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सुधाकरराव कुलकर्णी स्मृती प्रतिष्ठान



Mucormycosis

म्युकर मायकोसिस
(Zygomycosis)

Presented By- Dr. Rujuta Ayachit



- हा दुर्मिळ परंतु गंभीर आजार आहे.
- Mucorale नावाच्या प्रवर्गातील बुरशीमुळे होतो.
- यात एकूण ९ प्रकार येतात. mucor, Rhizopus, mycorrhizopus etc.
- वातावरणात बुरशीचे कण- spores नेहमीच असतात. माती, कुजणारे पदार्थ, झाडपाला, लाकूड, अन्न, कम्पोस्ट खत इत्यादी



Fungal spores

हवेतून

नाकात \ फुफ्फुस

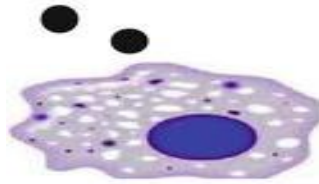
सायन्सेस

डोळ्यांची खोबणी

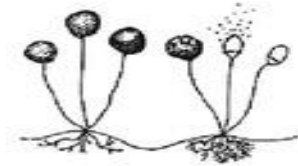
मेंदूकडे



Inhaled fungal spores trapped in the paranasal sinuses



Macrophages and PMN block replication (impaired in neutropenic patients or with corticosteroid, moAb therapy of graft vs host disease or hyperglycemia)



undetected fungal proliferation, angioinvasion, necrosis.
(fungal proliferation enhanced with iron overload)



Progressing fungal invasion, hemorrhage and necrosis detectable by CT scan



extensive necrosis limits drug delivery and immune response



Dissemination

प्रकार

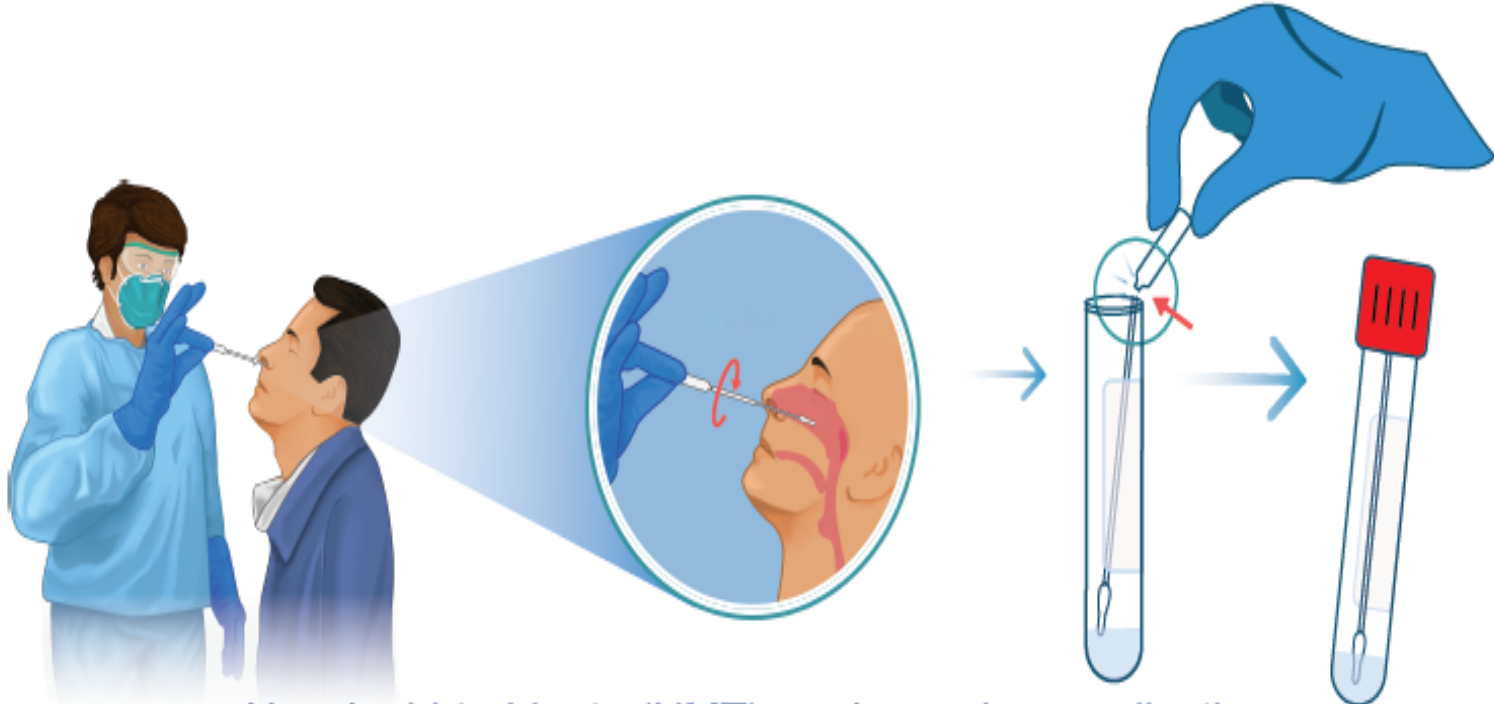
- Rhinoorbitocerebral (नाक-कवटी-मेंदू)
- फुफुसे
- आतडी- पचनसंस्था
- त्वचा
- किडनी
- रक्तातील..पसरलेला

प्रतिकारशक्ती कमी

- कॅन्सर पेशंट
- जास्त दिवस ICU
- जास्त काळ ऑक्सिजन
- Organ transplant
- अनियंत्रित डायबिटीस

लक्षणं

- नाक बंद होणे, स्त्राव , काळपट-लालसर
- चेहऱ्याच्या हाडांमध्ये, दातांमध्ये वेदना
- दात खिळखिळे होणे
- दृष्टी अधू होणे,
- डोळे लाल होणे
- डोकेदुखी



Nasal mid-turbinate (NMT) swab specimen collection

STEP 1

Tilt patient's head back 70 degrees.

Use a flocked tapered swab.

Some swabs come with a stopper, which indicates proper nasal insertion depth.

