AMSER Case of the Month December 2025

26-year-old male presents to the ED with 3 days of sore throat and odynophagia

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Patient Presentation

- HPI: 26-year-old male with no significant past medical history presents to the emergency department with 3 days of new, right-sided sore throat and odynophagia with solids and liquids. He experienced fevers and chills at home. Patient reports no sick contacts, recent trauma or procedures, and no recent sexual encounters. NSAIDs have provided him little relief.
- Vitals: Temp: 38.0 C, Pulse: 103, Resp Rate: 18, BP: 130/83, SP02: 95%, Pain: 8/10
- Physical Exam: No respiratory distress. Erythematous posterior pharynx with white exudative spots on right palatine tonsil.

Pertinent Labs

- WBC: 15.4 (H)
- HGB: 14.8
- PLT: 165
- Group A strep, PCR: Negative

What Imaging Should We Order?

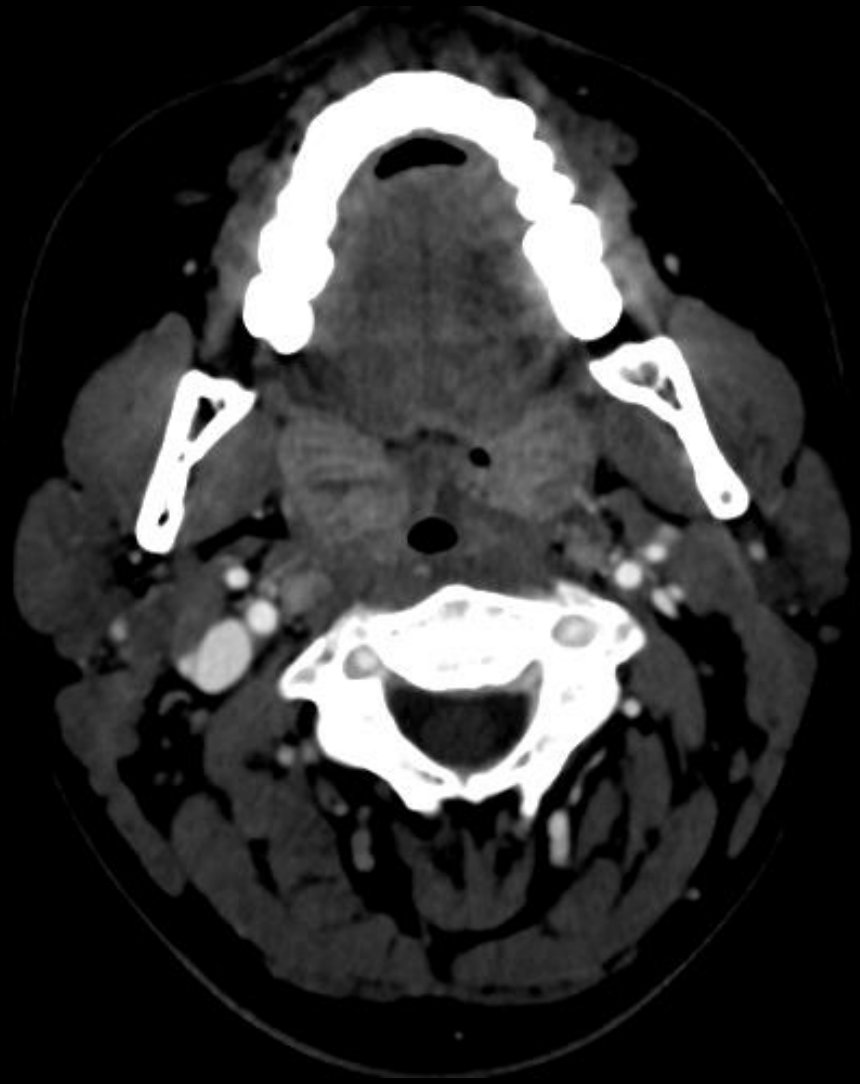
Select the applicable ACR Appropriateness Criteria

