Retropharyngeal Abscess Presenting as Leptomeningeal Meningitis: A Diagnostic Challenge

Abcesso Retrofaríngeo Apresentando-se como Meningite Leptomeníngea: Um Desafio Diagnóstico

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PALAVRAS-CHAVE: Abcesso Retrofaríngeo/diagnóstico por imagem; Meningite Bacteriana; Osteomielite

A 50-year-old female with a known history of type 2 diabetes presented to the Emergency Department (ED) with cervical pain, fever and confusion. Over the previous week, she had become progressively more confused and with low-grade fever. The pain had started three weeks earlier, and worsened despite taking analgesics prescribed during previous ED visits. Additionally, one month earlier, she had complained of odynophagia following an episode of choking on a chicken bone.

Upon admission, the patient was febrile (38.6ºC) and disoriented, with a Glasgow Coma Scale (GCS) score of 14. Physical examination revealed neck rigidity. Laboratory tests showed leukocytosis (24.8×10^3/µL; reference range [RR]:4.0–10.0×10^3/µL), with a predominance of neutrophils (22.2×10^3/µL; RR:2.0–7.0×10^3/µL), and an elevated C-reactive protein level (23.8 mg/dL; RR:<1 mg/dL). A head computed tomography (CT) scan revealed no abnormalities. Lumbar puncture was suggestive of bacterial meningitis. Empiric treatment with meningeal-dose ceftriaxone and ampicillin was initiated.

On the second day of admission, the patient's neurological status deteriorated, with her GCS score dropping to 10. A contrast-enhanced head and neck CT scan revealed a large foreign body of bone density, accompanied by an abscess in the retropharyngeal space, erosive changes in the first two cervical vertebrae and findings consistent with cervical leptomeningitis (Figs. 1 and 2). Despite aggressive treatment, the patient developed septic shock, which progressed to refractory shock, ultimately resulting in her death.

Retropharyngeal abscess is a rare but potentially life-threatening infection that can be triggered by trauma to the posterior pharynx.[1,2] Early diagnosis is

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essential to prevent complications, including cervical osteomyelitis and leptomeningitis, and a contrast-enhanced neck CT scan is the gold standard imaging modality.[1-3]

A high index of suspicion for neck infections in vulnerable patients presenting with neck pain should be maintained, and the threshold for imaging evaluation lowered.

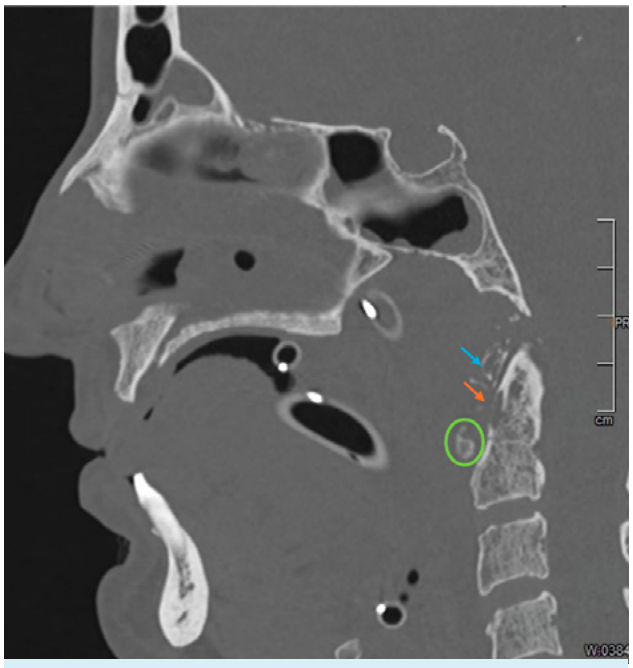


FIGURE 1. Head and neck CT scan - sagittal view: foreign body (green circle) and bone erosion of the atlas' anterior arch (blue arrow) and axis' odontoid process (orange arrow)

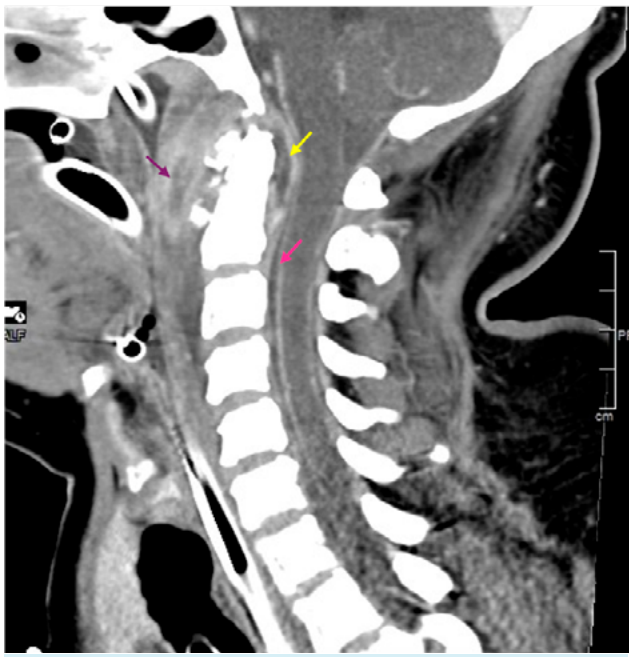


FIGURE 2. Head and neck CT scan sagittal view: perimedullary enhancement suggestive of leptomeningeal meningitis (pink arrow), subligamentous abscess (yellow arrow) and thickening and densification of the posterior pharyngeal wall with an abscessed cavity (purple arrow)

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REFERENCES

1. Sakthivel P, Yogal R, Verma H, Saini A, Chandran A. Acute Retropharyngeal Abscess Masquerading as Meningitis. JNMA J Nepal Med Assoc. 2017;56:186-8. doi: 10.31729/jnma.2993
2. Jain H, Hohman MH, Sinha V. Retropharyngeal Abscess [e-book]. StatPearls; 2024 [accessed 2023 Nov 25]. Available: https://www.ncbi.nlm.nih.gov/books/NBK441873/
3. Ku BD, Park KC, Yoon SS. Medically treated deep neck abscess presenting with occipital headache and meningism. J Headache Pain. 2008;9:47-50. doi: 10.1007/s10194-008-0005-2