

PERITONSILLAR ABSCESS (PTA): A CASE STUDY

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ABSTRACT

Peritonsillar abscess (PTA), also known as quinsy, is an accumulation of pus due to an infection behind the tonsil. Streptococcal bacteria is the most common cause of infection in the soft tissue around the tonsils. Dental infections (such as the gum infections, periodontitis and gingivitis) may also be risk factors. Symptoms include fever, throat pain, trouble opening the mouth, and change of voice. Pain is usually worse on one side i.e. the affected side. Relevant laboratory investigations and imaging are necessary to be done for patients with peritonsillar abscess. As a treatment protocol, analgesics: non-steroidal anti-inflammatory drugs (NSAIDs) are recommended. Intravenous fluids are also indicated to re-hydrate the patients who have reduced oral intake due to difficulty swallowing. Surgical interventions can also be implemented such as needle aspiration, incision and drainage, and tonsillectomy.

KEYWORDS : PTA, Quinsy, Trismus, Odynophagia

INTRODUCTION

A peritonsillar abscess, which can occur as a sequela of acute bacterial tonsillitis. A peritonsillar abscess is a bacterial infection that begins as a complication of untreated Streptococcal throat infection or tonsillitis. A pus-filled pocket forms near the tonsil. Peritonsillar abscess (PTA), also known as quinsy, is accumulation of pus due to infection behind the tonsil. Symptoms include fever, throat pain, trouble opening the mouth, and a change of voice. Pain is usually worse on one side. The tissue is invaded by anaerobes (bacteria that can live without oxygen), which enter through nearby glands. Complications may include blockage of the airway or aspiration pneumonitis. PTA often follows pharyngitis. Diagnosis is usually clinical based on the signs and symptoms. Medical imaging may be done to rule out complications followed by treatment of infection.¹

Etiology

A peritonsillar abscess is most often a complication of tonsillitis. Streptococcal bacteria are the most common cause of infection in the soft tissue around the tonsils. The tissue is then invaded by anaerobes (bacteria that can live without oxygen), which enter through nearby glands. Dental infection (such as the gum infections periodontitis and gingivitis) may also be a risk factor. Other risk factors include: Chronic tonsillitis, infectious mononucleosis, smoking, Chronic lymphocytic leukaemia (CLL), stones or calcium deposits in the tonsils (tonsilloliths).²

Clinical Features

The common clinical symptom is usually sore throat. The mouth and throat may show a swollen area of inflammation typically on one side. The uvula may be shoved away from the swollen side of the mouth. Lymph glands in the neck may be enlarged and tender. Other signs and symptoms that may be observed are:

- Painful swallowing
- Fever and chills
- Patient shows trismus, which is the restricted opening of the mouth – this is due to inflammation and painful spasm of the muscles of mastication.
- Ear pain on the same side as the abscess
- A muffled voice, often described as a "hot potato" voice (sounds as if you have a mouthful of hot potato when you talk)
- Odynophagia
- Patients will typically present with a severe sore throat (worse unilaterally), pyrexia. Associated symptoms include stertor and trismus, often presenting in similar ways in children.

- Examination can be difficult in cases with trismus, however there will often be extensive erythema and soft palate swelling, with the anterior arch being pushed medially and a deviated uvula to the opposite side.³

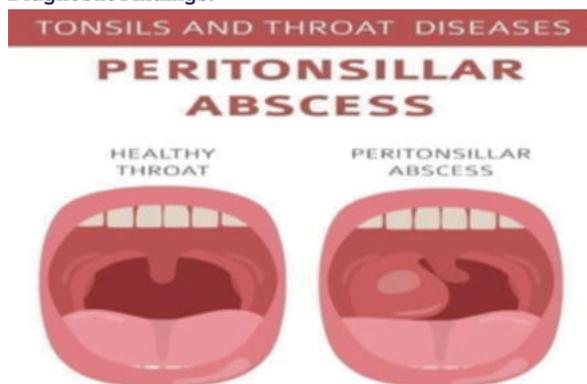
Diagnostic Findings:

Image 1: Depicting Peritonsillar Abscess.

Relevant laboratory investigations and Imaging are necessary to be done for patients with peritonsillar abscess, which are as follows.