STEP 2

While gently rotating the swab, insert it less than one inch (about 2 cm) into nostril parallel to the palate until resistance is met at turbinates.

STEP 3

Rotate the swab several times against nasal wall.

Remove swab, insert it into the other nostril and repeat the process.

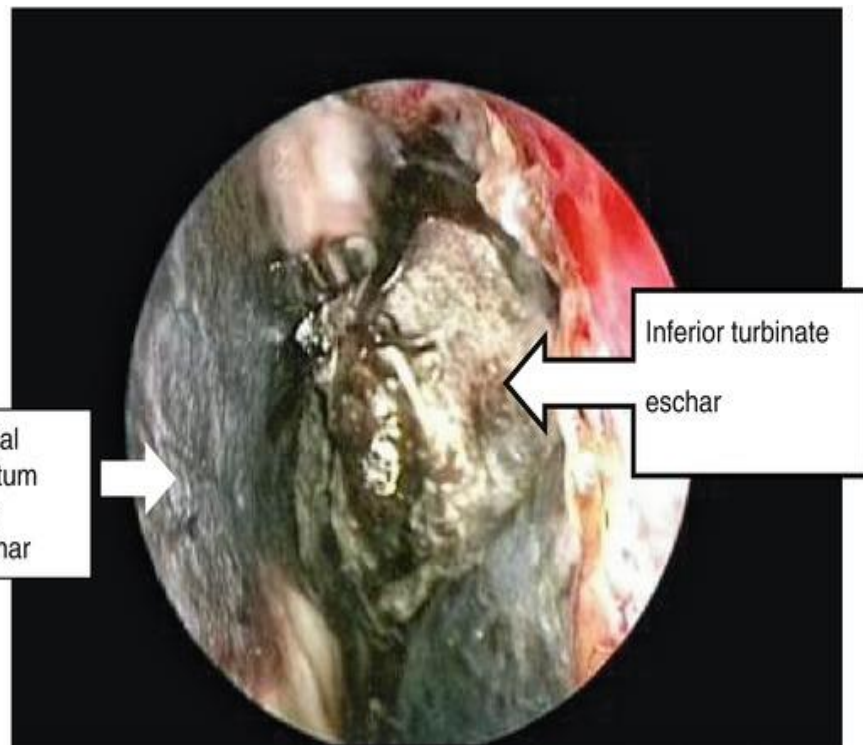
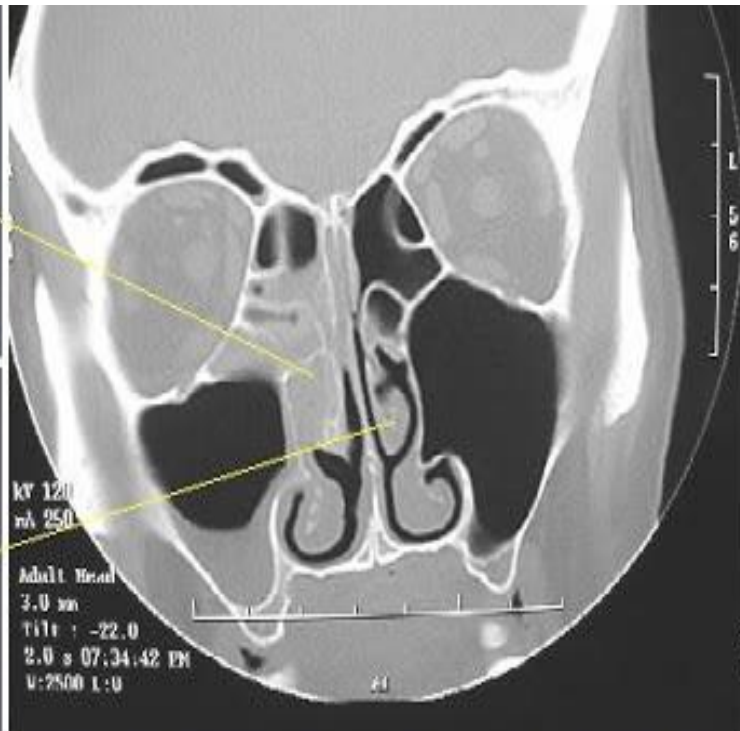
STEP 4

Place swab, tip first, into the transport tube provided.

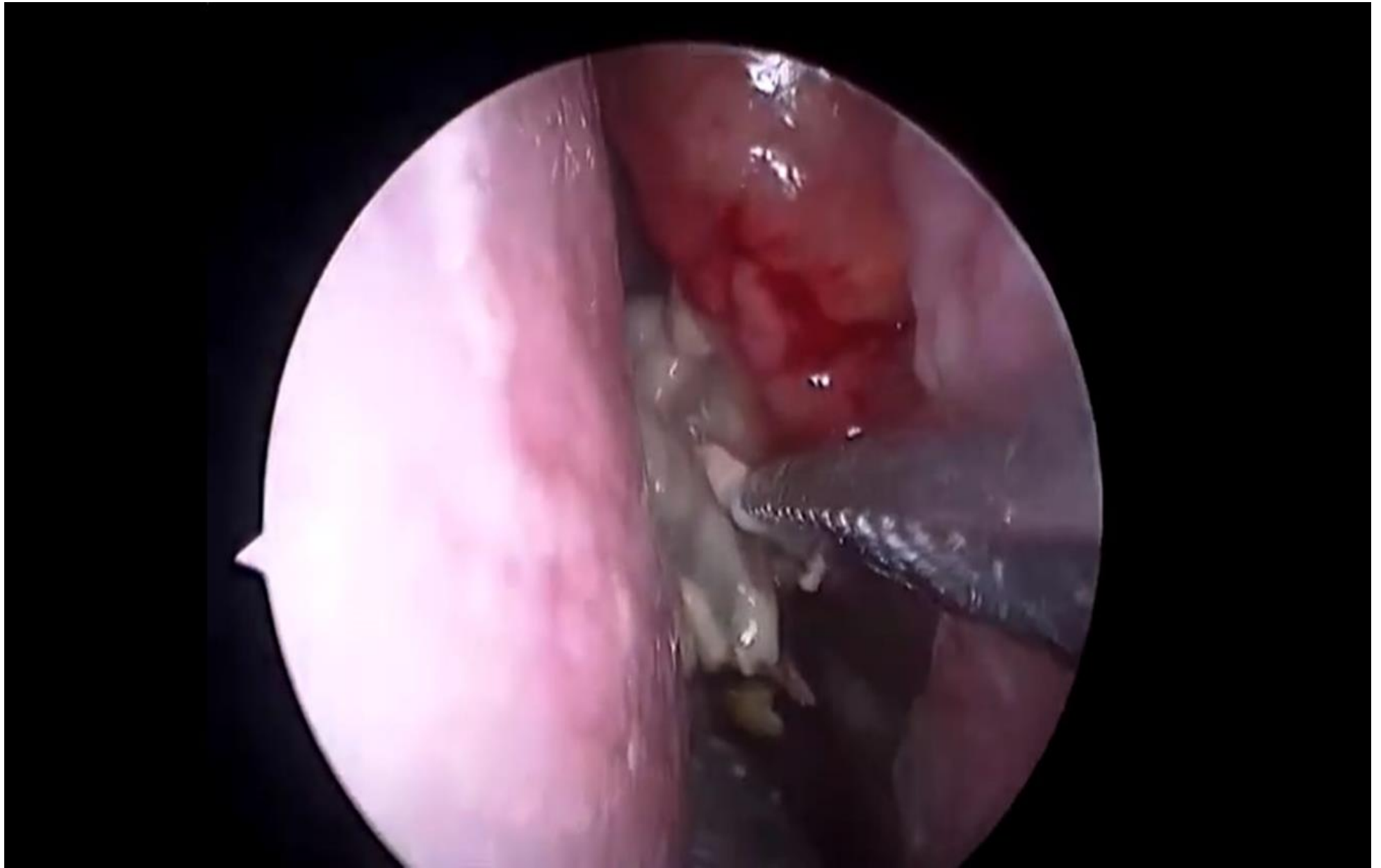
Once the tip is near the bottom, break the swab handle at the swab breakpoint by bending back and forth or cut it off with sterile scissors.

