



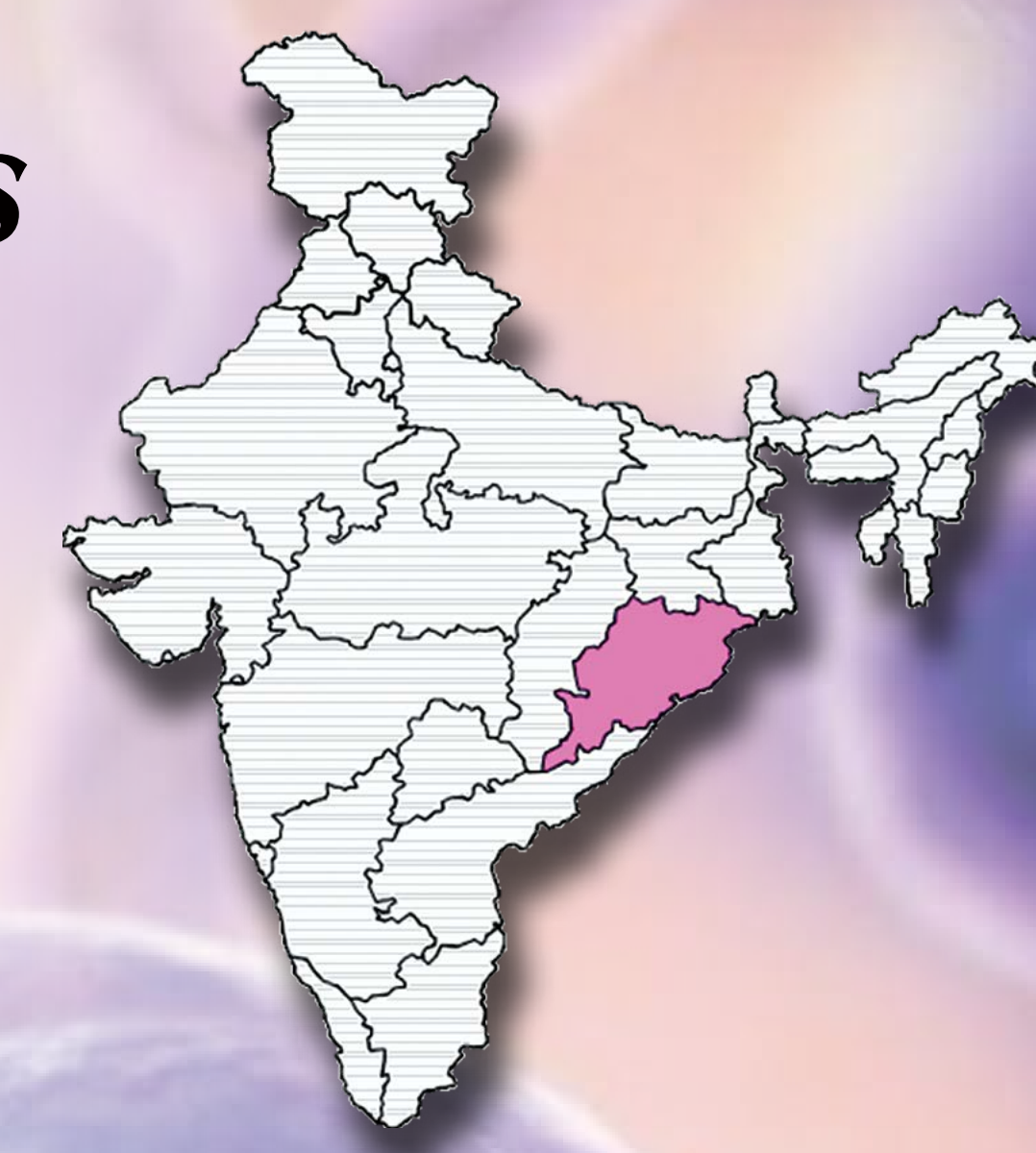
An Exotic Case of Palatal Entomophthoromycosis due to *Conidiobolus coronatus*

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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 itraconazole 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

