

Letter to Editor

Tuberculous subdural empyema mimicking chronic subdural hematoma

V. Soundappan¹, Krishnan Nagarajan², Vellathussery Chakkalakkoombil Sunitha²

¹Department of Neurosurgery, Chettinad Hospital and Research Institute, Chennai, Tamil Nadu, ²Department of Radio-Diagnosis, Jawaharlal Institute of Postgraduate Medical Education and Research, Puducherry, India.

Dear Editor,

We read the interesting case series by Rengarajan *et al.*^[1] and share our comments on the same. Calvarial osteomyelitis is uncommon and usually presents with scalp subgaleal swelling, lytic skull lesion, and occasionally extra- or subdural collections.^[2-4] The clinical presentations include scalp swelling similar to the cases, discharging sinus, seizures, or even signs of meningitis. The management is surgical debridement with anti-tuberculous chemotherapy. If the skull bony erosions are minimal without any empyema causing mass effect, only anti-tuberculous therapy may be tried after cytology from the scalp collection.^[5]

Forty-nine-year-old male presented with the right-sided scalp swelling and headache for the past 2 months. There was no history of injury. He had low-grade fever twice in the past 2 months. On examination, there was “boggy” scalp swelling in the right frontoparietal region. There was mild tenderness, but no warmth was noted. The swelling was not pulsatile or

compressible. Plain computed tomography (CT) scan was done which showed large mixed-density right frontoparietal extradural and subdural collections with loculations and posterior dependent layering giving the appearance of acute-on-chronic subdural hematoma (SDH). There was also a large right frontoparietal scalp subgaleal collection [Figure 1]. The underlying frontoparietal one around the coronal suture showed patchy rarefaction with diploic thinning suggestive of bone erosion. With the above findings, possibility of osteomyelitis of right frontal calvarium was considered with subdural empyema and subgaleal “cold” abscess formation. The patient was taken up for decompression and *en bloc* excision of infected bone was done with drainage of intra- and extracranial collections.

In the current case, there were both extra-and subdural collections with mass effect, and hence, decompression and confirmation of tuberculous etiology was done. The initial diagnosis in our middle-aged patient was chronic SDH as it

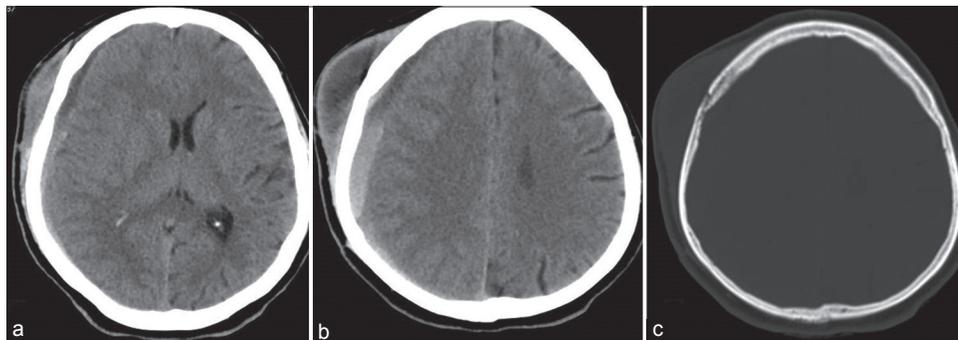


Figure 1: Plain computed tomography scan axial section of brain at the (a) and above the level of ventricles (b) showing large mixed density subgaleal, extradural, and subdural collections. Bone window (c) showing erosions and rarefaction of frontoparietal bones close to the coronal suture with diploic thinning suggestive of Osteomyelitis.

*Corresponding author: Krishnan Nagarajan, Department of Radio-Diagnosis, Jawaharlal Institute of Postgraduate Medical Education and Research, Puducherry, India. lknagarajan1@gmail.com

Received: 23 February 2023 Accepted: 22 April 2023 Epub Ahead of Print: 20 May 2023 Published: 16 August 2023 DOI: 10.25259/JNRP_91_2023

This is an open-access article distributed under the terms of the Creative Commons Attribution-Non Commercial-Share Alike 4.0 License, which allows others to remix, transform, and build upon the work non-commercially, as long as the author is credited and the new creations are licensed under the identical terms. ©2023 Published by Scientific Scholar on behalf of Journal of Neurosciences in Rural Practice

can present without history of trauma or occasionally trivial trauma. The possibility of infective origin like tuberculous etiology should be considered in unexplained scalp swelling that is unaccompanied by a history of trauma. Further, the bone erosion may be missed unless bone window settings are used to see the underlying bone in routine brain CT evaluation as CT brain window may not show the erosions. The combination of extracranial scalp subgaleal and extra- or subdural collections should give rise to the possibility of underlying skull bone osteomyelitis and bone window should be scrutinized for erosions and changes. This is more so particularly when there is no history of trauma in such a patient with both extra- and intracranial collections.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

REFERENCES

1. Rengarajan S, Krishnasamy L. Calvarial tuberculosis-a report of seven cases from a tertiary care hospital. *J Neurosci Rural Pract* 2023;14:123-6.
2. Raut AA, Nagar AM, Muzumdar D, Chawla AJ, Narlawar RS, Fattepurkar S, *et al.* Imaging features of calvarial tuberculosis: A study of 42 cases. *AJNR Am J Neuroradiol* 2004;25:409-14.
3. Diyora B, Kumar R, Modgi R, Sharma A. Calvarial tuberculosis: A report of eleven patients. *Neurol India* 2009;57:607-12.
4. Krishnan P, Sanyal S, Gupta D. Primary lytic calvarial tuberculosis: A report of two cases. *Acta Neurochir (Wien)* 2015;157:2223-5.
5. Mehrotra R, Sharma K. Cytodiagnosis of tuberculosis of the skull by fine needle aspiration cytology: A case report. *Pathology* 2000;32:213-5.

How to cite this article: Soundappan V, Nagarajan K, Sunitha VC. Tuberculous subdural empyema mimicking chronic subdural hematoma. *J Neurosci Rural Pract* 2023;14:554-5.