

Retropharyngeal abscess and clival osteomyelitis in a 2-year-old girl

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Case Presentation

A 2-year-old girl presented to the emergency department (ED), brought in by her parents, with a week's history of lethargy, irritability and fevers. In the days prior to hospital attendance she deteriorated, with high fevers, reduced consciousness, rigors and torticollis. She was an otherwise well child, fully immunised and a term delivery.

On examination, she was lethargic and febrile with rightward torticollis and no cranial neuropathies.

On computed tomography (CT) and magnetic resonance imaging (MRI) of the head and neck, a retropharyngeal abscess of the nasopharynx was identified. There was cortical breach of the clivus, osteomyelitis, dural enhancement and a small extra dural infected collection (Figure 1 and 2). She had raised inflammatory markers and blood cultures were positive for *Streptococcus anginosus* and the surgical sample microscopy and culture was positive for *Streptococcus intermedius*.

The patient was transferred to the operating theatre and had trans-nasal drainage of the abscess. She remained in hospital for some weeks on intravenous antibiotic therapy (ceftriaxone and metronidazole).

There was neurosurgical input for associated atlanto-axial and atlanto-occipital septic arthritis for which she required a rigid neck brace for three months.

She has now fully recovered, is off all antibiotic therapy and has no neurological sequelae. She has ongoing follow up with ENT surgery, neurosurgery and the infectious diseases physicians.

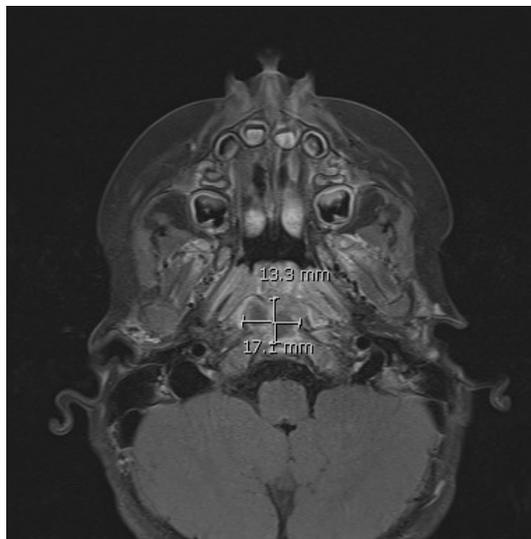


Figure 2: Axial T2 MRI head demonstrating clival multiloculated collection

Discussion

Osteomyelitis or abscess of the clivus is uncommon in adults and very rare in children. There are only two such similar paediatric cases published in the international literature^{1, 2}. This is a rare though important complication of retropharyngeal abscess. The ENT surgeon should be cognisant of this in the child with torticollis and fevers or meningitic symptoms.

References

1. Rusconi R, Bergamaschi S, Cazzavillan A, Carnelli V. Clivus osteomyelitis secondary to *Enterococcus faecium* infection in a 6-year-old girl. *Int J Pediatr Otorhinolaryngol*. 2005;69(9):1265-8.
2. Prabhu SP, Zinkus T, Cheng AG, Rahbar R. Clival osteomyelitis resulting from spread of infection through the fossa navicularis magna in a child. *Pediatr Radiol*. 2009;39(9):995-8.

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Figure 1: Sagittal CT neck and head demonstrating retropharyngeal collection with erosion and posterior cortical breach of the clivus