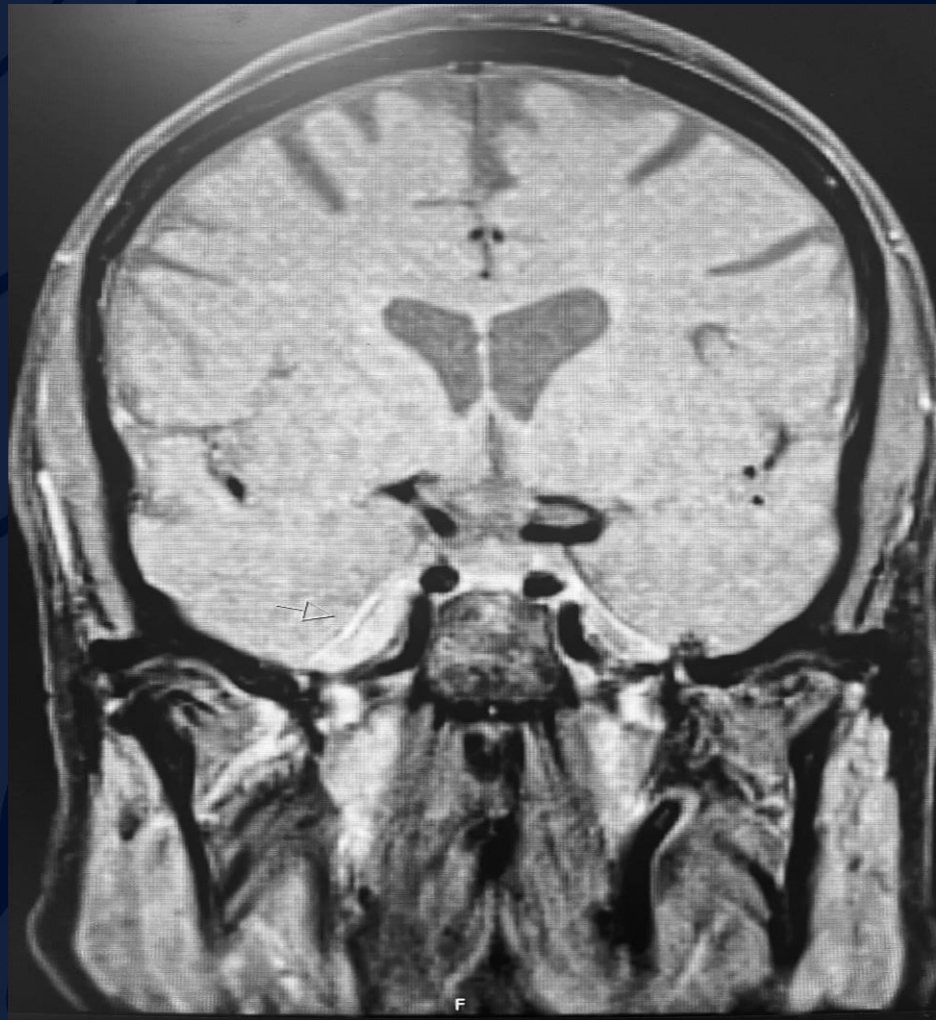


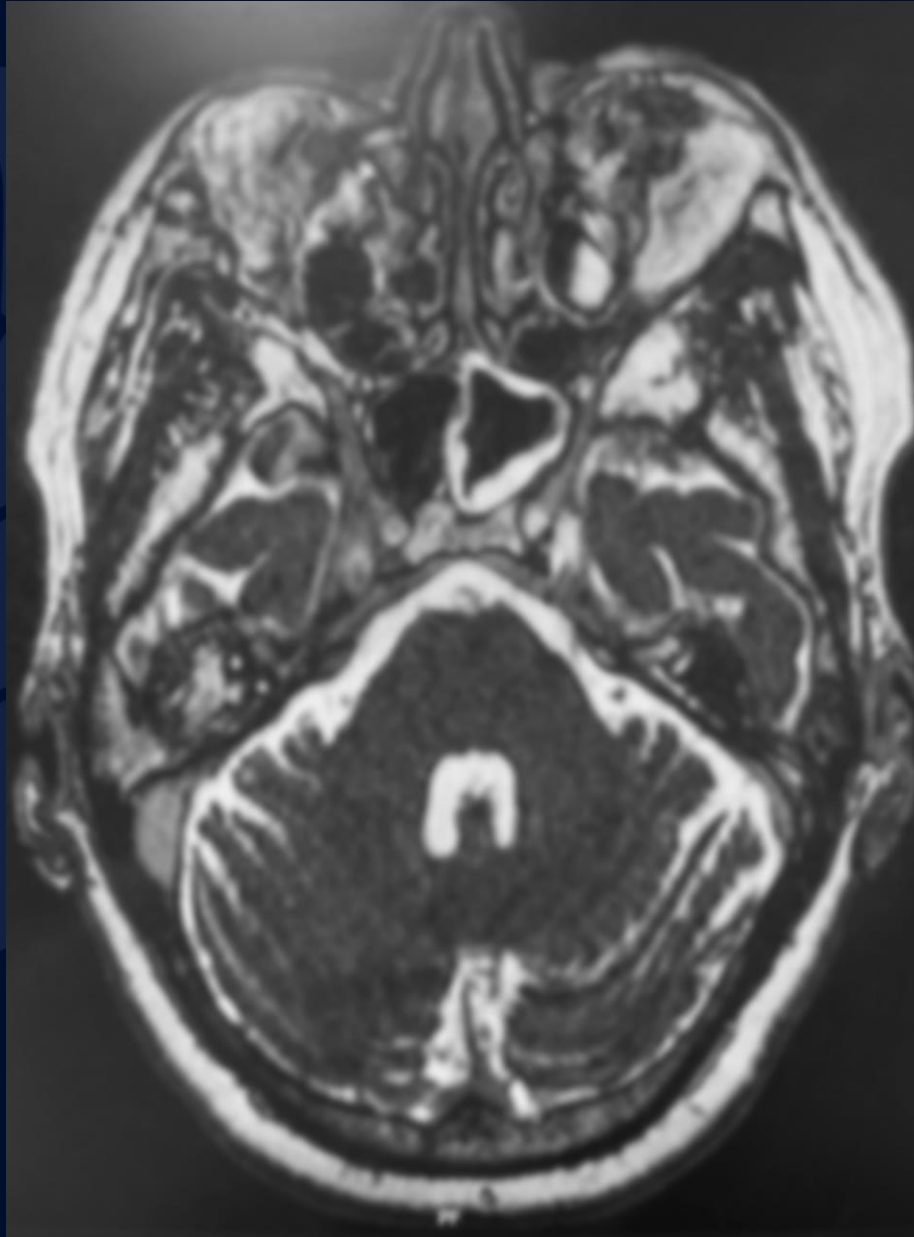
68-year-old female presenting
with altered mental status,
diplopia and right facial swelling

