

# Vision Loss Secondary to Allergic Fungal Sinusitis

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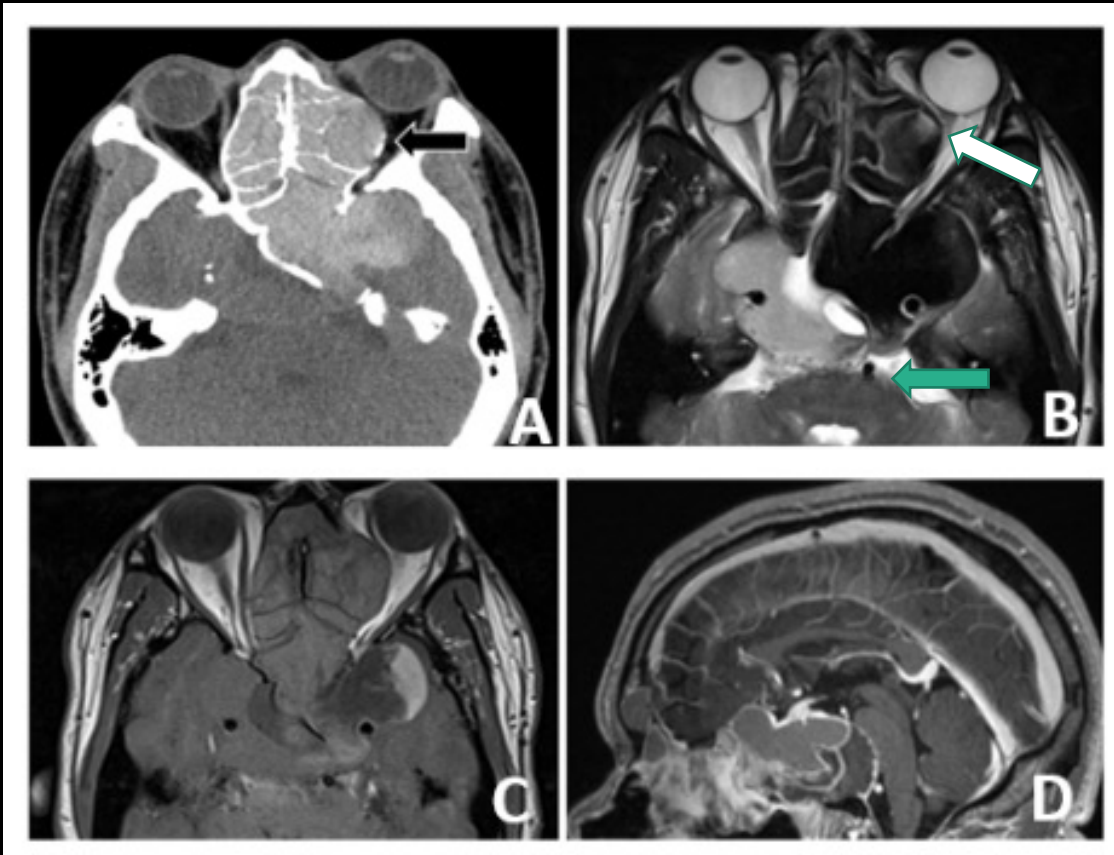


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# Clinical Presentation

- A 28-year-old male with a history of chronic sinusitis is presenting with progressive left vision loss.

# Imaging Discussion



- A. CT imaging showed expansile hyperdense tissue occupying the frontal and sphenoid sinuses, anterior and posterior ethmoid cells and causing sinus wall thinning and expansion and involving anterior, middle, and posterior fossa as well as bilateral orbits left greater than right.
- B. and C. MRI of the sinus showed T2WI signal void and T1 shortening in the sinuses which is probably due to high concentration of various metals and high protein and low free water content in allergic mucin. There is a mass effect on the left optic nerve (white arrow) and pons (green arrow).
- D. Post contrast images showed mucosal enhancement in sphenoid sinus which is prominent secondary to inflammation.

# Management and Outcome

- Oral steroid treatment was initiated with mild improvement. Frontal sinus exploration, bilateral total ethmoidectomy, bilateral maxillary antrostomy with removal of tissue, bilateral sphenoidotomy with removal of tissue and bilateral orbital decompression were performed.
- Pathology showed 'Edema and acute inflammation with numerous eosinophils'.
- After surgery he was on steroid taper and daily steroid irrigation with improving symptoms.

# Take Home Points

- Allergic fungal sinusitis is the most common form of fungal sinusitis. It is particularly common in warm, humid climates such as the southern United States.
- The underlying cause is thought to be a hypersensitivity reaction to certain inhaled fungal organisms resulting in a chronic noninfectious inflammatory process.
- Expansion of the sinuses is characteristic in allergic fungal sinusitis which can cause symptoms secondary to mass effect.
- Despite bone erosion in the sinus wall, the sinus mucosa is most of the time intact and prevents CSF leak and infectious spread to the brain.

# References

- Aribandi M, McCoy VA, Bazan C 3rd. Imaging features of invasive and noninvasive fungal sinusitis: a review. Radiographics. 2007 Sep-Oct;27(5):1283-96. doi: 10.1148/rg.275065189. PMID: 17848691.