Pediatric Peritonsillar Abscess (Quinsy) — Diagnosis and Treatment

See online here

Peritonsillar abscess, also known as quinsy, is the collection of pus in the peritonsillar space. It is a common complication of tonsillitis and is an otolaryngological emergency. It accounts for about 30% of head and neck abscesses.

Epidemiology of Peritonsillar Abscess

Peritonsillar abscess affects males and females equally. It commonly affects people of ages between 20 to 40. The disease is less common in young individuals unless they are immunocompromised. Multiple failed attempts to treat tonsillitis with oral antibiotics and chronic tonsillitis may predispose the individual for the development of peritonsillar abscess.

Data of a few countries like Denmark, Ireland, and the United States of peritonsillar abscess patients noted per year between 10 to 40 per 1 lac.

Causes of Peritonsillar Abscess

A peritonsillar abscess can be caused by both aerobic and anaerobic bacteria. Aerobic
bacteria include *staphylococcus*, *streptococcus* and *haemophilus*. Anaerobic bacteria include *bacteroides*, *fusobacterium necrophorum* and *peptostreptococcus prevotella species*. Peritonsillar abscess usually arises as a complication of untreated or partially treated tonsillitis. The peritonsillar space has a large amount of loose connective tissue and therefore is more prone to the formation of an abscess and collection of pus.

**Risk Factors of Peritonsillar Abscess**

The following are the risk factors for the development of a peritonsillar abscess:

- Dental infections
- Gingivitis
- Infectious mononucleosis
- Smoking
- Chronic lymphocytic leukemia

**Pathophysiology of Peritonsillar Abscess**

A specialized portion of the *intrapharyngeal aponeurosis* covers the medial side of the tonsils and provides a space for the passage of blood vessels. It also forms the capsule of the tonsil and covers it, so the space between the tonsil and the capsule is a potential space for the formation of an abscess.

The peritonsillar space is continuous with other several deeper spaces in the neck like the parapharyngeal and the retropharyngeal space and the infection can spread into these spaces as well.

In the soft palate and superior to the tonsil are numerous small salivary glands known as *weber glands* and they are thought to play an important role in the etiology of infection. If these glands become inflamed, then *cellulitis* develops which progresses to inflammation, ultimately leading to *necrosis* and *pus formation*.

**Signs and Symptoms of Peritonsillar Abscess**
Severely sore throat on the affected side

- Odynophagia (pain during swallowing)
- Fever
- Malaise
- Headache
- Hot potato voice (distortion of vowels)
- Referred ear pain
- Tender swollen jugulodiagastric lymph nodes
- Foul breath
- Uvula may be displaced to the unaffected side
- Erythema and exudates on tonsils
- Drooling of saliva
- Trismus
- Dehydration
- Lymph glands of the neck may be enlarged
- In severe infections, the throat may be blocked which can cause difficult breathing.

Diagnosis of Peritonsillar Abscess

There is no definitive diagnosis of peritonsillar abscess. Diagnosis is usually based on the presentation of the patient and presenting signs and symptoms.

Basic studies such as a complete blood count and C-reactive protein can be done. A Monospot test can be done if infectious mononucleosis is being suspected. Needle aspiration of the fluid can be done to find out the exact organism. Blood cultures can also be done according to the severity of the case.

Lateral neck radiograph can be done to rule out any other cause. Intraoral ultrasonography is also sometimes helpful for reaching a diagnosis. A CT scan of the head and neck can also be considered in cases where the patient is an uncooperative
child or in case the patient is unable to open his mouth.

Management and Treatment of Peritonsillar Abscess

If a patient with peritonsillar abscess arrives in emergency, then first of all his airway should be maintained and adequate fluid resuscitation should be done. Antipyretics should be administered in the case of fever and if the pain is severe than proper analgesia should be given.

Definitive treatment includes incision and drainage of the pus, needle aspiration and tonsillectomy if the patient presents again and again over time due to abscess formation. For the patients who present the first time with an abscess, most ENT surgeons prefer to wait and watch before doing a tonsillectomy.

Antibiotics are also given to treat acute infection. The infection is now considered to be penicillin-resistant worldwide so the treatment includes clindamycin or metronidazole in combination with penicillin, amoxicillin/clavulanate.

Overview of Management of Peritonsillar Abscess

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<tr>
<th>If deeper infection suspected</th>
<th>If not yet drainable</th>
<th>If drainable</th>
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<tbody>
<tr>
<td>Study of choice</td>
<td>• Ampicillin/sulbactam is first line (transition to amoxicillin/clavulinate) • Second-line clindamycin • Steroids indicated only if acute airway obstruction</td>
<td>ENT consult for I and D is indicated</td>
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Complications of Peritonsillar Abscess

- Sepsis
- Shock
- Decreased oral intake
- Dehydration
- Extension of abscess into other deep spaces of neck
- Glomerulonephritis and rheumatic fever

References