Variant 2: **Nonsuperficial (deep) soft tissue mass. Initial imaging.**

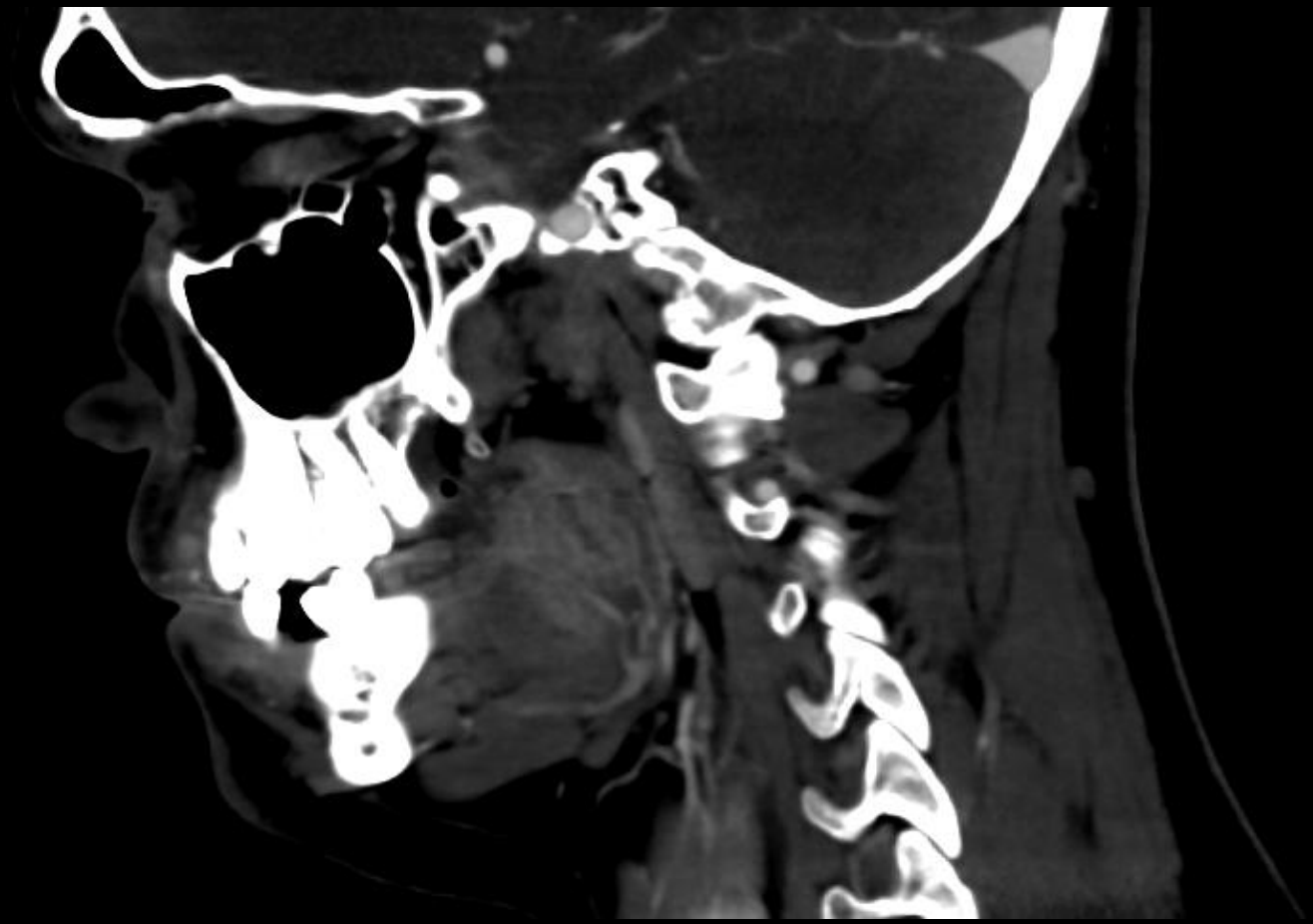
Procedure	Appropriateness Category	Relative Radiation Level
Radiography area of interest	Usually Appropriate	Varies
US area of interest	May Be Appropriate	O
CT area of interest with IV contrast	May Be Appropriate	Varies
CT area of interest without and with IV contrast	May Be Appropriate	Varies
CT area of interest without IV contrast	May Be Appropriate	Varies
US area of interest with IV contrast	Usually Not Appropriate	O
Image-guided biopsy area of interest	Usually Not Appropriate	Varies
Image-guided fine needle aspiration area of interest	Usually Not Appropriate	Varies
MRI area of interest without and with IV contrast	Usually Not Appropriate	O
MRI area of interest without IV contrast	Usually Not Appropriate	O
FDG-PET/CT area of interest	Usually Not Appropriate	☢☢☢☢

