

AMSER Case of the Month: December 2018

45 y/o male presenting with worsening sore throat and difficulty swallowing



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Patient Presentation

- **HPI:** A 45 y/o male returns to the ED with worsening difficulty swallowing, throat swelling, and inability to control his secretions x4 days. He was given antibiotics at an urgent care for presumed strep throat. He presented to the ED yesterday and had temporary improvement of symptoms after receiving Decadron and Toradol, but his throat swelling and discomfort worsened overnight. He also endorses fever and generalized discomfort.

Denies nausea, vomiting, headache, diarrhea, chest pain, or difficulty breathing.

- **Medical History:** Pre-diabetes

Pertinent Labs

• Pertinent Labs:

CBC:

- WBC: 20.70
- Lymphocytes(%): 4
- Metamyelocytes(%): 2
- Bands(%): 18
- Absolute Neutrophil Count: 13.66
- Absolute Monocyte Count: 2.07
- Absolute Banded Neutrophil Count: 3.73
- Rapid Strep Screen: Negative

Pertinent Physical Exam:

- VS: BP 135/81 HR 130 T 102°F SpO2 96%
- Mouth/Throat: Trismus in the jaw. Unable to open mouth to visualize oropharynx due to pain and swelling. Unable to control secretions. Muffled voice.
- Neck: Muscular tenderness and edema present.

Differential Diagnosis

- Retropharyngeal abscess
- Peritonsillar abscess
- Epiglottitis
- Squamous cell carcinoma
- Ludwig's angina

What Imaging Should We Order?

Select the applicable ACR Appropriateness Criteria

Variant 2: Adult presenting with a solitary neck mass (febrile).

Radiologic Procedure	Rating	Comments	RRL*
CT neck with contrast	9		☼ ☼ ☼
MRI neck without and with contrast	8	See statement regarding contrast in text under "Anticipated Exceptions."	0
CT neck without contrast	6	May be appropriate initially if mass relationship to thyroid gland is uncertain.	☼ ☼ ☼
MRI neck without contrast	5		0
US neck	4		0
MRA neck without and with contrast	3		0
CTA neck with contrast	3		☼ ☼ ☼
CT neck without and with contrast	2		☼ ☼ ☼
FDG-PET/CT neck	2	Not for primary diagnosis.	☼ ☼ ☼ ☼
MRA neck without contrast	1		0
Arteriography cervicocerebral	1		☼ ☼ ☼

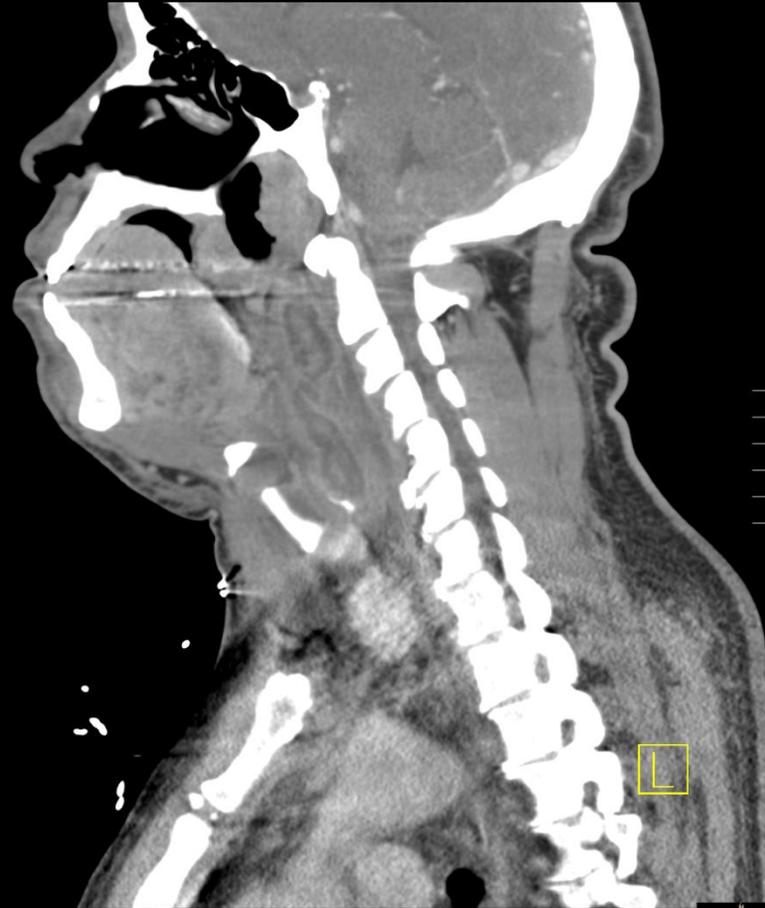
Rating Scale: 1,2,3 Usually not appropriate; 4,5,6 May be appropriate; 7,8,9 Usually appropriate

