EM CASE OF THE WEEK.

BROWARD HEALTH MEDICAL CENTER
DEPARTMENT OF EMERGENCY MEDICINE

Care Warriors

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Peritonsillar Abscess

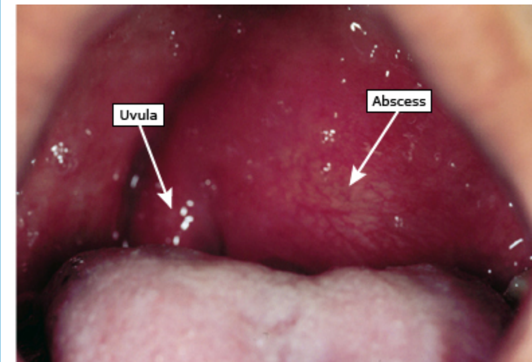
A 28 year old male presents to the ED with sore throat and left sided neck pain for the past 3 days. He admits to associated subjective fevers and painful swallowing. He denies cough, shortness of breath or sinus pain. The patient's vital signs are significant for a temperature of 100.7° F. He has no significant past medical history and takes no medications. On physical exam, the patient's oropharynx appears as shown on the right. There is significant left sided tonsillar swelling in addition to uvular deviation. Which of the following is the most important initial step in management?

A. Begin IV Clindamycin

B. STAT CT scan of the neck with IV contrast

C. Consult ENT

D. Assess degree of airway compromise



A peritonsillar abscess is a collection of pus between the palatine tonsil and pharyngeal muscles.

The image above is a view of the mouth demonstrating a large erythematous abscess causing significant deviation of the uvula. There is also swelling of the soft palate.

EM Case of the Week is a weekly "pop quiz" for ED staff.

The goal is to educate all ED personnel by sharing common pearls and pitfalls involving the care of ED patients. We intend on providing better patient care through better education for our nurses and staff.

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The correct answer is D. In a patient with a peritonsillar abscess, the airway should always be assessed for any signs of airway compromise or respiratory distress before proceeding further.

Introduction

A peritonsillar abscess (PTA) is a collection of pus between the palatine tonsil and pharyngeal muscles. Peritonsillar abscesses are the most common type of deep neck infections. However, they must be distinguished from retropharyngeal and parapharyngeal abscesses.

This infectious process exists on a spectrum, beginning with tonsillitis or pharyngitis, progressing to peritonsillar cellulitis, and finally to a PTA. If the abscess is not treated, however, it can spread to the carotid sheath or masseter muscle and lead to further airway compromise.

Evaluation

The most important factor when assessing a patient with a PTA is the degree of upper airway obstruction. The classic presentation in patients with a PTA includes fever, sore throat, pooling of saliva and a muffled or "hot potato" voice. With these symptoms, one must also consider other deep neck infections or obstructions and maintain a low threshold for placing an airway. Trismus secondary to irritation is seen in almost 60% of patients and can help to distinguish an abscess from tonsillitis or pharyngitis. Patients may have referred neck or ear pain as well.

Physical exam will show redness, swelling and fluctuance on the side of the abscess and contralateral deviation of the uvula. Depending on the stage of the disease, there may only be swelling of the posterior soft palate surrounding the tonsil. The incidence of bilateral PTA is less than 5% and may displace the uvula anteriorly instead of laterally.