This imaging modality was ordered by the ER physician

Axial View CT With Contrast Findings (unlabeled)

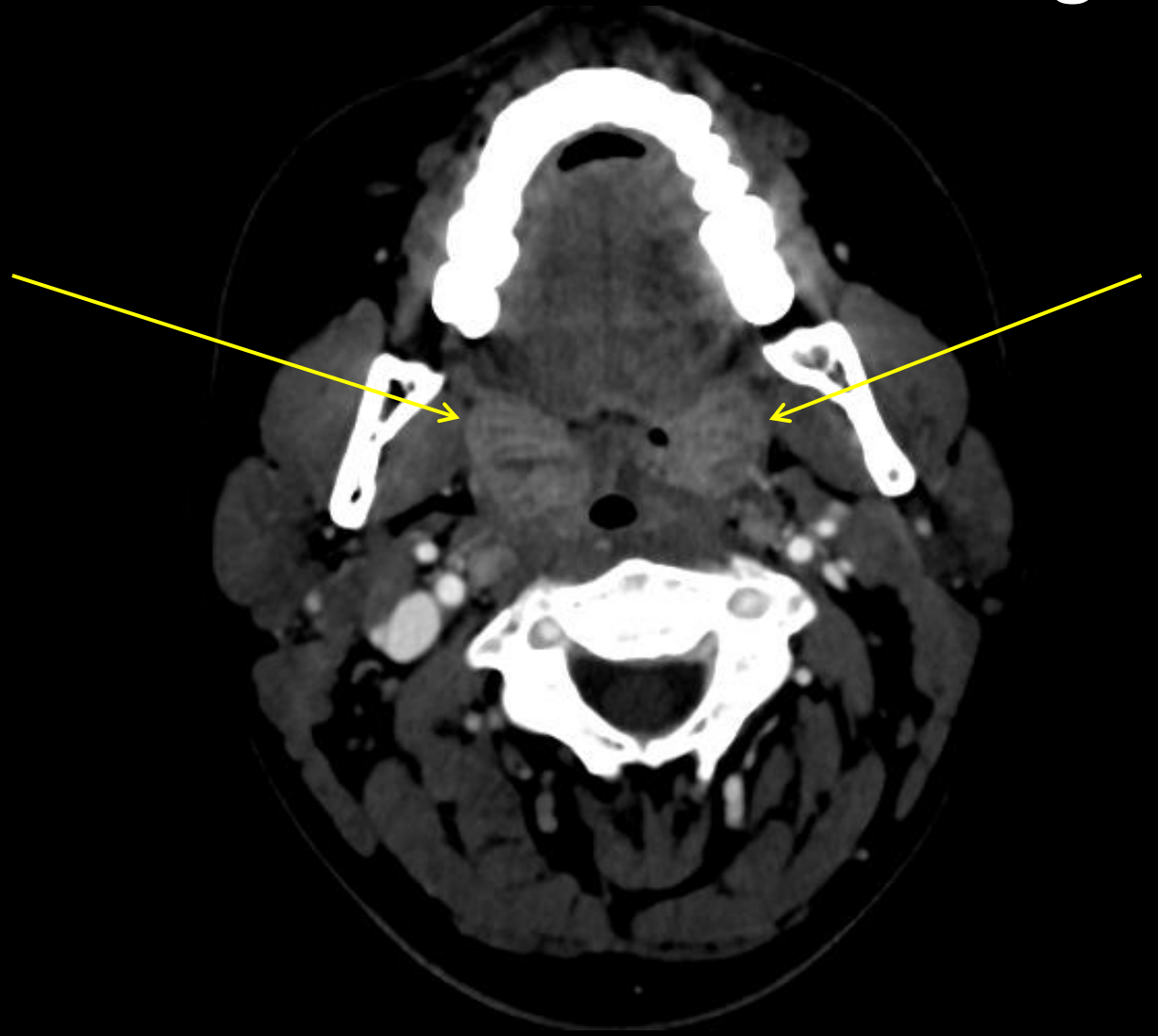


Sagittal View CT With Contrast Findings: (unlabeled)