***Relative Radiation Level**

This imaging modality was ordered by the ER physician



Findings: (unlabeled)



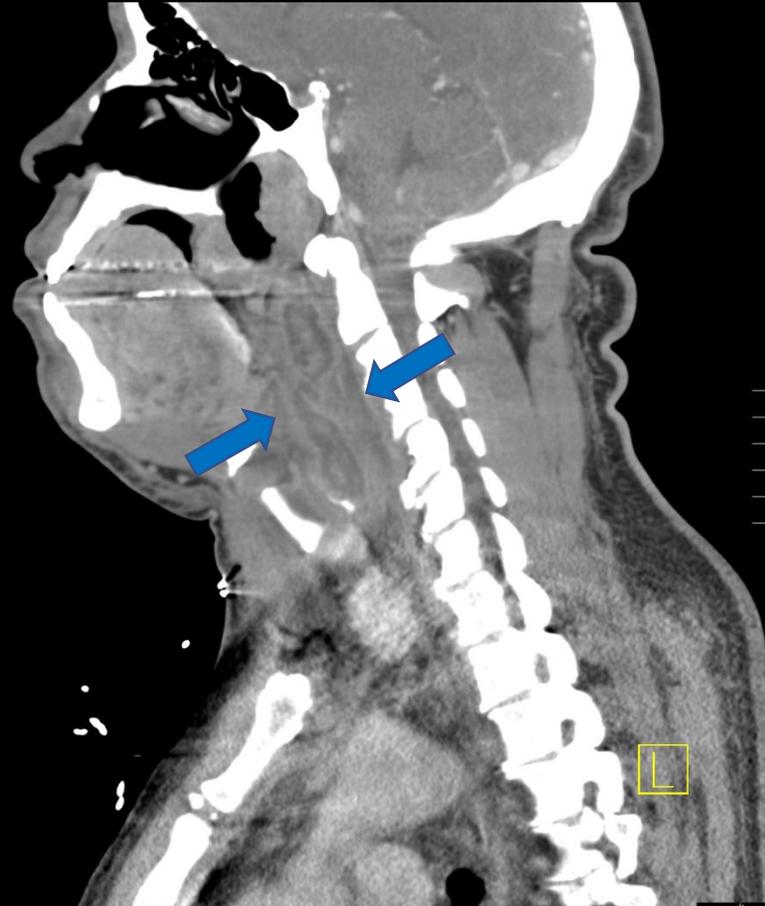
Findings: (unlabeled)



Findings: (labeled)