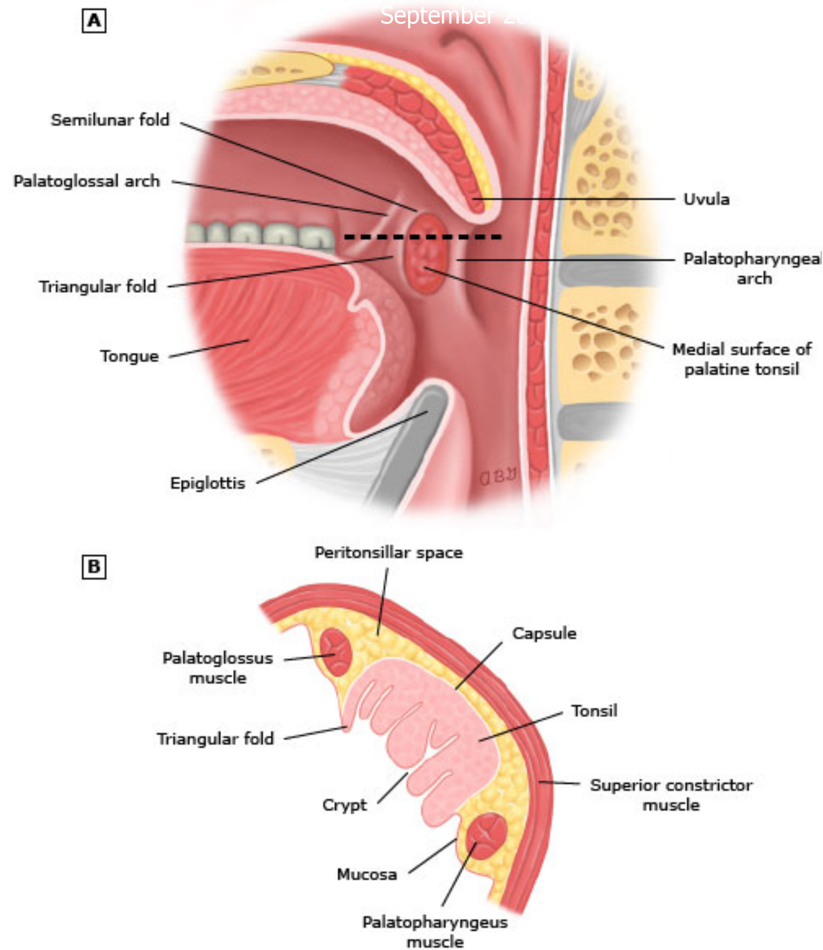


Image A represents a sagittal view of the pharynx showing the palatine tonsil in between the palatoglossal and palatopharyngeal arches.

Image B is a coronal section through the tonsil. Take note of the peritonsillar space surrounding the tonsil, where an abscess can form. Generally a peritonsillar abscess will form in the superior pole of the tonsil.

For a list of educational lectures, grand rounds, workshops, and didactics please visit ***BrowardER.com*** and **click** on the ***"Conference"*** **link**.

All are welcome to attend!

Diagnostic Tests

Since PTA is a clinical diagnosis, lab studies are generally not required. Similarly, imaging is not necessary unless there are special circumstances. For example, if the physical exam is limited due to trismus or there is suspicion of retropharyngeal spread. In these cases, CT with IV contrast is preferred as it can indicate spread to contiguous deep neck spaces.

Treatment

If suspicious of peritonsillar cellulitis without complications, patients can be started on a 24 hour trial of antibiotic therapy. If this fails, the diagnosis is most likely a PTA. Generally, patients with a PTA will require both antibiotics and a needle aspiration or incision and drainage by either an emergency physician or ENT.

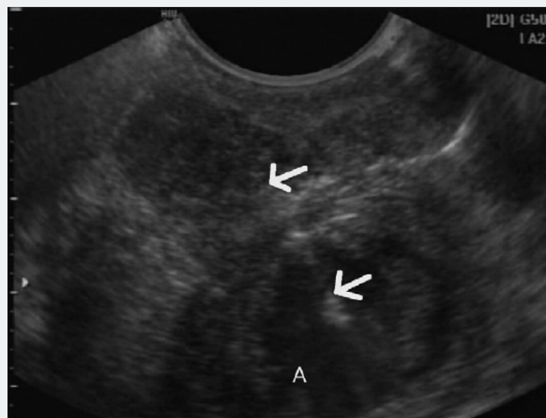
The predominant pathogenic organisms include *Strep. pyogenes* (group A strep), *Staph. aureus*, or MRSA. Therefore, antibiotic therapy includes amoxicillin-clavulanate (Augmentin) or clindamycin.

Randomized controlled trials show a similar success rate between needle aspiration and incision and drainage. Patients should be either admitted to ensure proper antibiotic and pain management or follow up in 24-36 hours to reassess the oropharynx.

If there is significant airway obstruction or the patient has a history of recurrent PTA, then the patient may be taken to the operating room for a tonsillectomy.

Risks of untreated PTA include airway obstruction, sepsis and spread to other deep neck spaces.

Ultrasound is now being used to not only diagnose but also treat PTA using bedside ultrasound-guided needle aspiration. A 2015 study from the Annals of Emergency Medicine found that bedside ultrasound-guided needle aspiration of peritonsillar abscesses by emergency medicine physicians led to higher success rates of aspiration and decreased consultation rates, CT imaging and total length of stay.



Take Home Points

- A peritonsillar abscess is a collection of pus next to the palatine tonsils which can lead to acute airway obstruction.
- Patients will present with sore throat, neck pain, drooling and a “hot potato” voice.
- The diagnosis is made clinically and imaging is generally not needed.
- Respiratory flora like group A strep and *Staph. aureus* are the main culprits, so Augmentin or clindamycin should be used.
- Definitive treatment involves either needle aspiration or incision and drainage.

ABOUT THE AUTHOR

This month’s case was written by Shawn Sethi. Shawn is a 4th year medical student from NSU-COM. He did his emergency medicine rotation at BHMC in August 2016. Shawn plans on pursuing a career in emergency medicine after graduation.

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