The swab should fit in the tube comfortably so that the cap can be screwed on tightly to prevent leakage and contamination.

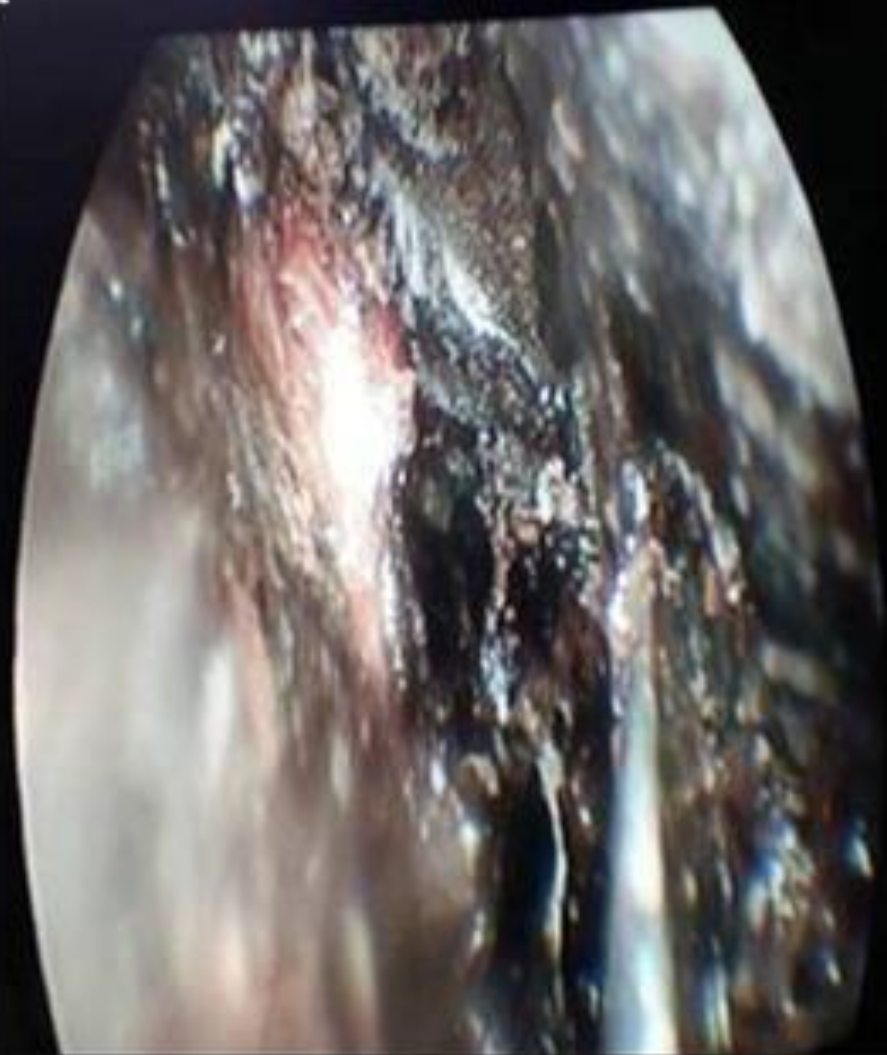
- Nasal endoscopy
- CT PNS
- MRI



Mucormycosis of the right ethmoid sinus and middle turbinate

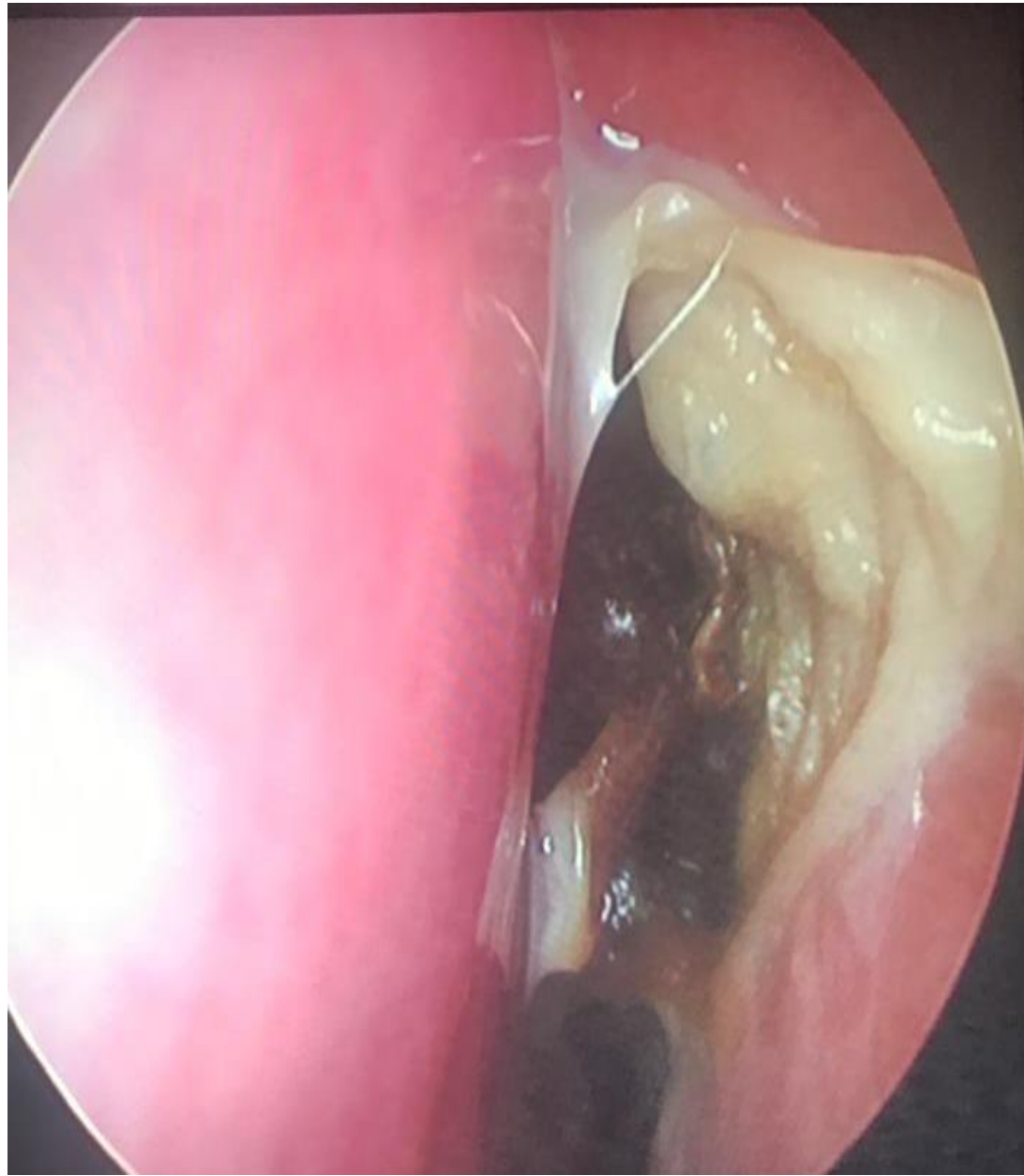