Relevant laboratory investigations include:

- WBC count: white blood cells are typically raised in acute infection. It is also important to establish a baseline haemoglobin and platelet count if the patient requires a surgical procedure.
- CRP: likely to be raised in acute infection
- LFTs: important to have a baseline if commencing on intravenous antibiotics. Acute derangement is often associated with infectious mononucleosis (glandular fever).
- Urine output- often reduced in patients due to dehydration because of reduced oral intake.
- Serum electrolytes- at times deranged in patients due to reduced oral intake.
- EBV/monospot/glandular fever screen: EBV can cause infectious mononucleosis (glandular fever), a viral cause of tonsillitis
- Blood cultures: should be taken if there is a suspicion of sepsis to guide future antimicrobial decisions

Imaging Investigations Include:

- CT neck: may be considered if a patient is not improving to

look for other sources of cervical sepsis (e.g. deep neck space infection)

- Orthopantomogram: if dental pathology is suspected can be done.⁵

Treatment

In the treatment of PTA two types of management is mostly included i.e. medical management and surgical management.

Medical management of a peritonsillar abscess includes:

- Analgesia: non-steroidal anti-inflammatory drugs (NSAIDs) are recommended.
- Intravenous fluids: to re-hydrate patients who may have had reduced oral intake due to difficulty swallowing.
- Intravenous antibiotics: usually a combination of benzylpenicillin and metronidazole (or in penicillin-allergic patients, clindamycin/clarithromycin monotherapy). Local guidelines should be followed.
- Corticosteroids: a single dose of corticosteroids (e.g. dexamethasone) may reduce inflammation and relieve trismus, however, there is limited evidence for this treatment.

Surgical management of a peritonsillar abscess includes:

- The pus can be removed by a number of methods including needle aspiration, incision and drainage, and tonsillectomy. Incision and drainage may be associated with a lower chance of recurrence than needle aspiration but the evidence is very uncertain. Needle aspiration may be less painful but again the evidence is very uncertain.
- Surgical treatment can also be given while a patient is under anaesthesia, but this is usually reserved for children or anxious patients. Tonsillectomy can be indicated if a patient has recurring peritonsillar abscesses or a history of tonsillitis. For patients with their first peritonsillar abscess most ENT-surgeons prefer to "wait and observe" before recommending tonsillectomy.⁶

Case Report

A 50 years old male adult patient was admitted on 23 October 2024 in our hospital in ENT department with chief complaints of sore throat and reduced mouth opening since x3 days. On examining the patient odynophagia, voice changes (muffled voice) and reduced mouth opening were observed. On examining the oral cavity, left tonsillar swelling and anterior tonsillar pillar bulge was noted along with slight displacement of uvula towards the opposite side i.e. right side. Trismus was observed. Taking the case symptoms into consideration patient was diagnosed with Left side Quinsy. Blood tests were advised to the patient by the ENT physician, which are specified below in the table. On reviewing the blood tests reports the patient was advised peritonsillar abscess drainage procedure which was performed in the operation theatre under local anaesthesia.

Table 1; Depicting The Blood Test Values Of Patient.

WBC	= 8.3	RBC	= 5.23	PLT 103/	267
103/mm3		103/mm3		mm3	
LYM%	21.8	HGB g/dl	15.4	MPV	7.6
				um3	
MON%	5.2	HCT %	45.1	PCT %	0.203
GRA%	73.0	MCV um3	86	PDW %	15.6
		MCH pg	29.4		
		MCHC g/dl	34.1 H		
		RDW-CV %	13.5		
		RDW-SD um3	42		



Image 2: Peritonsillar Abscess Pre-operative Stage.



Image 3: Peritonsillar Abscess Post-operative Day 1.



Image 4: Post Operative Day 2.

Under sterile condition in OT, 10ml wide bore needle (16 G) was inserted at the level of intersection of base of uvula and anterior tonsillar pillar. Purulent thick material was aspirated. Using a 15 number surgical blade incision and drainage was done after making a curvilinear incision in the anterior tonsillar pillar superiorly. 50ml purulent discharge material was drained. Immediately post drainage patient had symptomatic improvement with improved mouth opening and markedly reduced odynophagia. Purulent material was further sent for gram stain and culture sensitivity. After surgical procedure on post operative day 1 -patient was given intravenous Antibiotic injection Amoxycylav 1.2gm BD, Injection PCM 1gm TDS, Injection pantop 40mg OD and Injection Dexamethasone 8mg iv stat. Patient was also advised for gargles with diluted betadine and diluted hydrogen peroxide and was told to maintain oral hygiene. The condition of the patient had improved. On post operative day 2 same treatment was given. On post operative day 3 patient was discharged and was called for follow up after few days and was assessed again. On follow up patient did not report any symptoms and had recovered well.

Ethical Consideration

A fresh consent was taken from the patient in written in his

language to publish the information as well as permission was also taken from Incharge of the hospital in written for publishing this case study.

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