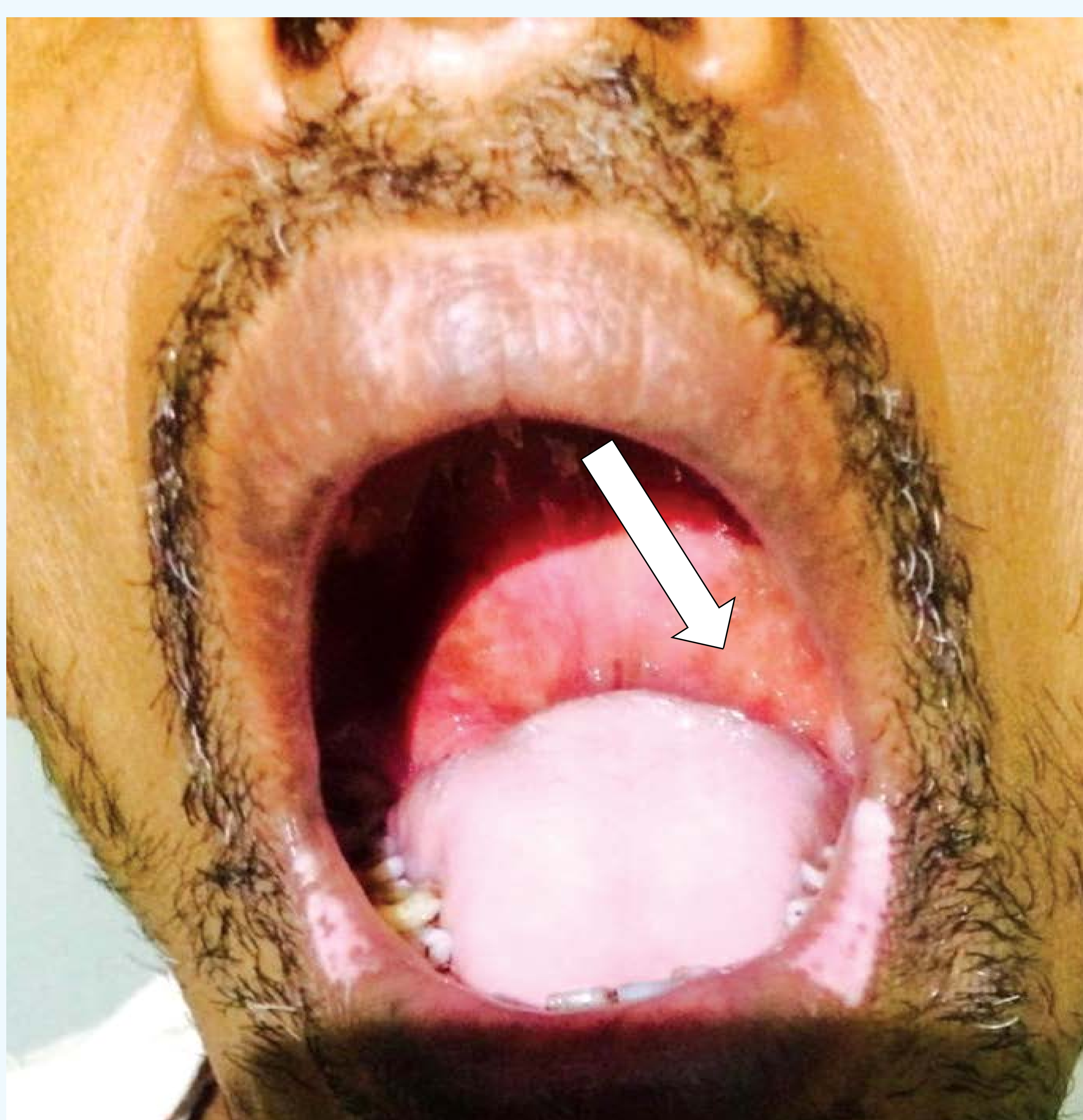


Fig 1. Palatal swelling

Investigation at our hospital

- **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

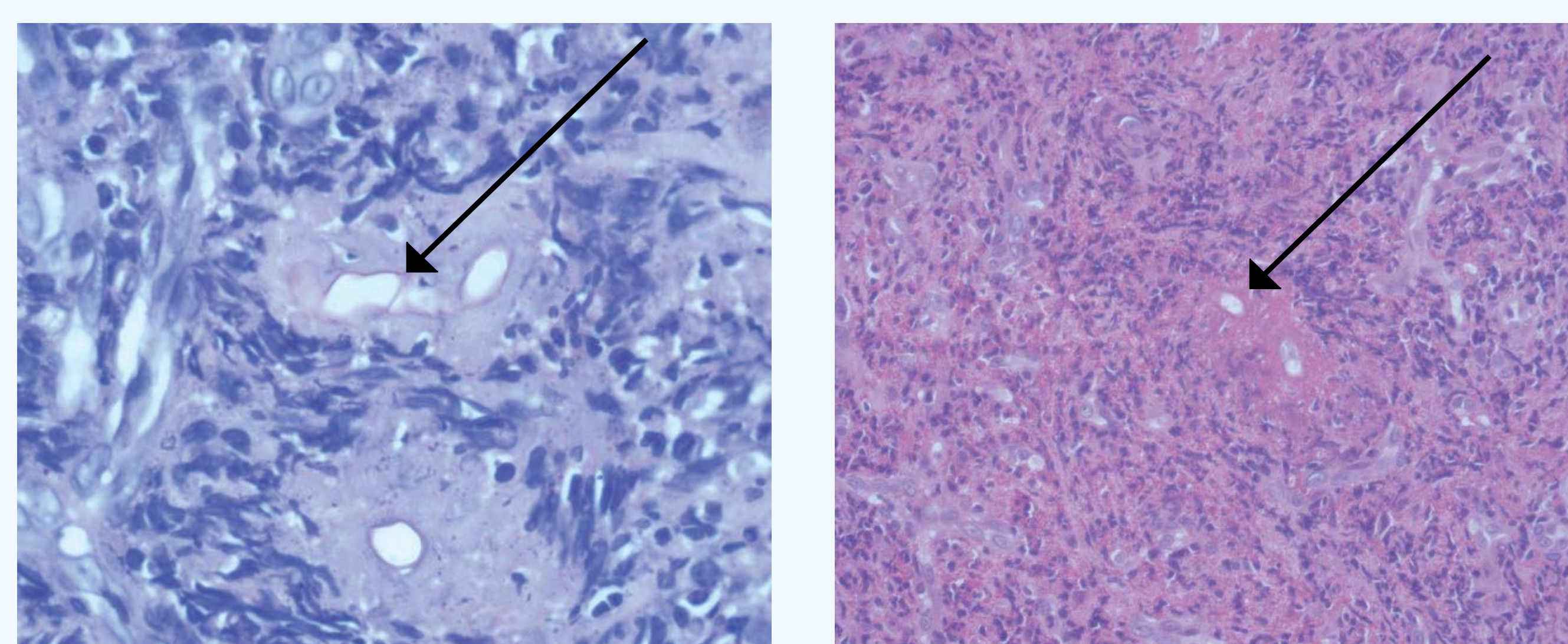


Fig.2: Periodic acid - Schiff (PAS) & Haematoxylin and Eosin (H&E) stained section of tissue showing broad pauci-septate hyphae surrounded by an eosinophilic sheath (Splendore-Hoeppli phenomenon)

