A Case of Isolated Sphenoid Sinusitis with Orbital Complication and Maxillary Osteomyelitis

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ABSTRACT

Aim: One should have a high index of suspicion to diagnose cases of isolated sphenoid sinusitis.

Background: Isolated acute sphenoid sinusitis is a rare clinical entity and accounts for less than 3% of all cases of sinusitis. Sphenoid sinusitis usually occurs in conjunction with infections of the other paranasal sinuses. Here, we report a case of acute isolated sphenoid sinusitis leading to orbital cellulitis and maxillary osteomyelitis.

Case report: Patient presented with history of sudden pain behind the right eye that progressed to loss of vision within 3 weeks. Within the next week, a draining sinus appeared in the cheek.

Treatment: Treatment included intravenous antibiotic, endoscopic ethmoidosphenoidotomy, and right total maxillectomy with orbital exenteration.

Outcome: Patient is performing his daily activities normally.

Conclusion: Isolated sphenoiditis with maxillary osteomyelitis is uncommon. It usually presents with subtle symptoms and illusive physical findings and, hence, a high index of suspicion is necessary. Nasoendoscopy with aid of computed tomography/magnetic resonance imaging (CT/MRI) sinuses allows for early diagnosis. Complications arise due to the close proximity of optic nerve to sphenoid.

Clinical significance: Early recognition of the disease is necessary to prevent persistence and progression of disease and avoid morbid complications.

Keywords: Complication, Headache, Isolated sphenoid sinusitis, Maxillary osteomyelitis.

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BACKGROUND

Isolated acute sphenoid sinusitis is a rare clinical entity and accounts for less than 3% of all cases of sinusitis. The common presenting complaint is headache and visual loss. Rarely, it leads to bilateral acute vision loss. Permanent blindness is reported in 10% of cases of acute sphenoiditis.

Sphenoid sinusitis usually occurs in conjunction with infection of the other paranasal sinuses. Here, we report a case of acute isolated sphenoid sinusitis leading to orbital cellulitis and maxillary osteomyelitis.
On postoperative period, regular dressing of wound and antral wash through palatal wound were done with diluted betadine.

Patient was discharged after 7 days, and called for regular follow-up.

DISCUSSION

The sphenoid sinus involvement in sinus disease has decreased over the years due to improvements in antibiotic therapy.4 Sphenoid sinus is lined with ciliated pseudostratified epithelium with fewer mucous-secreting cells as compared with the other paranasal sinuses. This contributes to fewer drainage problems and explains the low incidence of isolated sphenoiditis.5 The common presenting symptoms are headache and visual disturbances.6

Osteomyelitis of the craniofacial bones is a rare clinical entity. Osteomyelitis secondary to sinusitis is even more a rare occurrence. This generally results from inadequately treated infections of the sinuses and is aggravated by systemic diseases that decrease host defenses like anemia, malnutrition, radiation, malignancy, osteoporosis, Paget’s disease, and other conditions that decrease vascularity.5 In the present case, patient was a known uncontrolled diabetic, on insulin since the past 1 year.

Osteomyelitis of maxilla is much less frequent among all craniofacial bones because of extensive maxillary blood supply, thin cortical plate, and a relatively less amount of medullary tissue in the maxilla. However, in the discussed case, osteomyelitis was restricted to maxilla.5

Isolated sphenoid sinusitis is frequently misdiagnosed because of its vague symptoms and the paucity of clinical findings. The diagnosis is often delayed until the patient suffers neurological complications,6 as in the present case where optic nerve was involved.

CONCLUSION

Isolated sphenoiditis with maxillary osteomyelitis is uncommon. It usually presents with subtle symptoms...
and illusive physical findings and, hence, a high index of suspicion is necessary for diagnosis. Nasoendoscopy with the aid of CT/MRI sinuses allows for early diagnosis. Complications arise due to the close proximity of optic nerve to sphenoid sinuses.

**CLINICAL SIGNIFICANCE**

Early recognition of the disease is necessary for preventing persistence and progression of disease and avoiding morbid complications.

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**REFERENCES**