Case #1
HOPI

• TC is a 21 y/o F w 1 wk hx of sore throat. Initially began as isolated sore throat progressing to dysphagia with decreased oral intake. Pt also noted to have increasing difficulty opening mouth over past 48 hours

• The patient has not been evaluated or treated with atbx prior to presentation. The patient has had no sick contacts. The patient denies prior history of tonsillitis
Physical Exam

• GENERAL: no acute distress, no difficulty breathing, managing/swallowing secretions.
• EYES: PERRL, EOMI
• EARS: Tympanic membranes clear, no evidence of effusion.
• NOSE: No rhinorrhea, no septal deviation.
• ORAL CAVITY/OROPHARYNX: Moist mucous membranes; bilateral tonsillar hypertrophy, right greater than left, with bilateral exudate; white peritonsillar fullness with uvular deviation toward the left, no obvious fluctuance, area is tender to palpation, airway patent.
• NECK: Trachea midline. No lymphadenopathy.
• NEUROLOGIC: Cranial nerves 2-12 grossly intact.
Vitals/Labs

- Temp 99.1, 105/67, 96, 16, 98% on RA
- WBC 15.3 (H) (95.1% PMNs, 3.6 % Lymphs, 1.3% Monos)
- PLT: 317
Intraoral Ultrasound Acquisition
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Intraoral Ultrasound

- Ultrasound probe inserted intraorally to acquire images
- Shows well circumscribed hypoechoic fluid collection
- Numerous septations/loculations
- Increased blood flow in region of fluid collection
Peritonsillar Abscess

- Peritonsillar abscess is often a complication of streptococcal tonsillitis/pharyngitis
  - Variations include parapharyngeal and retropharyngeal abscess
- May begin as a phlegmon and develop into an abscess over the course of several days, even in the presence of antibiotic treatment
- The abscess often consists of mixed anaerobes and S. pyogenes
Treatment

• ENT consulted and underwent I&D at bedside with aspiration of approximately 3 mL of pustular drainage.
• Treated overnight with Unasyn and steroids. Discharged on Augmentin for 7 days the following day.
• This was the first presentation of Tonsillitis/peritonsillar abscess for this patient so tonsillectomy was not recommended.
• Patient returned 11 days later with re-accumulation of fluid collection after apparent initial resolution of symptoms.
• Was treated with I&D, Clindamycin and referred for tonsillectomy
Peritonsillar abscess

• Patients may present with intense pharyngeal pain, airway compromise, trismus, local lymphadenopathy, altered voice quality and other systemic signs of infection

• Treatment, as with most abscesses, involves incision and drainage, often done at the bedside

• Antibiotic treatment includes clindamycin, amoxicillin plus metronidazole, augmentin
Bonus Question
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• With further progression of the pathology noted in the images above, which of the following is this patient potentially at direct risk for?
  – A. High cervical cord injury/edema with diaphragmatic paralysis
  – B. Pulmonary embolus
  – C. Anaphylaxis from Iodinated contrast allergy with impending airway compromise
  – D. Hodgkin Lymphoma
  – E. Impingement of right vertebral artery at transverse foramen of C3 vertebra
Bonus Question

• Answer
  – B. Pulmonary Embolus
    • CT Scan of a similar patient shows a fluid collection with surrounding contrast enhancement in the right peritonsillar region. Proximity of this lesion to the carotid sheath is shown particularly well on image 3.
    • A rare but potentially fatal complication of peritonsillar abscess is Lemierre Syndrome. If the abscess involves the carotid sheath, patients may develop septic thrombophlebitis, caused by *Fusobacterium necrophorum*, of the internal jugular vein with subsequent embolization. The bacterium spreads by tonsillar veins to the IJV. The endotoxin produced induces platelet aggregation
    • Patients may also suffer life threatening erosion into the carotid arteries.
Lemierre’s Syndrome

• Chest Radiograph above shows cavitary lesion in right lung and involvement of the lingula

• Chest X rays can show diffuse involvement with nodular lesions due to septic embolization
Resources

• Flint: Cummings Otolaryngology: Head & Neck Surgery, 5th ed.
• Roberts: Clinical Procedures in Emergency Medicine, 5th ed.
• Goldman: Cecil Medicine, 23rd ed.