Obinna Ogbonna, MS3

T1 Contrast



T2 Axial

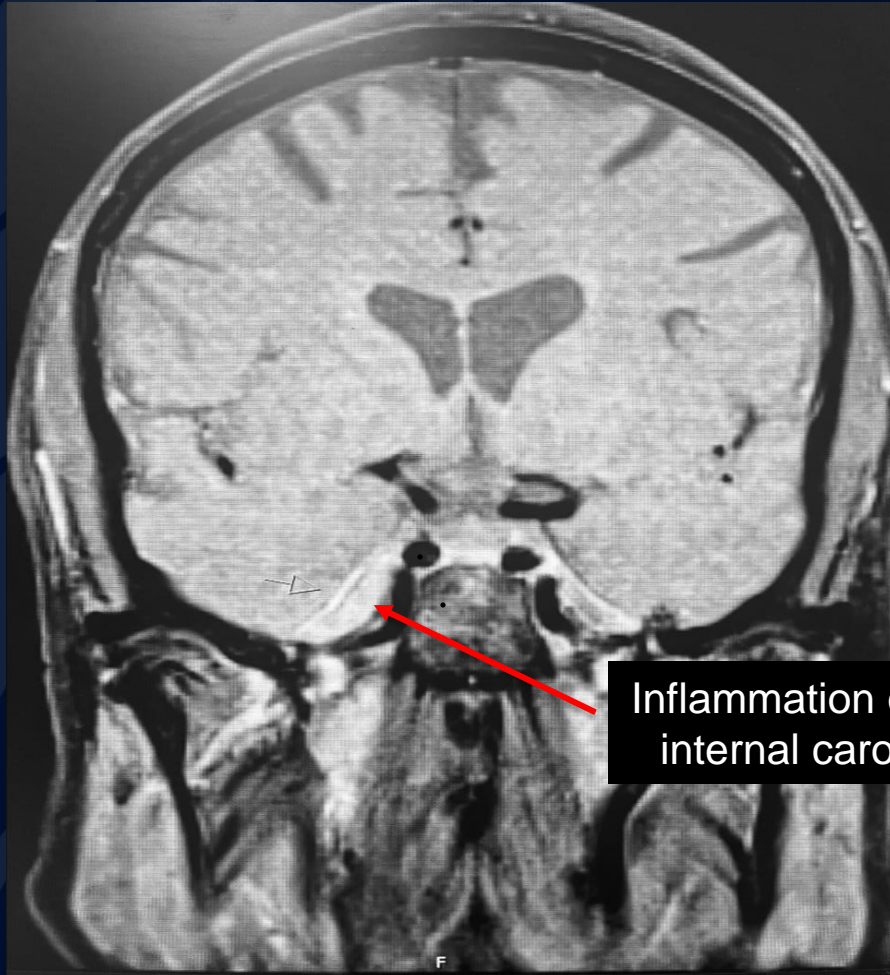




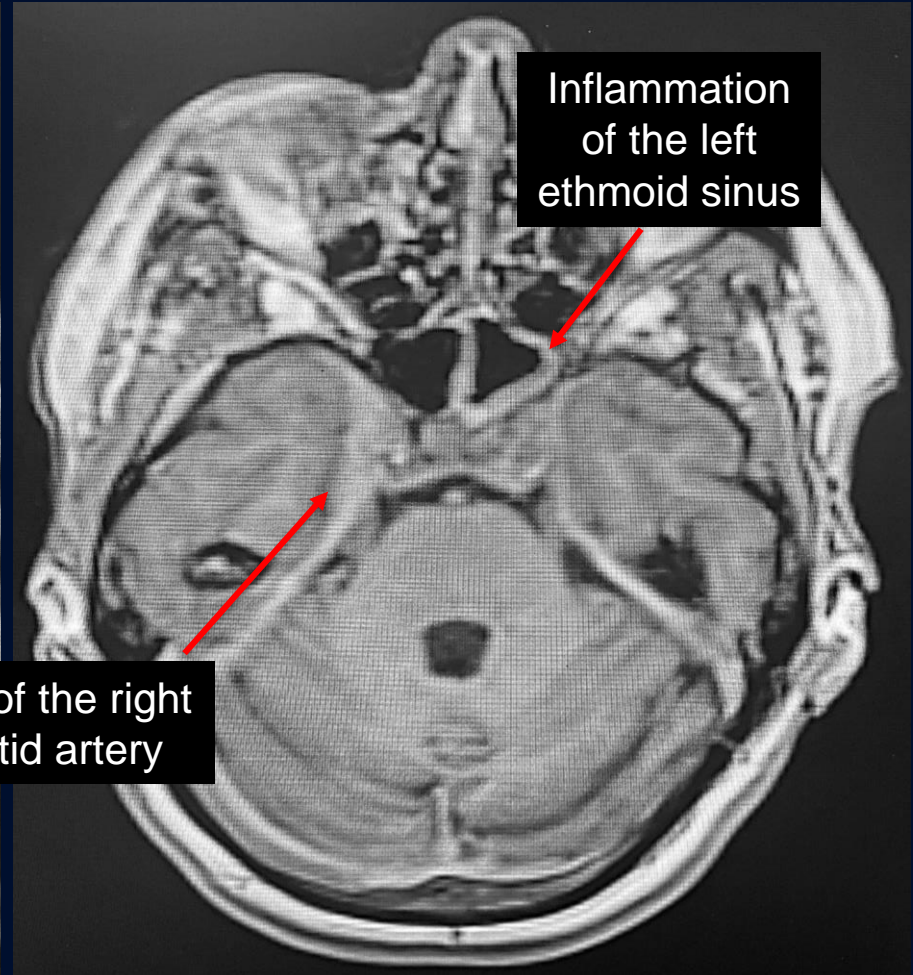
?

