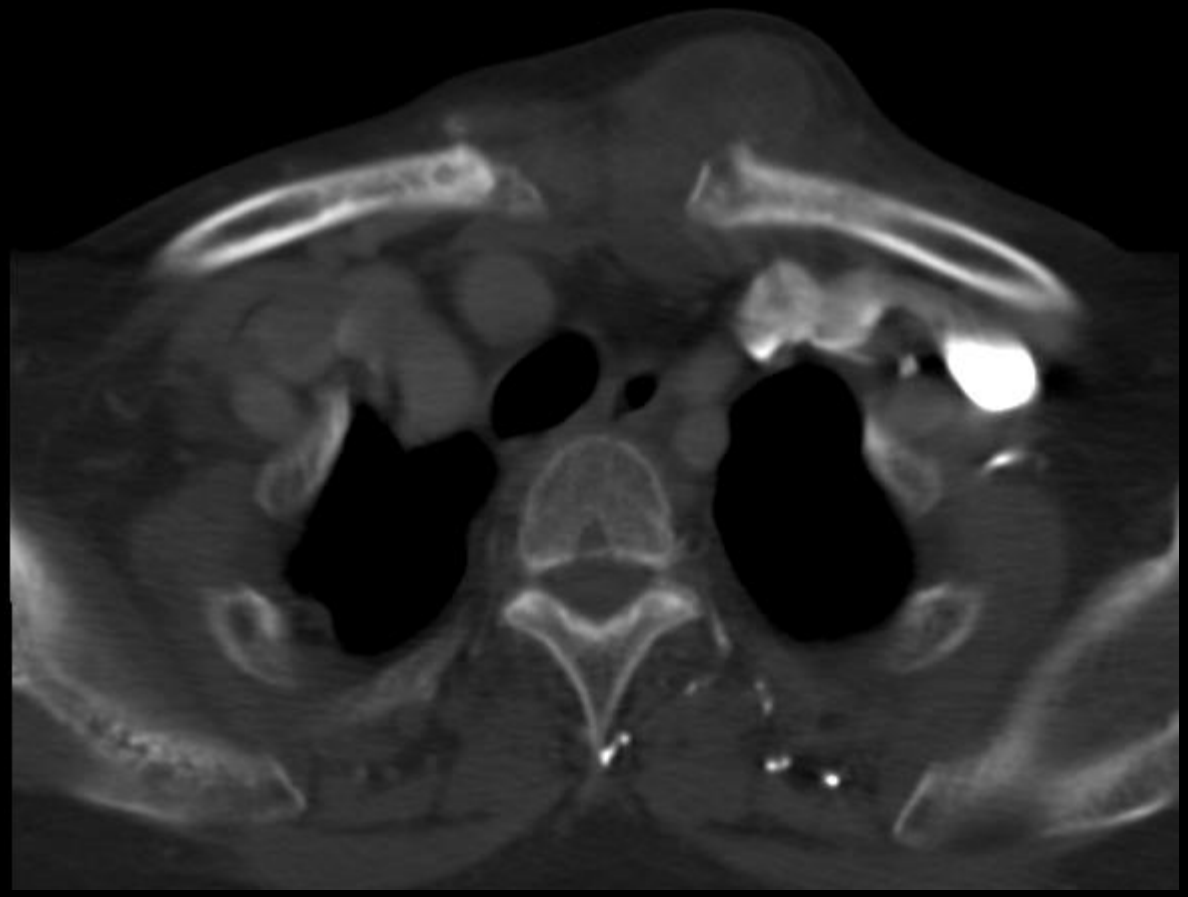
American College of Radiology
ACR Appropriateness Criteria®
Neck Mass/Adenopathy

Variant 1: **Nonpulsatile neck mass(es). Not parotid region or thyroid. Initial imaging.**