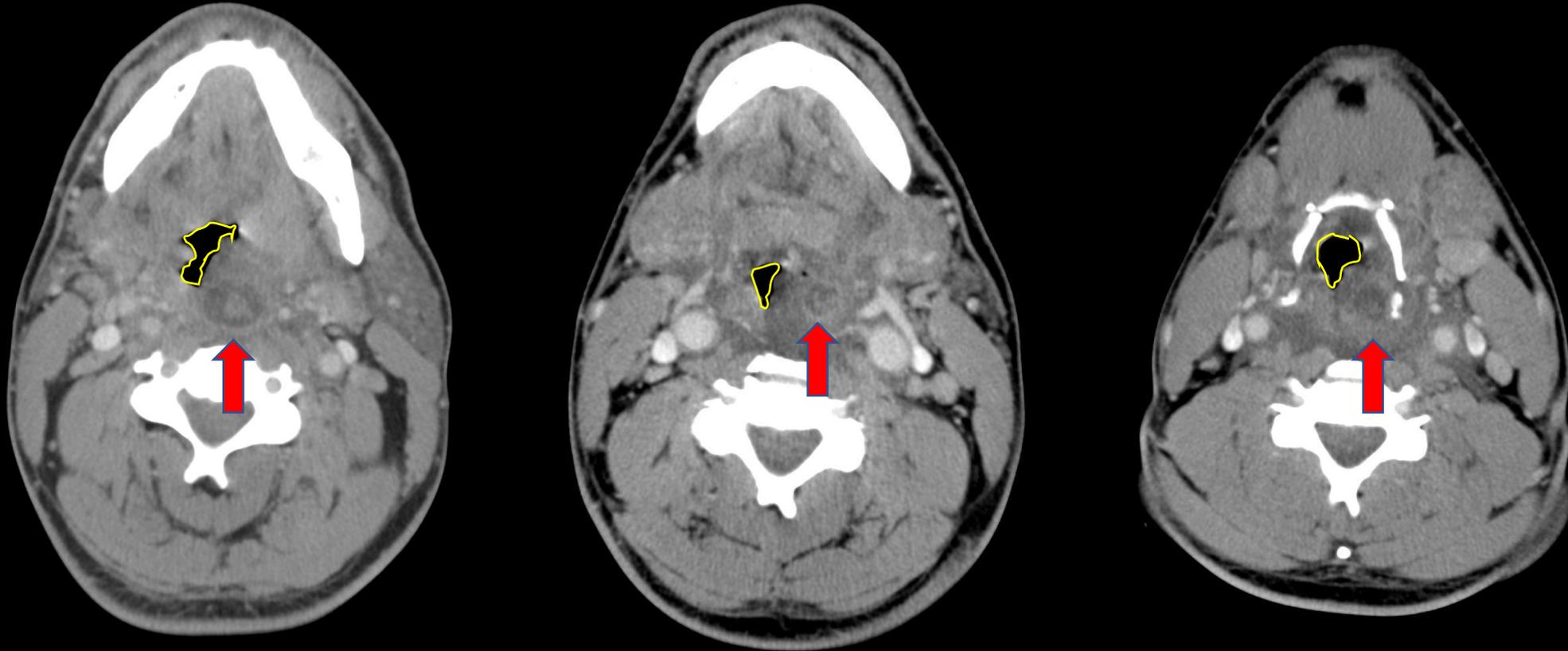


Red Arrows: prevertebral swelling



Blue Arrows: Extensive fluid and fat stranding in the retropharyngeal, danger, and/or prevertebral spaces.

Findings: (labeled)



Red arrows: Mildly rim-enhancing multilobulated fluid collection centered on the left palatine tonsil and parapharyngeal space. Internal contents are slightly heterogeneous in attenuation.

Yellow contour: There is narrowing of the airway at the level of the oropharynx

Final Dx:

Peritonsillar Abscess

Peritonsillar Abscess

- Symptoms
 - Severe unilateral sore throat
 - Fever
 - Muffled voice
 - Pooling of saliva or drooling
 - Trismus
- Pathology
 - Often polymicrobial; predominantly *Streptococcus pyogenes*, *Streptococcus anginosus*, *Staphylococcus aureus*, and respiratory anaerobes
 - Concern for spread into mediastinum -> mediastinitis
 - In this case, no edema/fluid in the imaged upper mediastinum.

Peritonsillar Abscess

- Diagnosis
 - Can be made clinically with medial displacement of the tonsil and deviation of the uvula; confirmed by collection of pus at the time of drainage
 - Contrast-enhanced CT is approximately 100% sensitive and 75% specific
 - **Central liquefaction with surrounding rim-like enhancement is diagnostic**
- Treatment
 - Needle aspiration or surgical drainage
 - Tonsillectomy if significant airway obstruction or other complications
 - Antibiotic therapy

Outcome

- Patient was admitted to MICU for possible airway compromise and placed on vancomycin and ampicillin-sulbactam
- Patient's odynophagia and hemoptysis gradually improved, until he developed hemoptysis and new fever 5 days later
- Blood cultures eventually identified growth of *Streptococcus constellatus*
 - subgroup of viridans streptococci; normal flora of human oral cavity and GI tract
 - highly penicillin resistant; Vancomycin and ampicillin-sulbactam were continued
- Patient underwent neck exploration with I&D of deep abscesses

References

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