

# Cervical Pott's Disease Presenting as a Large Retropharyngeal Abscess: A Rare Case Report

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**Abstract:** A 27 year old male complaints of pain and difficulty in swallowing for 20 days with difficulty in breathing for 2 days associated with low grade fever for long duration. On clinical examination, the patient was mild febrile, thin built, fatigue, cachexic and mild anemic. Oropharynx revealed a posterior pharyngeal wall bulge. A lateral radiograph of the neck suggested soft tissue accentuation in prevertebral region with straightening of cervical vertebra. A contrast enhanced CT scan showed erosion and cortical destruction of endplate of C5 & C6 vertebral bodies. The aspirated pus from posterior pharyngeal wall bulge was tested positive on CB - NAAT for Mycobacterium Tuberculosis.

**Keywords:** Pott's spine, Retropharyngeal Abscess, Mycobacterium Tuberculosis, CBNAAT.

## 1. Introduction

Tuberculosis of spine is a rare complication seen in less than 1% of patients infected with Mycobacterium tuberculosis. Amongst those with TB spine around 3 - 7% present with involvement of cervical vertebra. [1] Due to rarity of the disease and non - classical symptoms of presentation in these cases a high index of suspicion is necessary to accurately diagnose it.

Retropharyngeal abscess can be acute or chronic, with acute variant being common in children below 5 years of age or adults with traumatic injury to aerodigestive tract. The chronic variant is seen in setting of tuberculosis of spine either spreading from nodes of head and neck region or from thoracic spine via hematogenous spread through Bateson's plexus. If left untreated for long, it can result in complications such as mediastinitis, compression of great vessels, compression on roots of peripheral nerves or spinal cord, rupture of abscess, laryngeal oedema and stridor etc.

## 2. Case Details

A 27 year old male presented with complaints of pain in the neck, difficulty in swallowing for 20 days and difficulty in breathing for 2 days. The neck pain was persistent in nature and aggravated with neck movements (more with flexion). He had experienced a low - grade fever off and on since past 3 months. There is no history of ingestion foreign bodies, dental extraction, endoscopy or other invasive procedure and any physical trauma. On clinical examination, the patient was mild febrile, thin built, fatigue, cachexic and mild anemic. Oropharynx revealed a posterior pharyngeal wall bulge. On endoscopic laryngeal examination, the laryngeal framework appeared normal with only abnormality being the bulge present in the posterior pharyngeal wall pushing on the arytenoids and narrowing the laryngeal inlet.

A lateral radiograph of the neck suggested soft tissue accentuation in prevertebral region with straightening of cervical vertebra (figure 1). A contrast enhanced CT scan showed collection involving bilateral pre - vertebral space extending to retropharyngeal space from C2 to T2 vertebral

level. There was also erosion and cortical destruction of endplate of C5 & C6 vertebral bodies (figure 2). A complete blood count showed decreased haemoglobin (10.4 gm%), raised lymphocyte percentage (40%) and ESR (36) in an otherwise normal total leucocytes.

Before starting empirical antibiotic therapy diagnostic aspirate (which yielded pus) done from the posterior pharyngeal wall bulge and sent for culture and sensitivity, AFB staining and CBNAAT. After sending the pus for investigations, the patient was treated parenterally with broad spectrum antibiotics, followed by therapeutic aspiration done from the posterior pharyngeal wall bulge under local anaesthesia. The aspirated pus was tested negative for AFB staining and positive on CB - NAAT for Mycobacterium tuberculosis. On culture sensitivity, it failed to show growth of microorganisms. Following this the patient was started on standard ATT for EPTB (extra - pulmonary tuberculosis). Within 2 weeks of ATT regime the patient showed improvement in dysphagia and other associated symptoms. Then the patient was advised to continue ATT according to RNTCP guidelines.

## 3. Discussion

Spinal TB typically involves lower thoracic and lumbar vertebrae in adults and upper thoracic vertebra in children. [2] Acute presentation of spinal tuberculosis is less common. In chronic cases clinical presentation varies and sometimes atypical presentation such as obstructive sleep apnea may be the only presenting complaint. Owing to the variable presentation and paucity of organisms in diagnostic materials, it poses a diagnostic challenge to the clinicians. Histopathologic assessment is seen superior in such cases often revealing a caseating granuloma. However complete otolaryngologic clinical evaluation and keeping high index of suspicion for TB as one of the differential diagnoses helps in clinching the diagnosis in such cases. Contrast enhanced computerized tomography scan is usually the investigation of choice in evaluating such cases by showing sclerotic bone destruction, sequestrum formation, decreased intervertebral space and involvement of the centrum of vertebra. Magnetic

resonance imaging is superior in cases of dural involvement or involvement of central nervous system.

In this case pus for culture & sensitivity and AFB staining were negative and the diagnosis was established by positive CBNAAT report, which have shown greater sensitivity and specificity in detecting these cases.

There are 3 broad approaches in management of spinal TB - chemotherapy, chemotherapy along with debridement and radical debridement. [3] Abscess drainage and subsequent antitubercular therapy remains the most favored and mainstay of treatment in spinal cases. Adequate aspiration under local anaesthesia has also been described as an effective method to aspirate sufficient amount of pus to relieve patient's symptoms of dysphagia and airway symptoms. Role of prior tracheostomy have also been recommended in few selected cases in management along with drainage under general anaesthesia. However, in this case as the patient didn't have stridor or any other compelling indication for surgery at any point in his clinical course of disease so it was unnecessary to subject the patient to any significant surgical intervention. This case was managed satisfactorily with therapeutic aspiration under local anaesthesia and early initiation of antitubercular therapy.



Figure 1

Figure 2



Figure 3: Lateral radiograph of neck after resolution



Figure 4: Parasagittal CT cuts after resolution

#### 4. Conclusion

With review of existing literatures and experience with this case, in absence of progressive neurological deficit and stridor, therapeutic aspiration together with appropriate antitubercular therapy can be recommended as the standard of care in these cases.

#### References

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