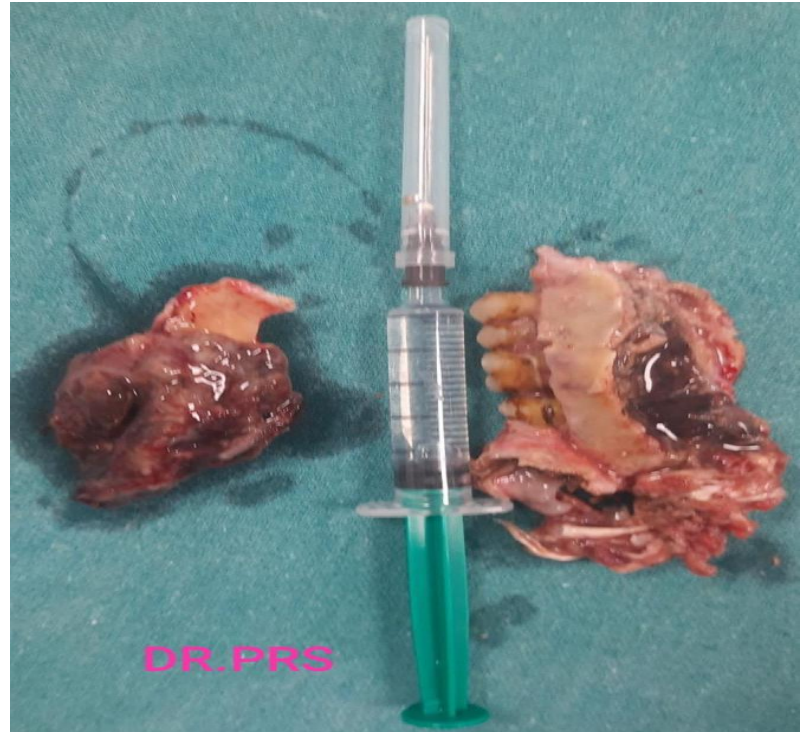
a



b







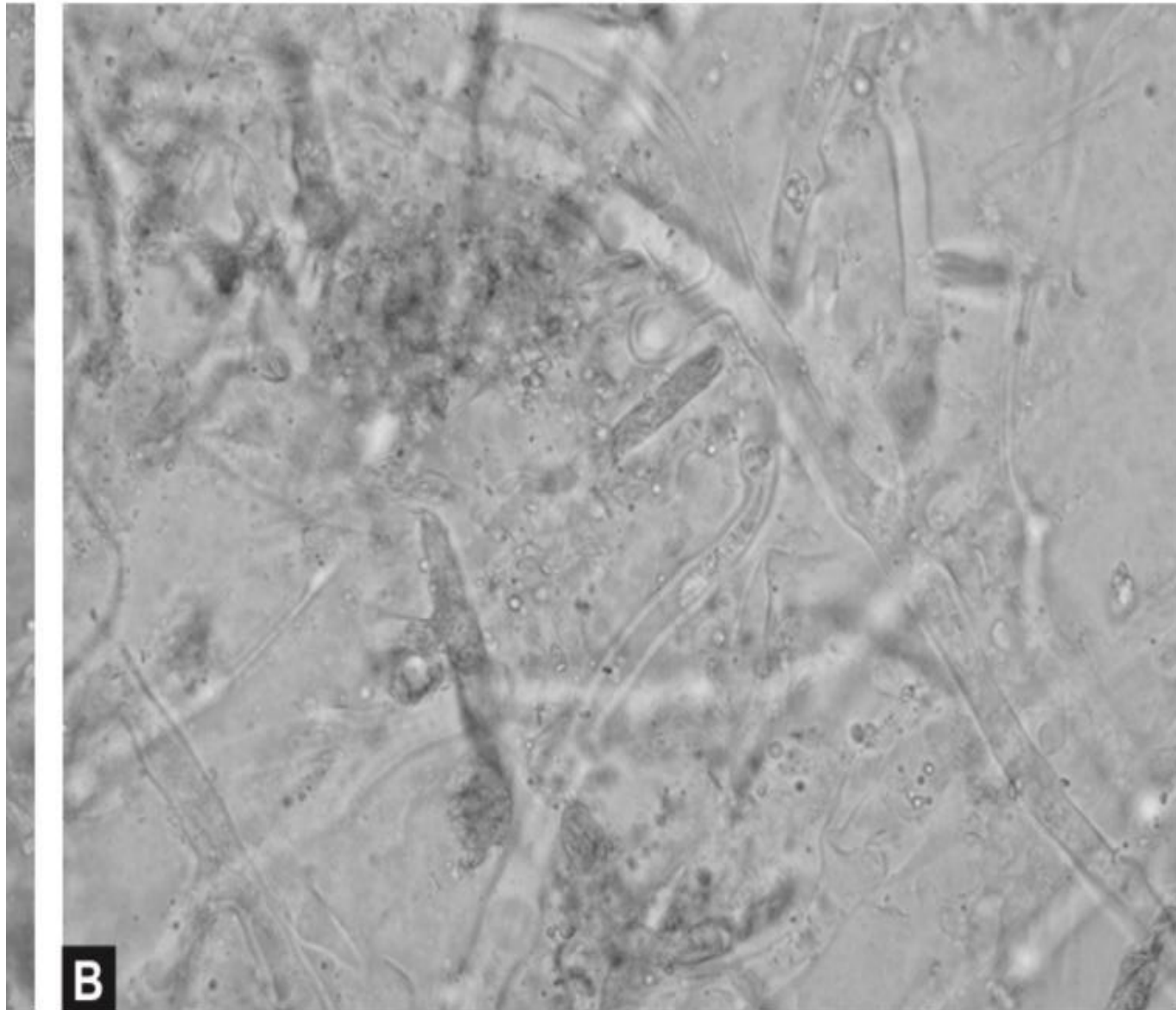
निदान

- High index of suspicion – संभव पडताळणे
- नाकातील स्त्राव
- बायोप्सी/ तुकडा

Lab methods –

- KOH mount Special stains....Gram, H&E, PAS etc.





B wide angle branching seen in wet mount (KOH \times 400).

