



Rare clinical presentation of ocular rhinosporidiosis

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Abstract :

Rhinosporidiosis is a chronic granulomatous condition affecting the mucous membrane. The etiological agent is *rhinosporidium seeberi*. It is a water borne disease. We report a case of rhinosporidiosis who presented with conjunctiva and nasopharyngeal involvement.

Keyword : rhinosporidiosis, sporangia.

A 60 year old man presented to our out patient department in cornea services with history of swelling in the left upper eyelid for the past 20 years duration. It was painless and gradually progressive in nature. He was farmer by occupation. He gave history of swimming in the ponds in his village for 20 years. The lesion had recurred after an earlier excision done 3 years ago in Madurai. On examination, the unaided visual acuity in BE was 6/36 which improved to 6/18 with pinhole. RE anterior segment was normal except for lens changes. RE fundus media was hazy due to lens changes. LE showed lid mass in the upper palpebral conjunctiva measured 2.5 × 2.5 cm which was non tender. Lid margin was thickened with loss of eye lashes (Fig-1). There were multiple yellowish pin headed nodules on the surface (Fig-2). On eversion there were multiple, translucent cystic nodules on palpebral conjunctiva (Fig-3). There was no palpable regional lymph nodes. Anterior segment was normal except for lens changes. LE fundus media was hazy due to lens changes. ENT examination revealed pinkish, polypoidal vascular mass measuring 5 × 5 cm which was arising from the tonsillar fossa extending into the oropharynx (Fig- 4) Naso lacrimal duct patency was confirmed by syringing. Dacrycystogram showed no evidence of obstruction. Excision biopsy was obtained from the mass in the palpebral conjunctiva and specimen was sent to histopathological examination which showed squamous epithelium with thick walled sporangia containing eosinophilic material and spores. Stroma was infiltrated by chronic inflammatory cells. (Fig-5) Patient was referred to ENT department at MMC. The oropharyngeal mass was excised and cauterization done



Fig 1- Vascular mass with thickened lid margin and loss of eyelashes



Fig-2 Multiple yellow pin headed nodules



Fig -3 On eversion multiple translucent cystic nodules



Fig- 4 Mass in the oropharynx



Fig- 5 Thick walled sporangia which contains eosinophilic spores

Discussion :

Rhinosporidiosis is caused by fungi *rhinosporidium seeberi*. It is endemic in South India, Sri Lanka, South America, Africa^{2,3}. It is transmitted by exposure to the pathogen in the contaminated water. Ocular involvement is 5%.³ Rhinosporidiosis affects nasopharynx 70%, palpebral conjunctiva 20%, lacrimal sac 10%.^{1,2} The wall of lacrimal sac is lined by granulation tissue enclosing the typical cyst which fill the lumen.⁵

Modes of spread:

- 1 Direct transmission
- 2 Autoinoculation
- 3 Haematogenous
- 4 Lymphatic spread

- 1 Nasal
- 2 Nasopharyngeal
- 3 Ocular

- 4 Malignant Naso pharyngeal mass presents with nasal obstruction and epistaxis. On examination mass is polypoidal, reddish, granular, highly vascular bleeds on touch due to the release of angiogenetic factor from the mass.^{4,5}

The cardinal features of rhinosporidiosis are

- 1 chronicity
- 2 recurrence
- 3 dissemination.

The reasons for chronicity are

- 1 Antigen sequestration - The chitinous wall and thick cellulose inner wall surrounding the

endospores is impervious to the exit of endospore antigens from inside, and is also impermeable to immune destruction. However this sequestered antigen may be released after phagocytosis.

2 Antigenic variation - Rhinosporidial spores express varying antigens thereby confusing the whole immune system of the body.

3 Immune suppression - possible release of immuno suppressor agents

4. Immune distraction - Studies of immune cell infiltration pattern have shown that immune cell infiltration has occurred in areas where there are no spores, suggesting that these infiltrates reached the area in response to free antigen released by the spores. This serves as, a distraction.

5 Immune deviation

6 Binding of host immunoglobins

Treatment Medical – T.Dapsone 100mg / day for 6 months. It reduces the formation and maturation of the spores by inhibiting enzyme folate synthetase which is necessary for DNA synthesis. **Surgical** – Wide excision of base of the mass after ligation and cauterization with 2% silver nitrate or electrocoagulation.^{1,6}

Conclusion:

Ocular rhinosporidiosis contributes to 5% of the total incidence. This condition is often misdiagnosed as malignancy. Only histopathological examination can confirm the diagnosis for proper management of the condition. This case report is presented for its rarity.

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