

## Chronic Retropharyngeal Abscess Secondary to Vertebral Osteomyelitis Masquerading Recurrent Meningitis

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**Abstract:** Retropharyngeal abscess is less frequently seen now as compared to few years ago , yet we have come across this case of a retropharyngeal abscess. All the clinical features suggested a child with meningitis but later on after investigating thoroughly he was found out to be having a retropharyngeal abscess. Hence, this attempt to report and record a case of retropharyngeal abscess secondary to vertebral osteomyelitis.

**Keywords:** Retropharyngeal abscess, Vertebral osteomyelitis, Recurrent meningitis, Lumbar puncture, MRI

### INTRODUCTION

Retropharyngeal abscess is less frequently seen now as compared to few years ago [1]. Lander published incidence of retropharyngeal abscess has risen up due to facilities of imaging. Most common types of retropharyngeal abscesses are secondary to staphylococcal and streptococcal infections [1] and are rarely due to vertebral osteomyelitis.

### CASE REPORT

A 7 year old boy was admitted with high grade fever and neck stiffness. He was admitted with similar symptoms on three different occasions and was treated as pyogenic meningitis. Child did not have vomiting's but suffered from vague dysphagia.

Examination of the child revealed severe neck stiffness with head bent to the left side. Other signs of meningeal irritation like Kerning's sign or Brudzinski's sign were negative. There is no history of injury to the throat, acute suppurative otitis media, chronic suppurative otitis media or history of abscess else where in the body. He also had mild respiratory stridor and resisted detailed throat examination. There were no cervical lymph nodes palpable. There was a vague tenderness on the left lower neck. Right side of the neck was unremarkable. With a clinical diagnosis of recurrent meningitis, child was administered parenteral antibiotics. Cerebrospinal fluid was normal on biochemical examination and cell count was also within normal limits.

Radiograph of neck showed widening of prevertebral space, although vertebral bodies appeared normal. MRI examination of the neck revealed, reserved cervical lordosis, increased intensity in the body of C2 vertebrae, atlanto-dental space or distance was increased. There was evidence of fluid collection in the prevertebral space extending from base of skull into mediastinum. Some lymph nodes are visible on the right side of neck. There were small multiple nodules in pulmonary parenchyma on both sides. The chest radiograph was normal.

An attempt was made to aspirate and drain the abscess. Only 4 ml of thick blood stained pus could be drained. No response to conventional high end anti-staphylococcal and broad spectrum antibiotics. Evidence of involvement of bone on MRI, normal cerebrospinal fluid on biochemical examination with multiple nodules in both lungs on MRI suggests tubercular pathology. Hence, anti tubercular medication was started.

### DISCUSSION

Retropharyngeal space is a potential anatomical space between carotid sheath laterally and extending from base of neck to mediastinum bounded anteriorly by buccopharyngeal membrane, posteriorly by prevertebral space. Infection in this space is called retropharyngeal abscess.

