

Rhinocerebral Mucormycosis

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Case History

A 55 years old male Mr. R Y A presented with swelling on left side of face, pain in nose, swelling of left eye with diminution of vision, deviation of angle of mouth, headache, vomiting, altered sensorium and black discharge per orally. Patient was a known case of type 2 diabetes mellitus and systemic hypertension on irregular treatment. On examination he was febrile, pulse 100/minute, BP 110/100 mm Hg, respiratory rate 20/min, SpO₂ 95%. He had periorbital edema, proptosis of left eye, swelling of left half of face tenderness over left maxillary and frontal region was present. Black Escher was present on left side palate. On neurological examination he was drowsy and disoriented. Total ophthalmoplegia with proptosis of left eye was present. Supranuclear 7th Nerve, left 9th and 10th nerve palsy was present on left side. Planter reflex was bilaterally extensor. CVS, RS, and Abdominal examination was normal. Routine haemogram, renal and liver function were normal. Urine examination was positive for sugar and ketones. Random Blood



Fig 1:- Showing periorbital oedema, Proptosis of left eye, swelling of left half of face.

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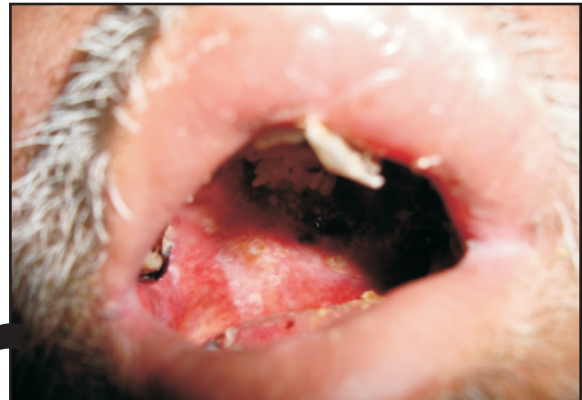


Fig 2:- Showing black eschar on left side of palate.

Sugar was 260 mg%. CSF examination showed proteins- 40mg%, glucose-65mg%, microscopy- 6cells/Cu.mm. all lymphocytes. Biopsy of the palatal lesion showed inflammatory cell infiltrate with fungal spores and scattered broad aseptate hyphae. MRI examination showed irregular mucosal thickening with bilateral maxillary and ethmoid sinusitis and partial thrombosis of cavernous sinus on left side. Mild proptosis of left eyeball and dilated inferior ophthalmic vessels. Patient was treated with IV Amphotericin-B, antibiotics (Ceftriaxone, Amikacin, metrogyl) Mannitol, Insulin, IV fluids.

DISCUSSION

Rhinocerebral mucormycosis is a rare opportunistic infection of sinuses and brain caused by

Saprophytic fungi. There are no good available data for the incidence of mucormycosis. Geographical distribution of this infection is worldwide. It commonly occurs in diabetics and immunocompromised patients.

PATHOPHYSIOLOGY

Saprophytic aerobic fungi of the phycomyetes class causes Rhinocerebral mucormycosis also known as phycomycosis. Three genes responsible are Rhizopus, Absidia and Mucor. Phycomyetes are ubiquitous in nature. They grow rapidly and can release large number of airborne spores. Thus they are frequently

found colonising oral mucosa, nose, paranasal sinuses and throat but do not cause disease in immunocompetent persons. Rhizopus species have active ketone reductase system that enables them to thrive in acidic pH and glucose rich medium. In most cases fungi gain entry via inhalation of spores in upper airways. Infection spreads along vascular and nervous structure and infiltrates wall of blood vessels, can erode wall of sinuses and spreads into orbit & retro orbital area extending into brain. Invasion of nerves, blood vessels, cartilage, bones, meninges and perineural spread are common. Invasion can result in thrombosis and nerve dysfunction.

Case fatality can exceed 80% with cerebral involvement. Prognosis improves with early diagnosis, combined antifungal and surgical intervention and reversal of underlying disorder.

BIBLIOGRAPHY

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