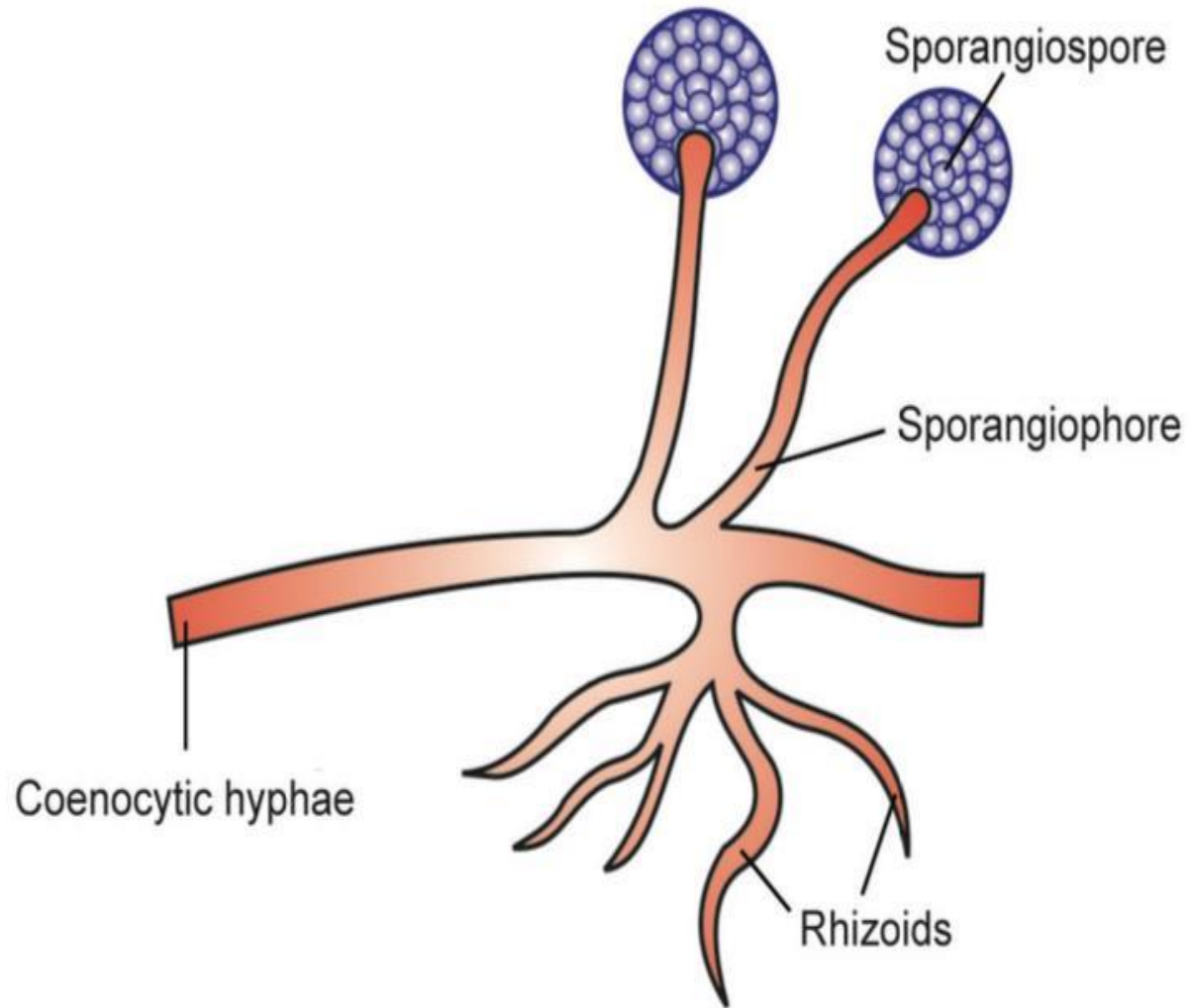
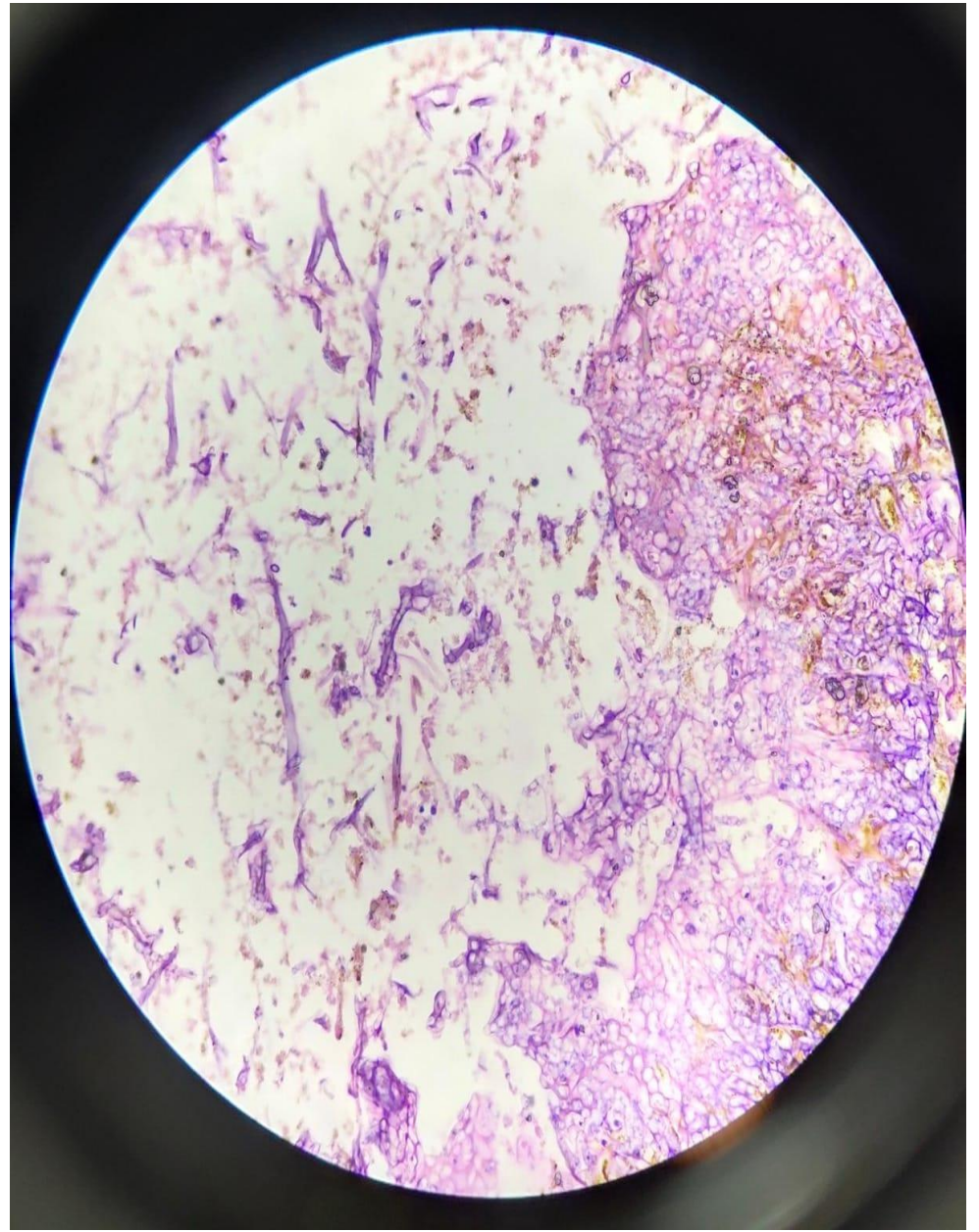
