



RHINOFACIAL CONIDIOBOLOMYCOSIS IN A DIABETIC MALE

Infectious Disease

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ABSTRACT

Fungal sinusitis may be caused by filamentous fungi like mucorales, aspergillus, entomophthorales. Mucormycosis, Aspergillosis have immunocompromising risk factors whereas entomophthorales can occur in apparently healthy person with significant soil exposure. It is a rare condition with involvement of mucosa of the nasal sinuses and facial soft tissues. There is no bony or angioinvasion seen with these fungi. It grows relentlessly and may mimic soft tissue neoplasm causing facial disfigurement.

KEYWORDS

Entomophthorales, Rhino-facial, Splendore-Hoepli Phenomenon, Itraconazole, SSKI

CASE DESCRIPTION –

A 66 years old gentleman presented with gradually progressive nasal stuffiness for 5 months duration. There was no history of bleeding per nose neither he complained any sinus pain, CNS or eye symptoms. He also noticed insidious onset skin thickening over bridge of nose which slowly worsened to involve central forehead (**Figure 1A**). It was erythematous, indurated and tender on palpation without any discharge. There was no antecedent history of trauma or manipulation. He is a known diabetic for 12 years and is on therapy with insulin and oral hypoglycaemic agent. He stays and works in rural India with significant soil exposure. Baseline HbA1C was 9.5%. Blood counts, LFT, HIV antibodies were all negative. CT paranasal sinus revealed bilateral maxillary (left more than right) and mild ethmoidal sinusitis (**Figure 2**). There was no evidence of osteomyelitis of maxillary bone or involvement of orbital structures. Nasal endoscopy showed gross narrowing of the cavity without any discharge or blood. Biopsy performed from soft tissue revealed granulomatous inflammation composed of lymphocytes, histiocytes and centre is having broad aseptate fungal hyphae with eosinophilic reaction suggestive of Splendore-Hoepli phenomenon (**Figure 3**). Skin biopsy done from forehead showed similar picture. Based on his clinical presentation, radiology and histopathology findings provisional diagnosis of entomophthoromycosis was made and he was initiated on itraconazole and saturated salt solution of potassium iodide. Fungal culture grew *Conidiobolus coronatus* after 3 weeks. Blood sugar was strictly controlled. Nasal obstruction, swelling were significantly improved after three months of therapy (**Figure 1B**) after 3 months of therapy. He is planned for 12 months of treatment and currently is under follow up.



Figure – 1 : (A) – before treatment (red arrow – biopsy site), (B) – after treatment

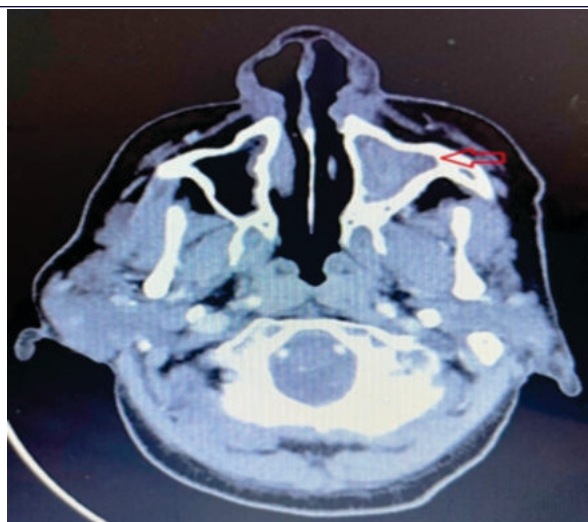


Figure – 2 : CT PNS showing opacification of left maxillary sinus (red arrow)

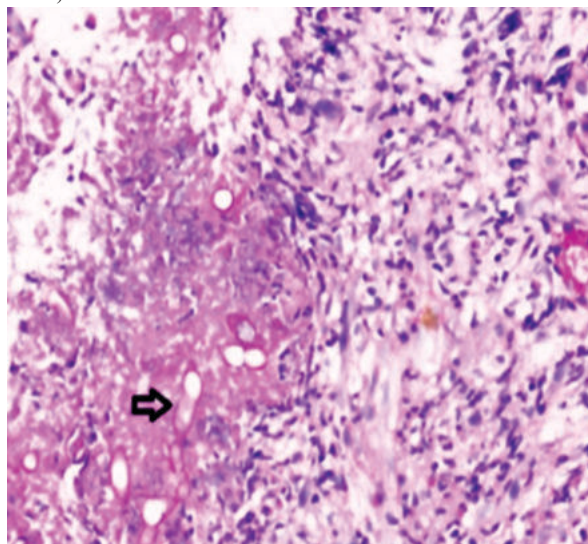


Figure – 3 : Fungal hyphae within eosinophilic material (Splendore-Hoepli phenomenon) surrounded by granulomas (PAS stain- 400×)

CONCLUSION –

Entomophthoromycosis may present either as subcutaneous zygomycosis caused by basidiobolus species or rhinofacial involvement caused by conidiobolus species. Rhinofacial conidiobolomycosis presents as sinusitis and facial soft tissue

swelling. Unlike mucormycosis it does not cause osteomyelitis and angioinvasion. It may increase in size and mimics soft tissue neoplasm. Histopathology showed eosinophilic reaction without invasion to bone or blood vessels as it is not a vasculotropic fungus¹. Treatment is also different than mucor and prognosis is good with timely diagnosis in endemic areas². Delay in therapy may cause permanent facial disfigurement.

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