A Case of Neurosarcoidosis and Its Radiographic Findings

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Background

- Sarcoidosis is an inflammatory, immune-mediated condition with characteristic formation of noncaseating granulomas throughout the body, most prominently in the lungs, skin, liver, lymph nodes and eyes.[1, 2]
- Clinical features are nonspecific and typically dependent on where there is granulomatous invasion.[1]
- Neurosarcoidosis, granulomatous infiltration into the central and/or peripheral nervous system, presents with a variety of neurologic symptoms including facial nerve paralysis, vision loss, headache, and seizure.[3]
- These nonspecific findings can mimic various neurologic diseases which can delay early diagnosis and treatment.
- We present a case of neurosarcoidosis and demonstrate how radiographic imaging plays a vital role in diagnosis.

Objectives

- Present the clinical features of neurosarcoidosis.
- Discuss CT and MR imaging findings associated with neurosarcoidosis.
- Review the process for diagnosing and treating neurosarcoidosis.

HPI

- 25-year-old African American male with no significant PMH, FH and SH who presented as an outside hospital transfer with new onset seizure. No significant lab findings.

CT Chest Findings

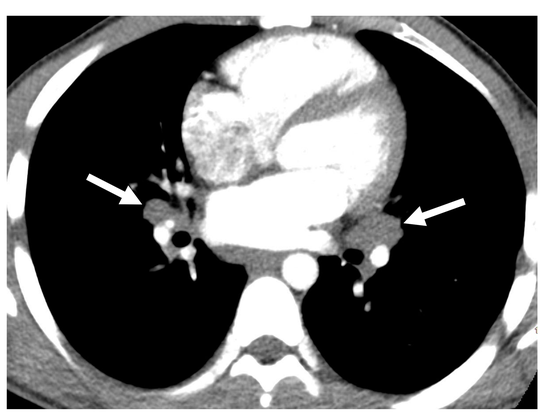

Fig. I: CT Chest with contrast revealed bilateral hilar lymphadenopathy (white arrows)

MRI Brain Findings

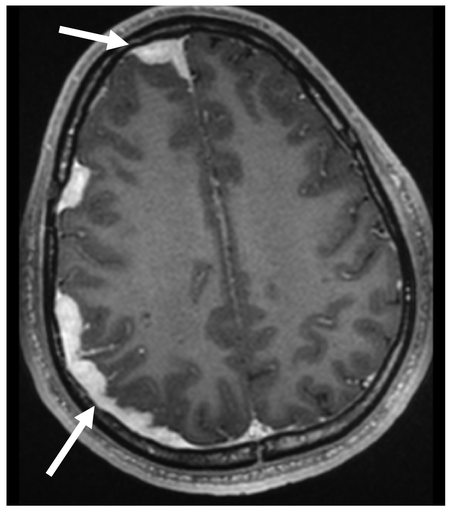

Fig II: Post contrast T1 weighted imaging noted pachymeningeal enhancement along the right cerebral convexity (white arrows)

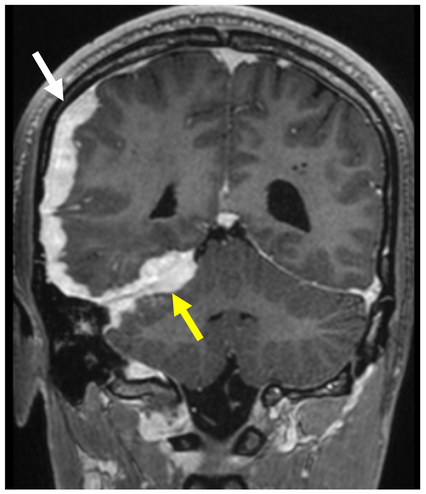

Fig III: Post contrast T1 weighted imaging showed pachymeningeal enhancement along the right cerebral convexity(white arrow) and right tentorium (yellow arrow)

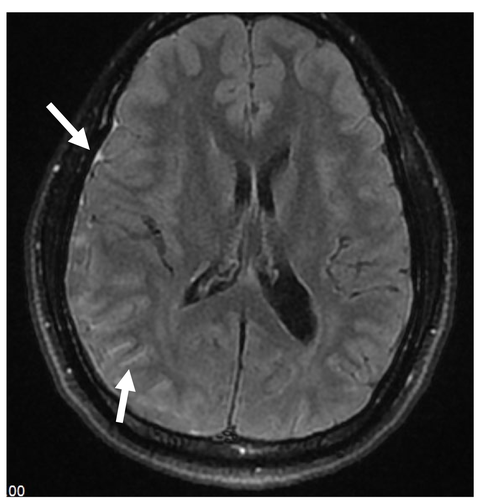

Fig IV: T2 FLAIR imaging demonstrated nodular leptomeningeal thickening and enhancement involving the right occipital convexity and right cerebellum (white arrows)

MRI Brain Findings

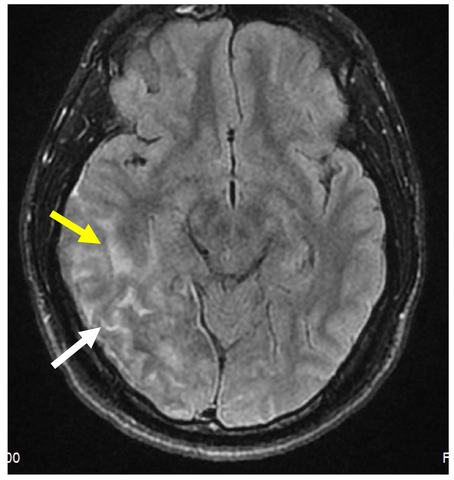

Fig V: T2 FLAIR imaging demonstrated similar findings as Fig IV (white arrow). Additionally, there is subcortical edematous changes involving the right occipitotemporal lobe (yellow arrow).

Discussion/Conclusion

- Neurosarcoidosis is a rare manifestation of sarcoidosis that commonly mimics various neurologic diseases.
- If left unrecognized by a clinician, it can progressively disseminate throughout the nervous system resulting in severe debilitation and morbidity.
- Through CT and MR imaging, clinicians can provide early diagnoses of neurosarcoidosis ultimately allowing for prompt treatment and improved patient outcome as demonstrated in this case report.

References

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