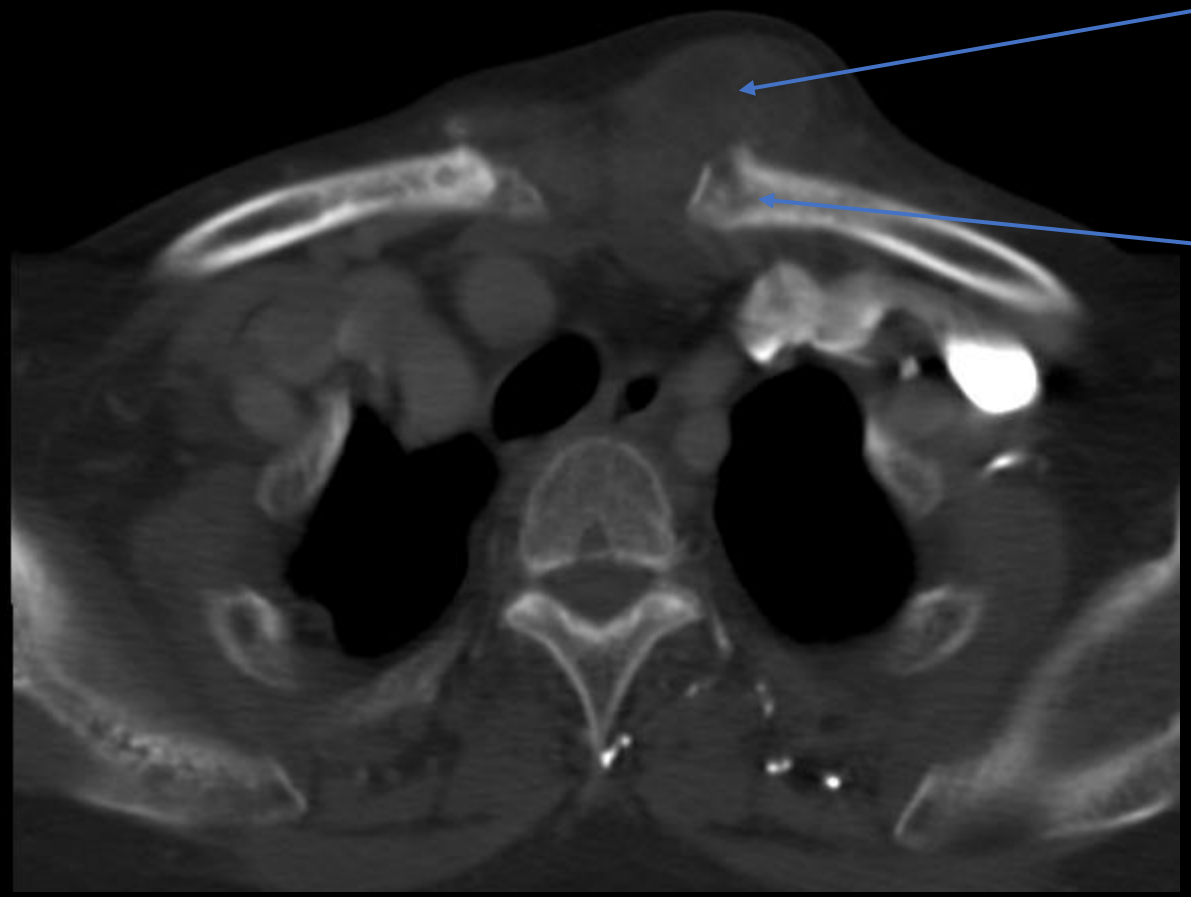
Procedure	Appropriateness Category	Relative Radiation Level
CT neck with IV contrast	Usually Appropriate	☢☢☢
MRI neck without and with IV contrast	Usually Appropriate	O
MRI neck without IV contrast	May Be Appropriate	O
US neck	May Be Appropriate	O
CT neck without IV contrast	May Be Appropriate	☢☢☢
CT neck without and with IV contrast	Usually Not Appropriate	☢☢☢
CTA neck with IV contrast	Usually Not Appropriate	☢☢☢
FDG-PET/CT skull base to mid-thigh	Usually Not Appropriate	☢☢☢☢
FDG-PET/MRI skull base to mid-thigh	Usually Not Appropriate	☢☢☢
MRA neck without and with IV contrast	Usually Not Appropriate	O
Arteriography cervicocerebral	Usually Not Appropriate	☢☢☢
MRA neck without IV contrast	Usually Not Appropriate	O

This imaging modality was ordered by the ER physician

Findings (unlabeled)



Findings: (labled)



4.7cm cystic lesion with rim enhancement at the left sternoclavicular joint with subtle erosion of the cortex of the clavicular head.

Findings are suspicious for an abscess versus septic arthritis involving the left sternoclavicular joint.

