Case Report

Pott’s disease presenting as a superior mediastinal mass: A case report

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Abstract

Tuberculosis spine presenting as isolated superior mediastinal widening is rarely seen in children. We present a 1 ½ years old child with fever and cough for a month, who was detected to have superior mediastinal widening on chest X-ray which on CT chest was found to be an extension of abscess from tuberculosis spine which had progressed anteriorly to push and compress the trachea. We report the case for its rarity and unusual presentation of TB spine.

Keywords: Pott’s spine, Superior mediastinal, Tuberculosis

1. Introduction

Tuberculosis of the spine is one of the most common spine pathology in India. Over last 4 decades a lot has changed in the diagnosis, medical treatment and surgical procedures to treat this disorder. Five to 10% cases of tuberculosis (TB) in children under 5 years are extra pulmonary. Spine is a favored site because of high vascularity and relative scarcity of phagocytic cells. Most cases of spinal TB present late with kyphotic deformity in dorsolumbar region. Spinal childhood tuberculosis also called Pott’s disease presenting as a mediastinal mass without associated gibbous has not been reported in children. We present a 1 ½ years old child who was detected to have superior mediastinal widening on chest X-ray which on imaging was shown to be extension of abscess from tuberculosis spine which had progressed anteriorly to push and compress the trachea.

2. Case report

One and half year old boy presented with a one month history of cough and evening rise of temperature, loss of weight and appetite. There was no breathlessness, noisy breathing, neurological symptoms or history of contact with a patient having TB. On examination, he weighed 8.3kg (less than 3rd percentile), had temperature of 99.4°F. There was no respiratory distress. There was no obvious deformity of spine or local tenderness on the back. On systemic examination, trachea was deviated to left, but the lungs were clear to auscultation. Other systems were normal. Laboratory examination revealed hemoglobin-7.9 gm/dl, total leukocyte count-13.8 x 10^9/L, Differential leukocyte count- P53%, L45% E2%, ESR 87 mm 1 hr. Mantoux test with 5TU was positive (15 x 15 mm induration), gastric lavage for AFB was negative on three occasions. A chest radiograph showed triangular opacities in both upper zones with a widened superior mediastinum (Fig 1). Radiograph lateral view was suggestive of anterior displacement of trachea. CT chest revealed destruction and collapse of...
vertebral bodies D1-D3. A large multiseptate lobulated periphery enhancing lesion in pre-vertebral space with extension into pre-vertebral space causing compression of underlying spinal cord and trachea at the level of thoracic inlet (Fig 2). Thoracotomy with drainage of abscess was done which was suggestive of cold abscess and child was started on anti-tuberculosis therapy.

3. Discussion

The most common mode of presentation of tuberculosis spine in a child less than 2 years is development of a gibbus\(^2\) which usually draws the attention of the parents towards a spinal problem. Backache may manifest as constant crying and preference for lying down. Systemic symptoms like fever, anorexia, failure to thrive may not be always seen but were good clinical clues in our case. Kyphotic deformity results from affliction of the growth plate along with destruction of the anterior portion of vertebrae. Older children may present as a cold abscess far away from the vertebral column like in the paraspinal regions at the back, along the intercostal spaces on the chest wall because of tracking along facial planes or along neurovascular bundle. Anterior extension with compression of trachea and spine as seen in our case is very has been reported in adults but not in children.\(^3,4\) Mediastinal widening as an isolated presentation of tuberculosis spine is without associated gibbus has not been reported in children. Neurological deficit is reported in 10-30 percent cases of spinal TB but was absent in our case.\(^5\)

Concomitant pulmonary or genitourinary TB is reported in 40-50% adults but in only 12% children from Indian series.\(^5\) No primary focus was detectable in the index case. CT scan is a very useful tool in assessing the destructive lesions of the vertebral column which are often missed on chest radiographs in young infants.\(^6,7\) MRI findings are characteristic but not pathognomonic.\(^6,7\) The management usually depends upon the time of presentation, number of vertebral bodies involved and presence or not of associated complications of collapse, abscess formation, neurological deficits. While only 4 drug chemotherapy with a cast or brace may suffice in uncomplicated patients with active disease who present early, complicated cases may additionally need radical debridement with reconstruction of the large defect using a bone graft from iliac crest or fibula along with anterior or posterior spinal fusion.\(^8\) Thoracotomy with abscess drainage was carried out in our patient.

4. Conclusion

Spinal TB may present as mediastinal widening due to spread of abscess anteriorly. A strong clinical suspicion with early CT or MRI may help to confirm the diagnosis and institute early treatment.

\(^\text{1}Ohri et al\)
References


