An Exotic Case of Palatal Entomophthoromycosis due to Conidiobolus coronatus

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Introduction

Entomophthoromycosis is a chronic, inflammatory or granulomatous fungal disease that is generally restricted to subcutaneous or submucosal tissue

Two histopathological variants

- Basidiobolomycosis
- Conidiobolomycosis

CASE

Patient Details:
- 46 year old male for progressive dysphagia for 6 months
- He had consulted a private practitioner
- He was referred to us by a private practitioner as a case of intractable zygomycosis

Previous Investigation:
Magnetic Resonance Imaging (MRI) - A granulomatous lesion in the soft palate which was confirmed by video laryngoscopy

Previous Biopsy:
Aseptate hyphae with Splendore-Hoeppli material around the hyphae

Previous treatment details:
Treated with oral itracnaazole for 6 months
No improvement & condition worsening with dysphagia & loss of weight

Examination details at our hospital:
The patient was pale, cachectic and weighed 40 kilograms
Oral cavity examination showed diffuse swelling over soft palate, which was soft to firm in consistency with few small brownish black lesions

The nose was normal on clinical examination

Radiology (Repeat MRI scan) - reconfirmed the presence of ill-defined isointense soft tissue with its epicentre in soft palate

Histopathology - reconfirmed presence of broad aseptate fungal hyphae surrounded by granulomatous reaction and Splendore-Hoeppli phenomenon

Investigation at our hospital:

- Culture on modified Sabouraud’s dextrose agar (SDA) medium - after 3 days incubation showed white to cream coloured waxy colonies with radial grooves & satellite colonies which on further incubation developed into fine powdery colonies with white surface mycelium & conidiophores
- Culture on 2% SDA from primary culture after 48 hours
- Diagnosis made by demonstration of pauciseptate hyphae on microscopy & morphological identification on culture
- Demonstration of ballistospores and papillate spores clinches the diagnosis
- Conidiobolus incongrus and Conidiobolus lamprauges can be isolated from atypical sites and cause atypical disease

Molecular Investigation

- Sequencing of ITS region confirmed the identification as Conidiobolus coronatus (Accession number: MN421921)

Discussion

- Term Zygomycosis was used to describe infections caused by members of family Mucormycetes & Entomophthoromycetes
- The term is no longer used as it is taxonomically incorrect
- Further, infections caused by Mucormycetes are acute and life threatening while infections due to Entomophthoromycetes are chronic and insidious rarely causing mortality
- The family Entomophthoromycetes contains two genera namely Conidiobolus & Basidiobolus which are pathogenic
- Infections due to Conidiobolus spp. are called as Conidiobolomyicosis, and involve mainly the rhino facial tissue
- Lesions spread slowly to involve anatomically contagious areas. Very few cases of palatal Conidiobolomyicosis described to date
- Diagnosis made by demonstration of pauciseptate hyphae on microscopy & morphological identification on culture
- Conidiobolus incongrus and Conidiobolus lamprauges can be isolated from atypical sites and cause atypical disease

Conclusion

- We report an exotic case of Conidiobolomyicosis with palatal involvement due to Conidiobolus coronatus
- Remarkably the nose was found to be normal on clinical examination
- Although rare, Conidiobolomyicosis should be considered in differential diagnosis of young immunocompetent patients from tropical countries presenting with dysphagia and granulomatous lesion in the soft palate

References