Tolosa-Hunt Syndrome

T1 Contrast



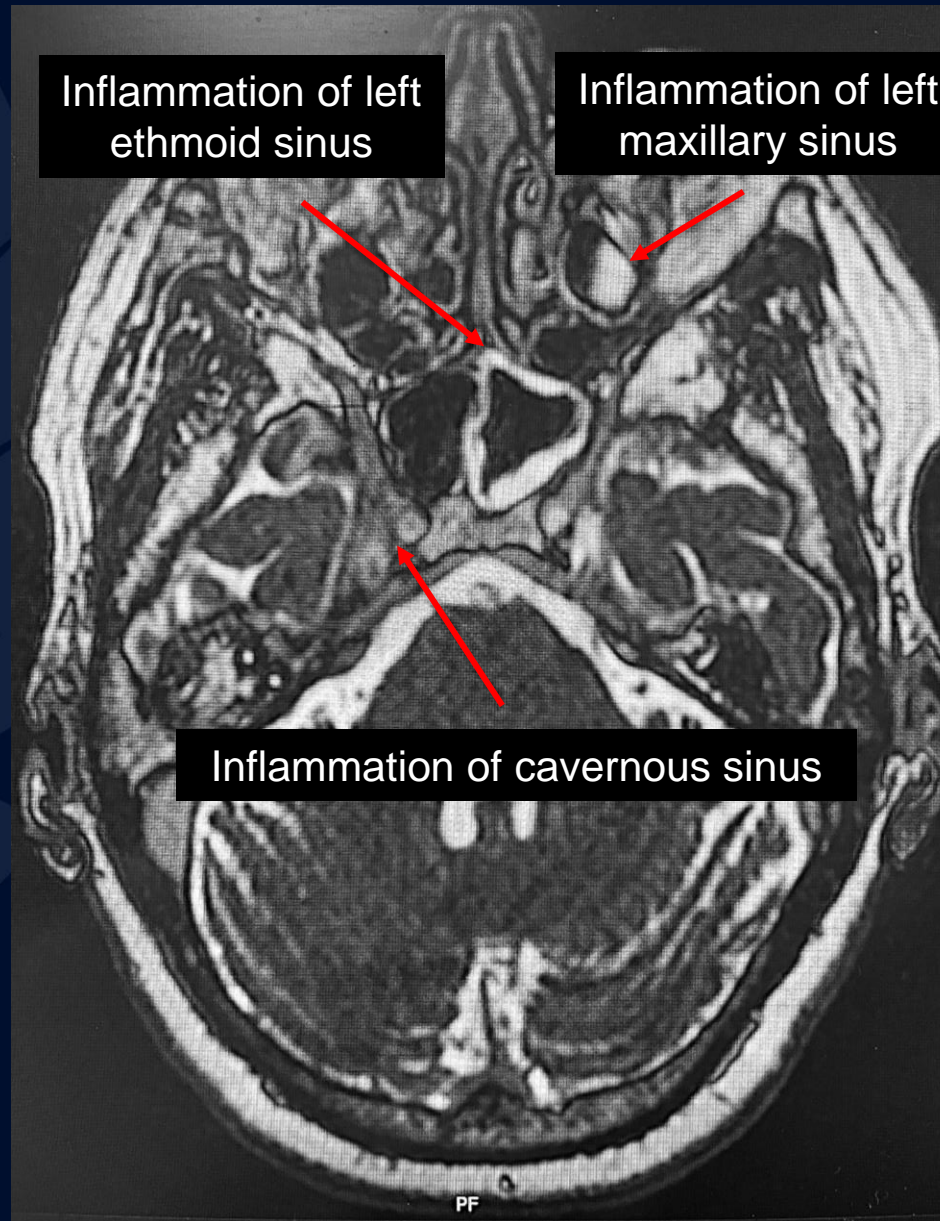
Inflammation of the right
internal carotid artery



Inflammation
of the left
ethmoid sinus

Note the relative superior positioning
of the right internal carotid artery

T2 Axial



Tolosa-Hunt Syndrome

Is a variant apical form of idiopathic orbital inflammation (pseudotumor) which extends through the orbital fissures and into the cavernous sinus; is a diagnosis of exclusion.

Epidemiology

- Very rare entity causing cavernous sinus syndrome. It occurs in 1 case per 1 million per year; mean age of onset is early 40s

Pathophysiology

- Idiopathic sterile inflammation of the cavernous sinus with a lymphocyte and plasma cell infiltration, giant cell granulomas and proliferation of fibroblasts. Inflammation produces pressure and dysfunction of the cavernous sinus structures which can include cranial nerves III, IV, VI as well as the superior division of cranial nerve V

Differential Diagnosis

- Pathological processes which may present with similar clinical features include meningioma, sarcoidosis, pituitary tumor, tuberculous meningitis, lymphoma, cavernous sinus thrombosis. Consider biopsy if there is concern for malignancy.

Treatment

- Glucocorticoids

Imaging Findings

CT

- Asymmetric enlargement (representing inflammation/swelling) of cavernous sinus soft tissue
- May show internal carotid narrowing depending on degree of inflammation

MRI

- T1 – hyperintense
- T2 – hyperintensity
- T1 with contrast – contrast enhancement

References

Amrutkar C, Burton EV. Tolosa-Hunt Syndrome. [Updated 2022 Aug 8]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2023 Jan-.

Kline LB, Hoyt WF. The Tolosa-Hunt syndrome. *Journal of Neurology, Neurosurgery & Psychiatry* 2001;71:577-582.

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