

RHINOSPORIDIOSIS-A MYSTERIOUS DISEASE OF MAN

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ABSTRACT

Rhinosporidiosis is a non-contagious disease of mucous membranes of the body, caused by fungi *Rhinosporidiosis seeberi*, endemic in south-Asian countries like India, and Sri Lanka. Predominantly it affects the nose, nasopharyngeal mucosa, and ocular regions. Cutaneous spread of the disease is much rarer and is often misdiagnosed. Here we describe a case of 40-year-old male presenting with nasal obstruction and recurrent epistaxis for 1 year, and lesions arising from scalp, face and mouth. It is important for clinician to consider Rhinosporidiosis as a differential diagnosis in patients presenting with nasal growth and epistaxis.

Key words:

Nasal obstruction, rare cutaneous spread, misdiagnosed

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INTRODUCTION

Rhinosporidiosis is a prolonged painless disease. It predominantly affects nasalmucosa. This disease is more common in males than females in the ratio of 3:1. It's endemic in South East Asian countries like India and Sri Lanka¹. The presumed mode of infection is from aquatic habitat through traumatised epithelium. There was a lot of mystery surrounding the disease, including the causative agent, before further studies revealed it to be *R seeberi*. Even now, several aspects of the disease are unknown, and often misunderstood. Further research is needed, especially on mode of action and transmission of the disease.²

Case Report

A 40-year-old male, presented to our out-patient department with complaints of bilateral nasal blockage, and odynophagia; and swelling over right pre-auricular region since 6 months. He gave history of frequent episodes of epistaxis, nearly 2 to 3 episodes a month, since 1 year, and history of the lesions gradually increasing in size. He also complained of a similar swelling over the scalp. On further enquiry he elicited history of frequently bathing in ponds.³

Examination of the nose showed multiple pink-red polyps in bilateral nostrils forcing him to breathe through his mouth. The polyps also appeared to cause an external deformity over the nose. Detailed examination revealed them to be friable, strawberry red in appearance, and painless⁵.

Examination of the right ear showed a similar swelling in the pre-auricular region, non-tender, and bleeding on touch. On a

more comprehensive ENT examination, a polypoidal lesion was also found to be present at the base of tongue which moved with deglutition. These features aroused a suspicion of Rhinosporidiosis.



Fig 1 Depicting polypoidal mass in bilateral nostrils



Fig 2 Picture depicting pre-auricular lesion

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An inspection of the scalp showed comparable swellings, which gradually increased in size. The swelling were typically nodular, with central ulcerations, and no discharge. This led the possible diagnosis of Disseminated Rhinosporidiosis. The patient was also referred to the Department of Dermatology for the lesions over the scalp.



Fig 3 Depicting polypoidal lesion in the oropharynx



Fig 4 Depicting cutaneous lesion over scalp indicating spread of the disease

Routine blood investigations were done, and were found to be within normal limits.

An excision biopsy from a subcutaneous lesion over the scalp, and nasal mass from right nostril was taken, for wet mount biopsy in 10% KOH. While awaiting biopsy results, the patient was prophylactically started on oral antibiotics. Biopsy showed hyper-plastic epithelium, with numerous globular cysts of varying sizes representing immature and few mature sporangia, with chronic inflammatory cells and ruptured sporangia.⁶

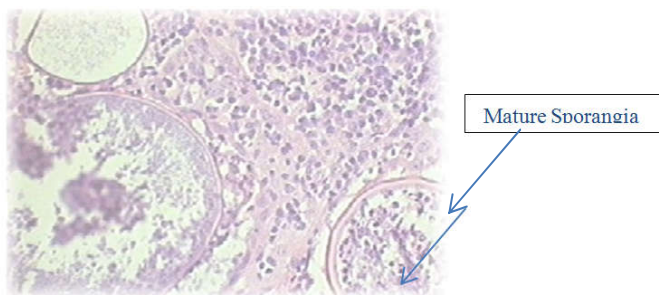


Fig1 Depicting hyperplastic epithelium containing mature sporangia

Once the diagnosis of Rhinosporidiosis was confirmed, complete removal of the lesions was planned. Total excision, and electrocauterization of base of lesions was done. Patient was post-operatively started on Tablet Dapsone (100mg) for 6 months.

Patient was counselled regarding the aetiology of the condition. Regular follow-up was done for the patient, and no recurrence was noted.

DISCUSSION

Rhinosporidiosis is a non-contagious, chronic granulomatous disease. It mainly involves the mucosal lining of nasopharynx, anterior nares, inferior turbinate, septum or nasal floor. Disease is common in India (more in males than females). It is caused by the fungus *Rhinosporidiosis seeberi*. Transmission may occur by direct contact with fungal spores through aerosols, infected clothing and swimming in torpid contaminated water. Disease progresses with local replication of *R.seeberi*, and associated hyperplastic growth of host tissue and localised immune response.

Patient usually presents with complaints of nasal obstruction and recurrent episodes of epistaxis.

Occasionally, the disease may spread subcutaneously, and cause similar polypoidal lesions in other parts of the body. In such cases the disease is frequently misdiagnosed, leading to delayed treatment.

On examination there is a gradually progressive mass arising from nasal mucosa extending into oropharynx. A typical lesion is fleshy, vascular, polypoidal with greyish white dots present on the surface of lesion.

On histopathology-large round chitinous structures filled with spore like bodies are seen.

Disease is diagnosed using a wet mount biopsy of lesion in 10%KOH. Biopsy shows presence of several spherical sporangia (5-10 micrometre) containing numerous sporangiospores (50-100 micrometre) in different stages of development. Agents like lactophenol cotton blue, PAS, Mucin can also be used⁴Molecular technique like PCR using *R.seeberi* specific primers can be done for confirmatory diagnosis.

Surgical excision and electrocauterization of lesion base is the mainstay of treatment. Medical management has not been proved very effective except the use of Dapsone (100mg) given orally, once daily for nearly 3-6 months⁷

CONCLUSION

Here we have discussed in brief about the disease, i.e., Rhinosporidiosis and its possible mode of transmission, clinical features and diagnostic approach against the disease.

Rhinosporidiosis continues to be seldom suspected and diagnosed in India. Due to the lack of awareness of the disease, it is often caught too late. The chronic nature of pathogen is another ramp which delays the diagnosis.

Prevention and protection is the best option for swimmers and people bathing in stagnant water. Safety measures need to be taken at all times.

It is imperative for the clinician to consider Rhinosporidiosis as a differential diagnosis in patients presenting with nasal growth and chronic epistaxis.

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