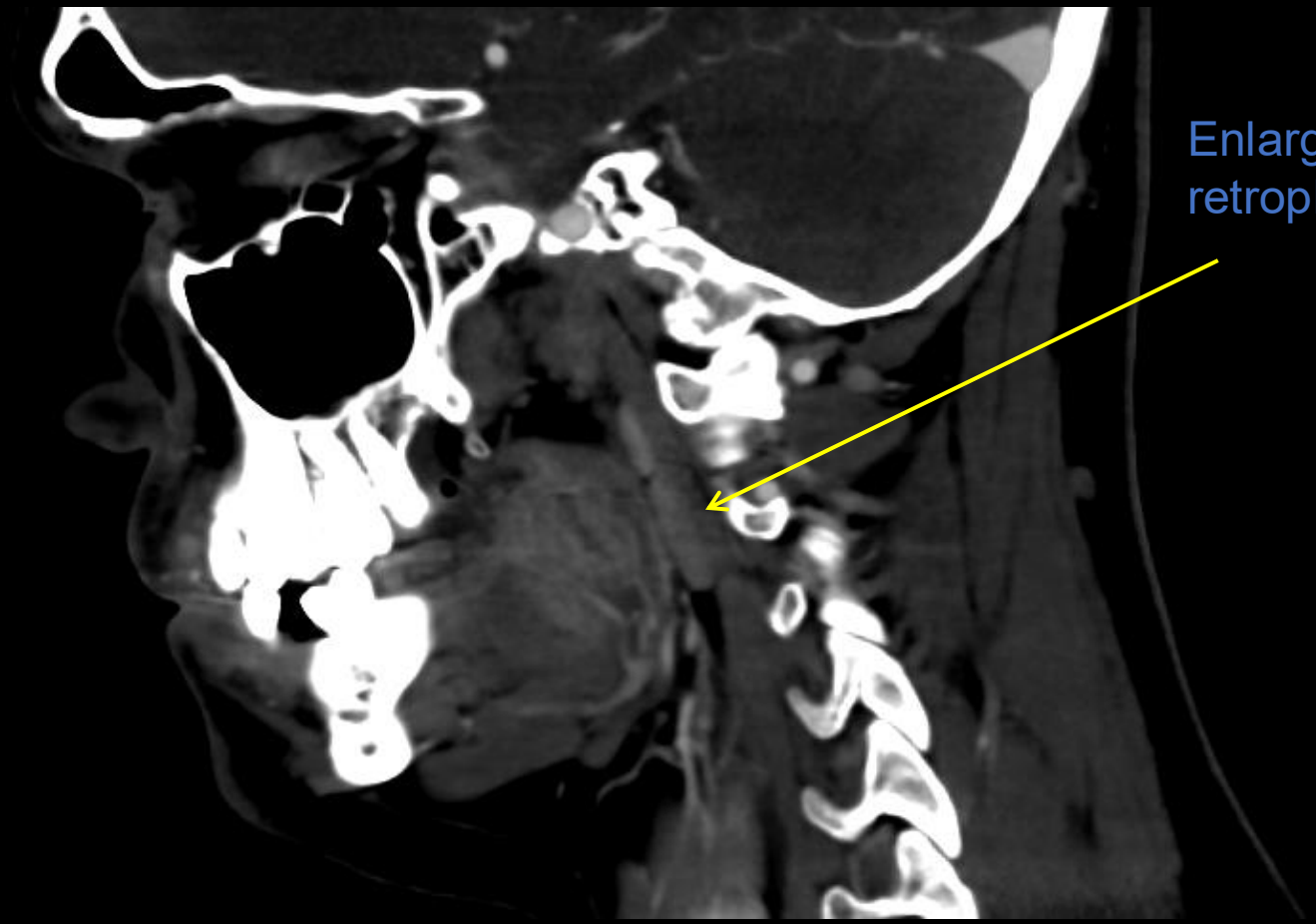


Axial View CT With Contrast Findings: (labeled)

Enlarged palatine tonsils bilaterally, with striated enhancement pattern



Sagittal CT With Contrast Findings (labeled)



Enlarged, morphologically normal retropharyngeal lymph nodes

Final Dx:

Acute Tonsillopharyngitis

Case Discussion

Presentation

- Sudden onset of sore throat, dysphagia, odynophagia, fever, headache, otalgia, abdominal pain, cough, nausea, and vomiting[4]
- Physical exam can show tonsillopharyngeal erythema with or without exudates, swollen uvula, soft palate petechiae, anterior cervical lymphadenopathy, rash[4]

Etiology

- Most commonly viral (70-95%): rhinovirus, adenovirus, influenza, EBV, CMV, coronavirus[3]
- Bacterial (15-30%): most commonly Group A Streptococcus, also Neisseria gonorrhoeae, Corynebacterium diphtheria, Mycoplasma pneumonia, Fusobacterium necrophorum, Group G and C streptococcus[3]

Case Discussion

Classic computed tomography (CT) with contrast findings in uncomplicated tonsillopharyngitis[1]

- Tonsillar enlargement; may contact each other in the midline ("kissing tonsils")
- Tonsillar striated enhancement pattern
- Pharyngeal wall mucosal edema
- Fat stranding in the parapharyngeal space
- Cervical lymphadenopathy

Case Discussion