- **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

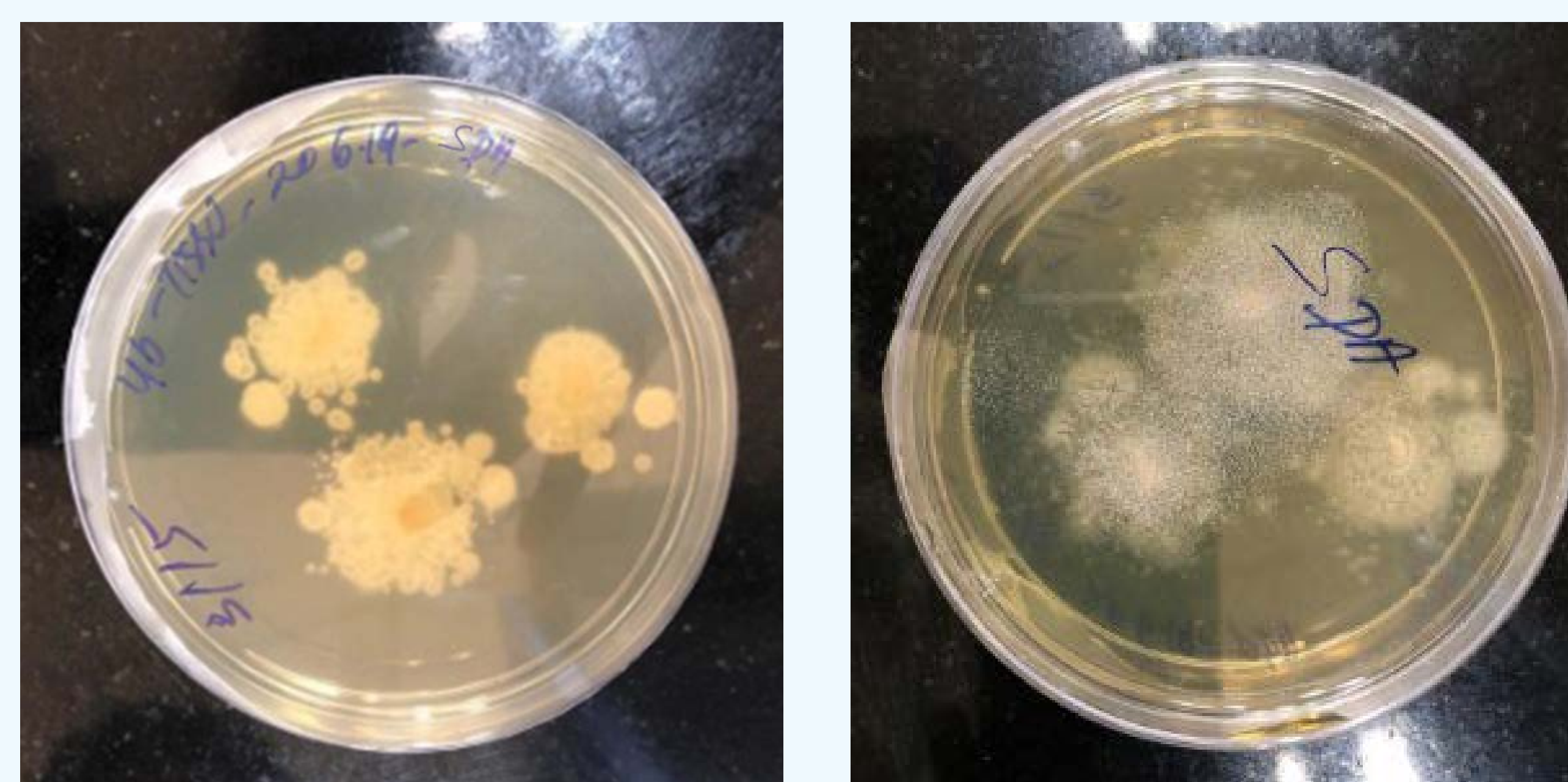


Fig.3 Yellow White colony of *Conidiobolus coronatus* on 2% SDA from primary culture after 48 hours

- **Lactophenol cotton blue preparation (LPCB)** showed broad pauci-septate hyphae with long conidiophores bearing single, terminal, spherical conidia with papillate base identified as *Conidiobolus coronatus*

