Looking beyond an abscess

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Sir,

We present a rare case of fourth branchial cyst presenting as a perithyroidal and mediastinal abscess.

A 3-year-child presented with history of fever, cough since 7 days and fast breathing since 3 days, fever was of high-grade. On clinical examination, the pulse and blood pressure was normal for the age and the child had stridor and respiratory rate was 46/min. On chest auscultation, rhonchi were present bilaterally with scattered crepts.

Biochemical profile revealed Hemoglobin (Hb): 8.3 g/dl, Total Leucocyte Count (TLC) of 12,300 cells/cumm. Mantoux was non-reactive. Ultrasound examination of the abdomen was normal. Chest X-ray revealed mediastinal mass on the right side. Contrast-enhanced computed tomography was done which revealed perithyroidal abscess extending into the retropharyngeal space, mediastinum, and paraspinal region. A beak like linear tract was seen extending into the left lobe of thyroid [Figure 1]. The child was being managed on injectable antibiotics initially but did not show improvement. Fine-needle aspiration cytology was done which corroborated the diagnosis of a infected branchial cyst [Figure 2]. Patient underwent surgery with excision of the cyst.

Fourth branchial cysts are very rare with only a few documented cases, majority occurring on the left side.[1] Branchial abnormalities result from incomplete obliteration of the cervical sinus of His or as a result of buried epithelial cell rests. Branchial cysts are lined by stratified squamous or columnar epithelium and virtually all cysts havelymphoid tissue in their walls.[2] On imaging, a fourth branchial cyst appears as a solitary, often infected, cyst posterior to the common carotid artery with involvement of the adjacent thyroid lobe, usually on the left side. The tract enters the apex or floor of the pyriform sinus. Rarely, these cysts can occur in the mediastinum without a connection to the larynx.[3]

It is imperative that both the paediatricians' and radiologists are aware of this entity so that appropriate treatment can be done. Management consists of antibiotic therapy in the acute phase, aspiration of cyst contents followed by definitive surgical excision after the inflammation subsides.[4] Branchial cleft anomalies must be part of the differential diagnosis in the management of pediatric patients with retropharyngeal abscesses. It is important to examine the pyriform sinuses for evidence of fistulae in patients with recurrent retropharyngeal abscess.[5] Awareness of a

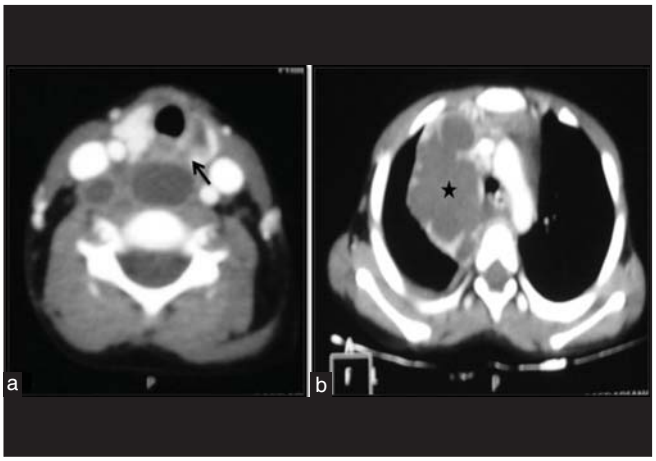


Figure 1: Contrast-enhanced computed tomography reveals (a and b) perithyroidal abscess extending into the retropharyngeal space, mediastinum (asterisk) and paraspinal region with a beak like linear tract (arrow) extending into the left lobe of thyroid

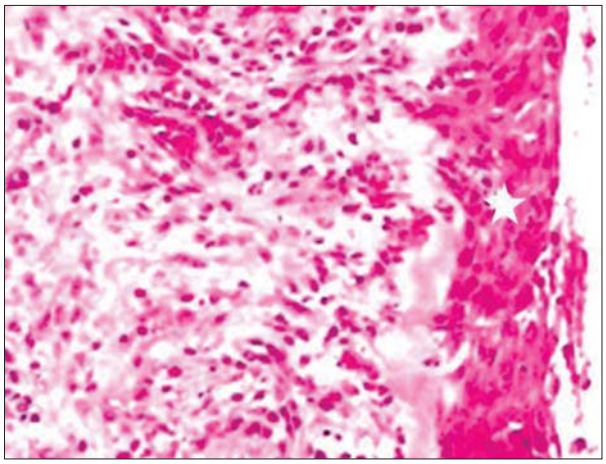


Figure 2: Fine-needle aspiration cytology from the cyst showing cyst wall lined with squamous epithelium (star) with infiltrates of lymphoid and plasma cells in the stroma (H and E, ×200)

typical presentations enables pediatric surgeons to provide the optimal treatment and timely intervention.

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