# Neurosarcoidosis Presenting as Trigeminal Neuralgia

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## Introduction

- Sarcoidosis is a noncaseating, granulomatous disease that primarily affects the lungs and skin, but can include other organ systems.
- Central nervous system (CNS) involvement is rare, affecting 5 to 13% of patients, with many cases being subclinical.

## Case Presentation

- 38 year old African American female, with a known history of sarcoidosis, presented with refractory trigeminal neuralgia.
- Magnetic Resonance Imaging (MRI) head was done, revealing a 1.5 cm x 0.6 cm x 1.1 cm mass in the left Meckel's cave (Figure 1).
- A partial craniotomy was performed and the mass was excised.

## Pathology and Laboratory Results

- Frozen sections showed noncaseating, granulomatous inflammation, suggestive for sarcoidosis (Figure 2).
- Tissue stains for acid fast bacilli and fungi were negative.
- Serology studies, including Human Immunodeficiency Virus (HIV), Quantiferon Gold, and Antinuclear Antibody (ANA) were negative. Angiotensin Converting Enzyme (ACE) on serum was normal.

## Clinical Outcome

- The patient's symptoms improved dramatically post operatively.
- The patient was dismissed with a tapering dose of steroids.
- Outpatient follow up with a rheumatologist was scheduled.

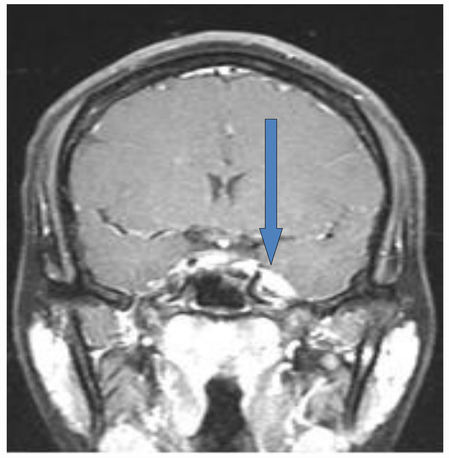


Figure 1: MRI T1 with gadolinium showing an enhancing lesion in the region of Meckel's cave.

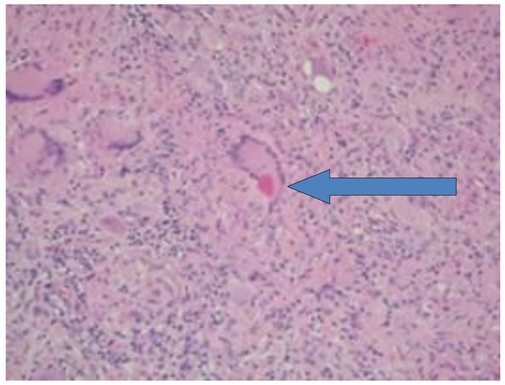
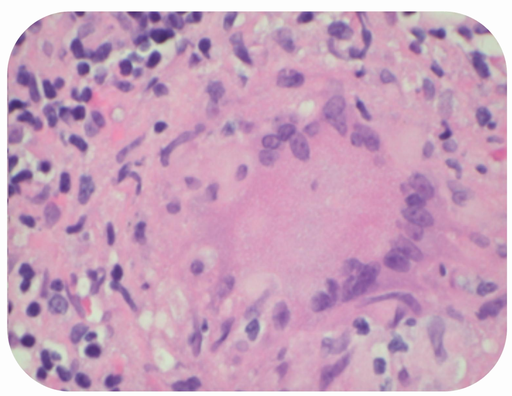


Figure 2: Low powered image (above) and high-power image (below) of inflammatory cells with multinucleated giant cells, characteristic of noncaseating, granuloma formation.



## Discussion

- Neurosarcoidosis presents within two years of the initial diagnosis of sarcoidosis, most commonly affecting cranial nerve (CN) VII.
- There are very few case reports of neurosarcoidosis presenting as trigeminal neuralgia, a unilateral, sharp, intermittent pain resulting from compression of one or more of the CN V branches.
- Laboratory evaluation is limited; analysis of cerebral spinal fluid (CSF) can help rule out infectious etiologies.
- ACE is elevated in the serum of 29-60% of patients, but absence of elevation does not rule out neurosarcoidosis.
- MRI is the most common imaging modality used to investigate possible neurosarcoidosis.
- The gold standard for diagnosis is histological examination.
- Treatment includes steroids or immunomodulators.

## Conclusion

- Although rare, neurosarcoidosis should be a differential diagnosis for a patient with known sarcoidosis presenting with neurological symptoms.

## References

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