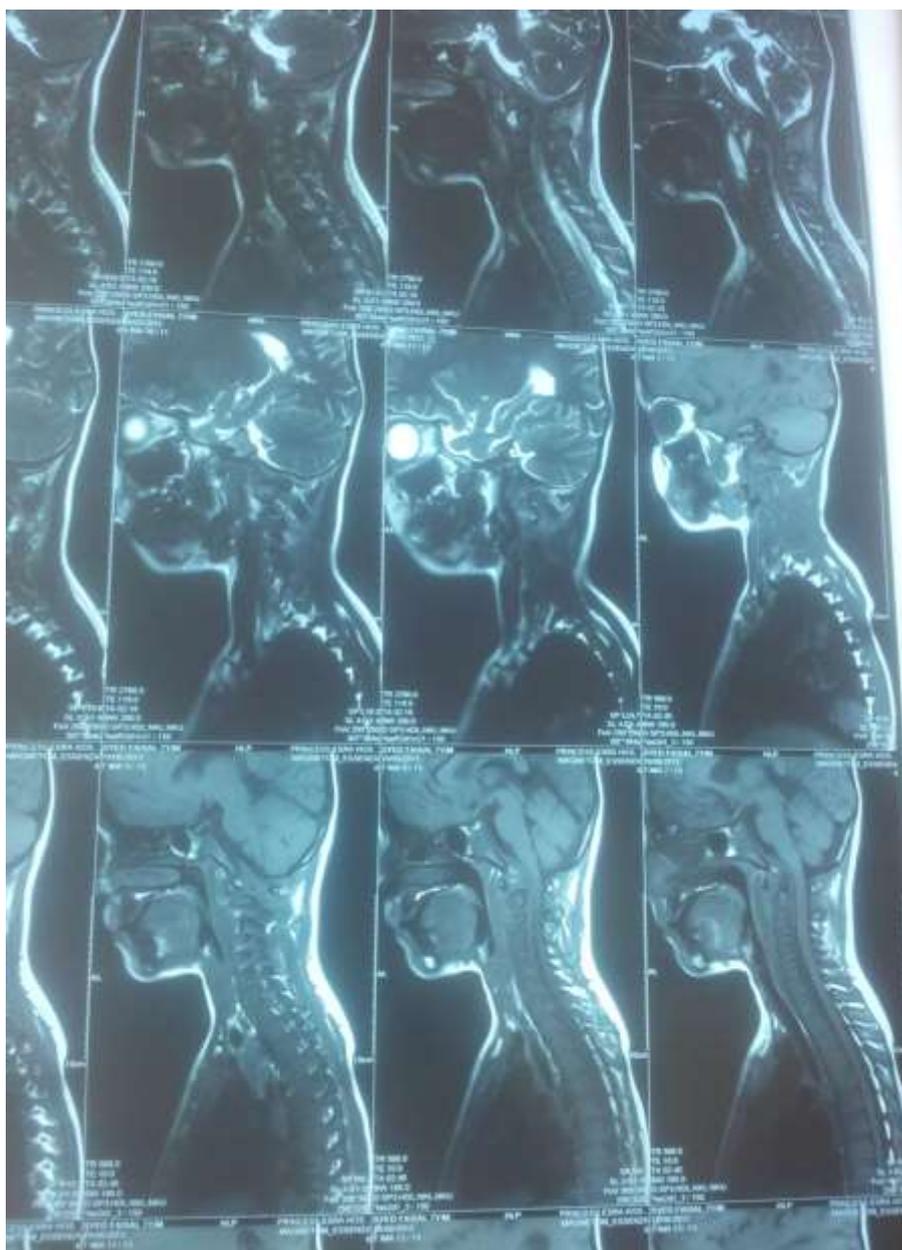
Usually retropharyngeal abscess is caused by pyogenic organisms, most commonly staphylococcal and streptococcal organisms [1]. Most common source

being the pharynx and tonsils or a penetrating injury to the pharynx by a fish bone [2].

The present case behaved like pyogenic or pharyngeal abscess and growing staphylococcus on one occasion. Retropharyngeal abscess usually presents with high grade fever, inability to swallow along with respiratory distress. They can also present with respiratory stidor. Neck rigidity is usually misdiagnosed

as neck pain with torticollis suggestive of retropharyngeal abscess [3].

Commonly used diagnostic tool is CECT (Contrast-Enhanced Computed Tomography) [4] for changes in the bone. CECT is preferable to MRI (Magnetic resonance imaging). MRI in this case shows evidence of osteomyelitis of C2 vertebrae (Fig. 1).



**Fig. 1: MRI**

Osteomyelitis producing retropharyngeal abscess is uncommon. Most common cause of osteomyelitis is staphylococcus. Multiple bone involvements, extensive pus from the base of skull to mediastinum with multiple

nodules in bilateral lung parenchyma suggests tubercular pathology. The child under discussion also had most of the above features. He was treated with

antitubercular medication. Ventura *et al.* [5] presented a case of Pott's disease of cervico-occipital junction.

#### **CONCLUSION**

A case of retropharyngeal abscess secondary to tubercular osteomyelitis misdiagnosed as recurrent meningitis is being reported.

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