Additional Imaging & Tests

- Ultrasound –guided needle aspiration of the fluctuant mass was performed
- Approximately 6 milliliters of viscous turbid fluid was aspirated and sent to the lab for Gram stain and culture
- Gram stain revealed moderate polymorphonuclear leukocytes and no organisms
- Culture revealed rare Staphylococcus lugdunensis

Final Dx:

Septic Arthritis of the Left Sternoclavicular Joint

After ultrasound-guided aspiration, the patient was discharged on 10 day course of tetracycline and instructed to follow up.

Case Discussion

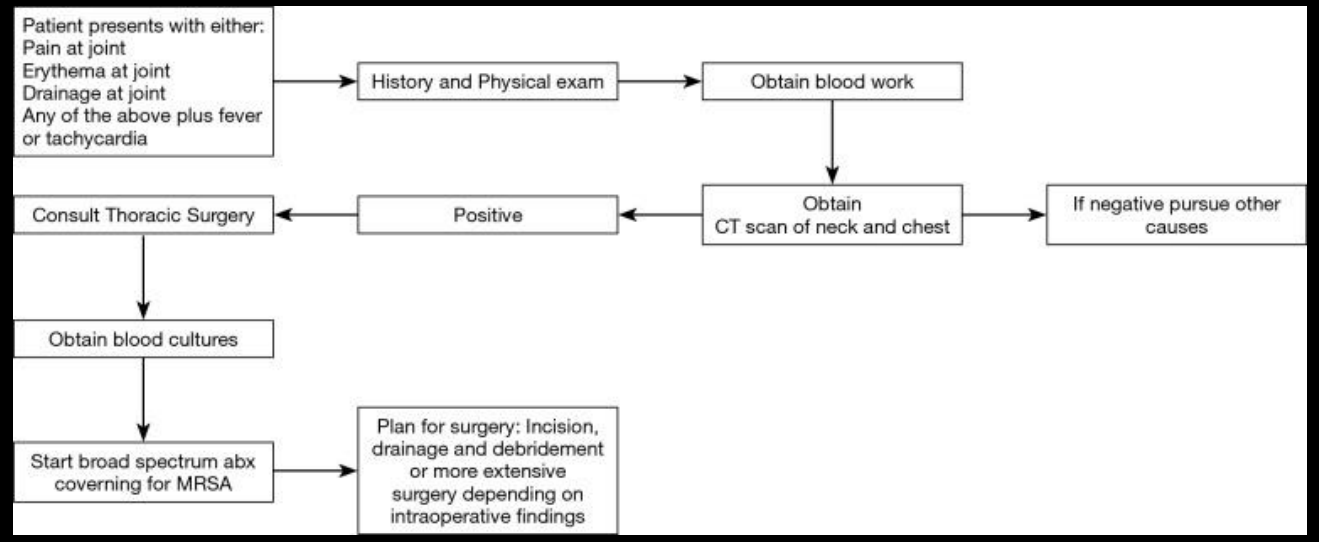
- Sternoclavicular joint infection
  - Most common in IV drug users
  - *Staphylococcus aureus* is most common pathogen
  - Risk Factors:
    - Diabetes melittis, IV drug abuse, rheumatoid arthritis, liver cirrhosis, recent surgery, immunosuppression
- Presenting Signs and Symptoms
  - Pain, erythema, leukocytosis, tachycardia, hyperglycemia, drainage, fever

Case Discussion

- *Staphylococcus lugdunensis*
  - Coagulase negative staphylococci (CoNS)
  - Clinical infections range from soft tissue infections , chorditis, bacteremia, prosthetic device infections, osteomyelitis, and septic arthritis
  - Usually missed as many labs do not routinely evaluate for CoNS
  - Biofilms play a large role in the pathogenesis of infection, and infection of prosthetic joints is one of the most common presentations (~33%)
  - Rarely a contaminant, infections with *S. lugdunensis* should be treated as a true pathogen
  - Highly susceptible to most antibiotics, some form of penicillin is usually the first line treatment agent

Case Discussion

- Imaging Options
  - Most appropriate Imaging modality with high clinical suspicion is a CT scan with IV contrast
  - Treatment options
    - Controversial due to rare nature of infection
    - Options include conservative therapy or surgery which includes resection of the sternoclavicular joint



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- Murga, A., Copeland, H., Hargrove, R., Wallen, J. M., & Zaheer, S. (2017). Treatment for sternoclavicular joint infections: a multi-institutional study. *J Thorac Dis*, 9(6), 1503-1508. doi:10.21037/jtd.2017.05.76
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