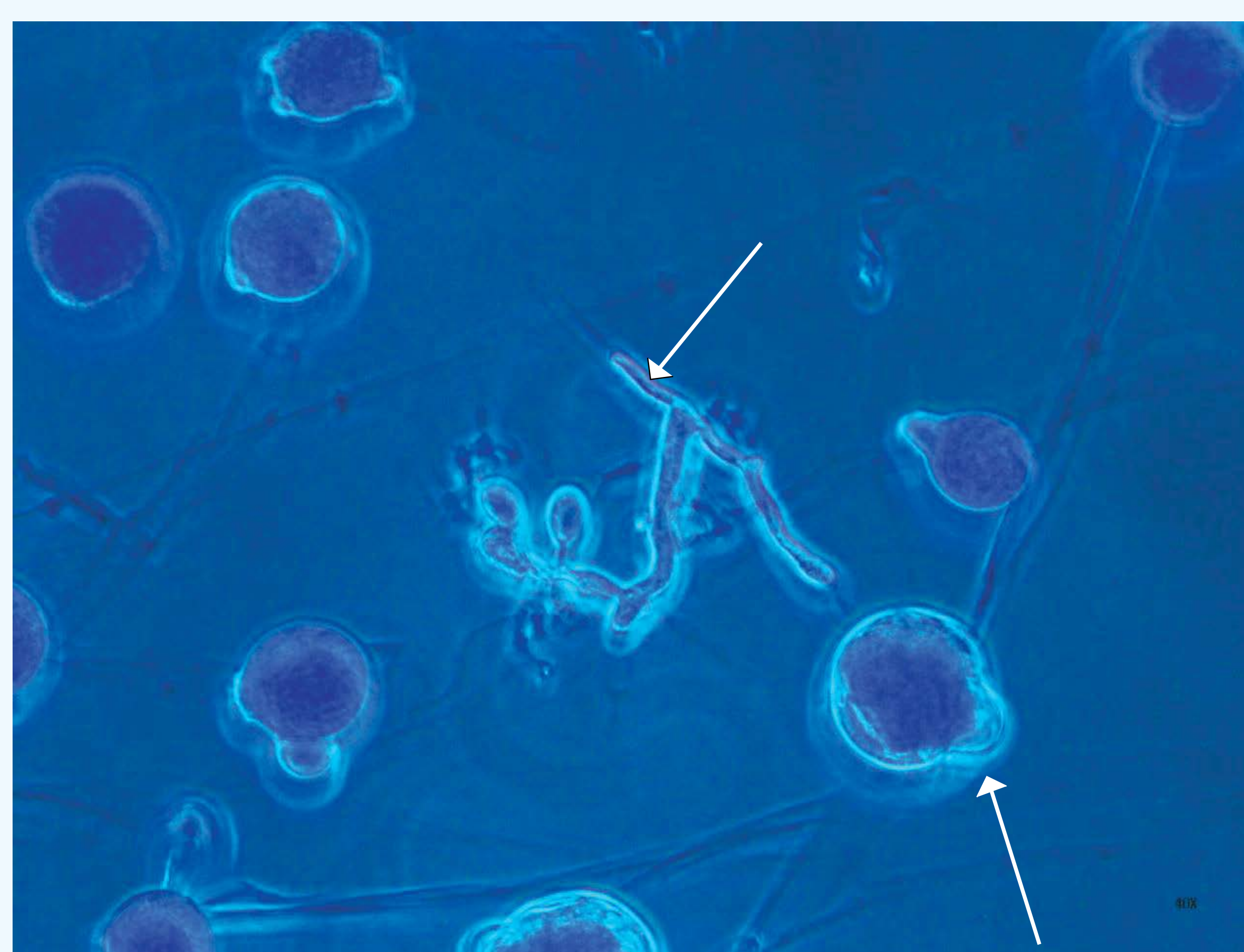


Fig 4. LPCB showing conidia with papillate base and pauci-septate hyphae

Molecular Investigation

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

Treatment

• Treatment:

- Saturated solution of potassium iodide (SSKI) 14 drops three times for 2 weeks in addition to oral itraconazole
- Patient improved symptomatically with reduction in dysphagia & started gaining weight within 2 weeks of therapy
- Discharged with advice to continue SSKI for 6 months but patient took for 1 month without any complications
- On follow up after 6 months patient relieved of dysphagia and regained his lost weight

Discussion

- Term *Zygomycosis* was used to describe infections caused by members of family *Mucormycetes* & *Entomophthoromycetes*¹
- The term is no longer used as it is taxonomically incorrect³
- 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 Conidiobolomycosis, and involve mainly the rhino facial tissue²
- Lesions spread slowly to involve anatomically contiguous areas. Very few cases of palatal Conidiobolomycosis described to date
- Diagnosis made by demonstration of pauciseptate hyphae on microscopy & morphological identification on culture
- Demonstration of ballistospores and papillate spores clinches the diagnosis
- *Conidiobolus incongruus* and *Conidiobolus lamprauges* can be isolated from atypical sites and cause atypical disease³

Conclusion

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

References

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3. Vilela R, Mendoza L. 2018. Human pathogenic Entomophthorales. Clin Microbiol Rev 31:e00014-18.