Rhinogenic optic neuropathy with hemianopia caused by sinusitis

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Key clinical messages:

A patient complained of acute right vision loss and headache. A computed tomography scan revealed sinusitis in the right ethmoid sinus that was compressing the optic nerve and emergency endoscopic sinus surgery was performed.

TEXT

A 61-year-old man without a particular medical history complained of acute right vision loss and headache. The visual field of the right eye showed temporal hemianopia. Tenderness was noted in the right eye and the right eyelid was swollen. The right eyelid conjunctiva was hyperemic, but there was no abnormal eye movement or pupillary irregularity. A computed tomography scan revealed mucosal thickening and liquid retention in the right ethmoid sinus with accompanying destruction of the adjacent bone and compression of the optic nerve (**Picture A**: axial, arrow and **Picture B**: coronal, arrow). Emergency endoscopic sinus surgery was performed, but the visual loss did not recover completely.

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Rhinogenic optic neuropathy should be considered in patients with acute vision loss, especially when unilateral temporal hemianopia is observed (1). Early diagnosis and surgical intervention can help to prevent the complication of permanent blindness due to optic nerve injury (2).

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References

Reynolds S, Evans E. Acute Sphenoid Sinusitis Induced Blindness: A Case Report. The Journal of Emergency Medicine. 2012;43:e123-e124.

Otsuka M, Yunoki T, Ozaki H, Tachino H, Takakura H, Shojaku H, Hayashi A. Prognostic Factors for Post-operative Visual Acuity in Patients with Rhinogenic Optic Neuropathy. J Ophthalmol. 2019;2019:3417425.