Potential complications of acute tonsillopharyngitis[2]

- Deep neck space infections including peritonsillar, parapharyngeal, and retropharyngeal abscess
- Sinusitis
- Otitis media and mastoiditis
- Cervical lymphadenitis
- Infectious thrombophlebitis of internal jugular vein (Lemeirre syndrome)

Red Flag signs that suggest a complication and would warrant imaging[2]

- Drooling, displaced uvula, asymmetric tonsils, unilateral facial swelling, muffled voice, trismus

References

1. Capps EF, Kinsella JJ, Gupta M, Bhatki AM, Opatowsky MJ. Emergency imaging assessment of acute, nontraumatic conditions of the head and neck. Radiographics. 2010;30(5):1335-1352. doi:10.1148/rg.305105040
2. Committee on Infectious Disease, American Academy of Pediatrics. Red Book: 2024-2027 Report of the Committee on Infectious Diseases, 33rd Edition. American Academy of Pediatrics; 2024
3. Shulman ST, Bisno AL, Clegg HW, et al. Clinical practice guideline for the diagnosis and management of group A streptococcal pharyngitis: 2012 update by the Infectious Diseases Society of America. Clin Infect Dis. 2012;55(10):e86-e102. doi:10.1093/cid/cis629
4. Wessels MR. Clinical practice. Streptococcal pharyngitis. N Engl J Med. 2011 Feb 17;364(7):648-55. doi: 10.1056/NEJMcp1009126. PMID: 21323542.