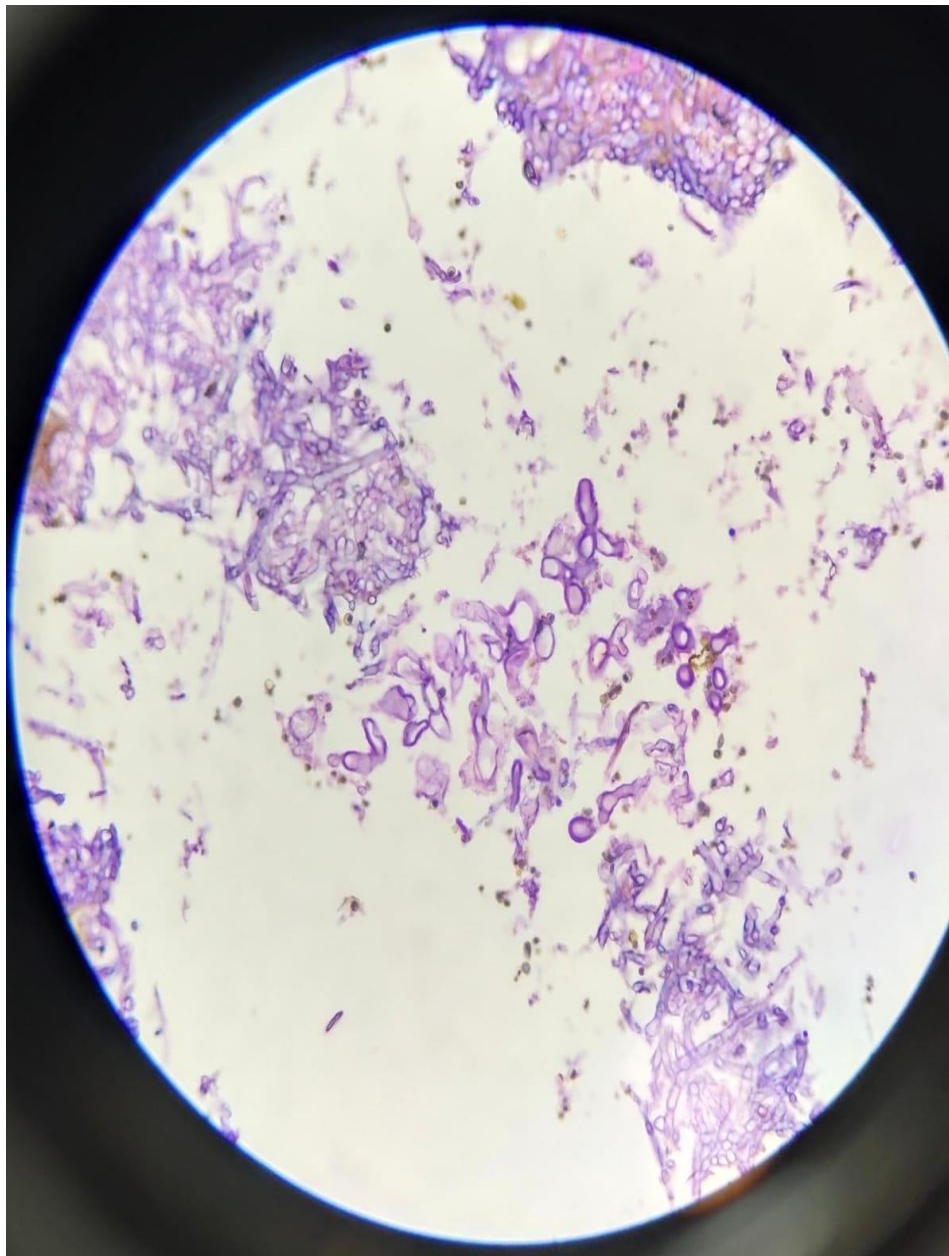
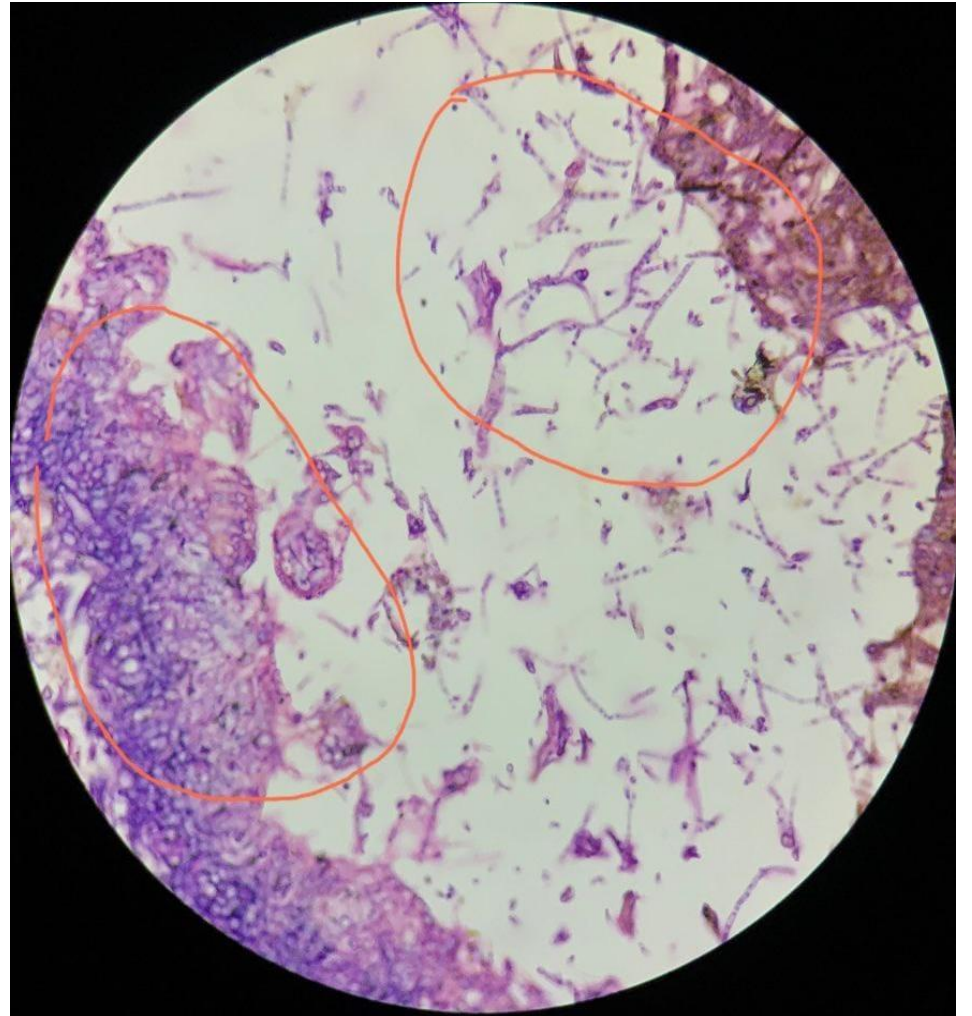
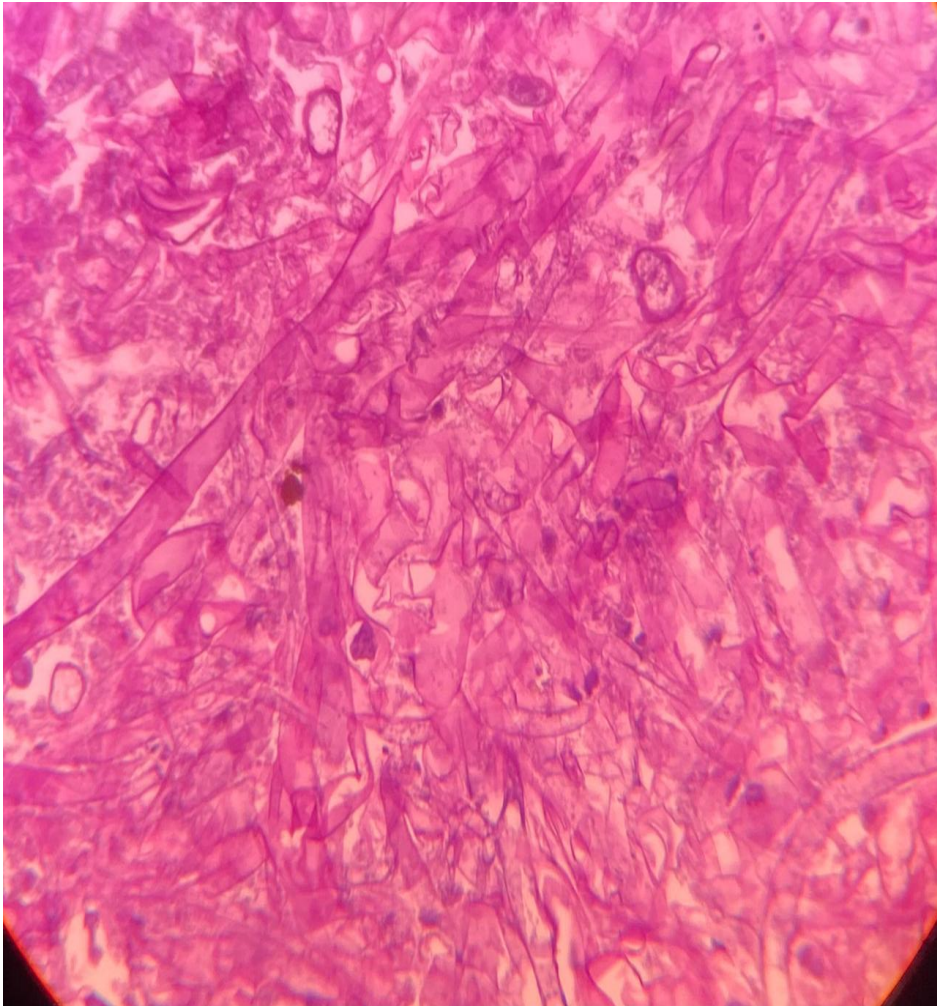
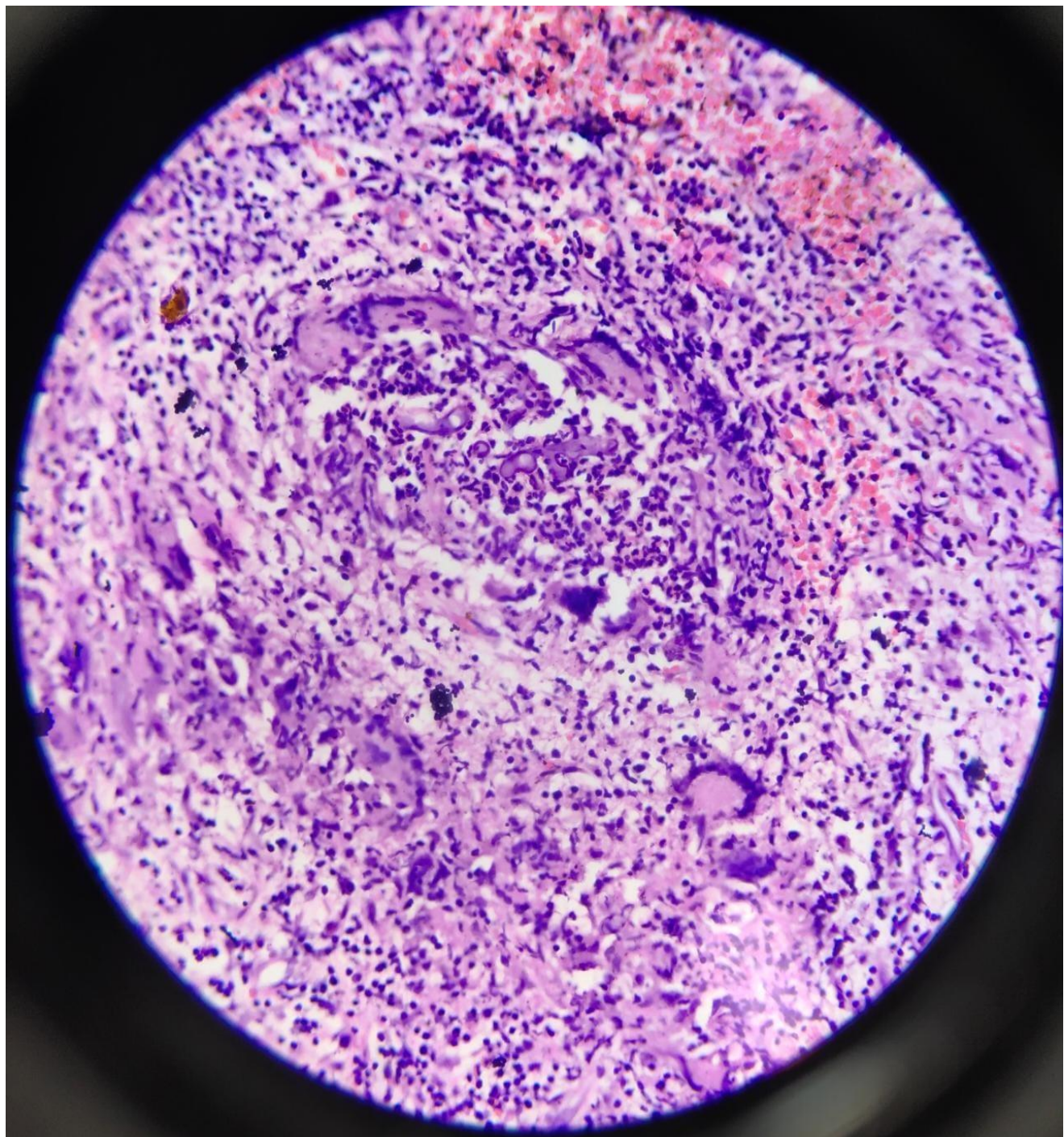


Fig. 26.3. Non-septate hyphae with rhizoids, sporangiophores and sporangia of *Rhizopus* species.







• सुरक्षित रहा...