

Ocular Rhinosporidiosis in Rural Population: Case Series

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Abstract: Ocular involvement of rhinosporidiosis is seen in about 15% of cases and clinically appears as a freely mobile, granular, pink, fleshy sessile or pedunculated mass. The conjunctiva being the most common site of origin among the other sites. We present a case series of ocular rhinosporidiosis with varied presentation found almost exclusively among young male patients. The presentations of ocular rhinosporidiosis vary. Though the conjunctival origin is very common, it may not have a classic pink fleshy appearance at all times. A vascular/cystic painless conjunctival mass should also be considered as a case of rhinosporidiosis in prone areas.

Key words: conjunctival rhinosporidiosis; ocular rhinosporidiosis; Tamil Nadu

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I. Introduction

Rhinosporidiosis is a chronic granulomatous infection of mucous membranes (nasal, oral, ocular, genital and rectal) caused by *Rhinosporidium seeberi*.¹ This is an unusual pathogen which is difficult to culture and was previously considered to be a fungus and classified as fungal disease under ICD 10. It is now considered as a protist² classified under Mesomycetozoa “meso-in the middle of, “-myceto-fungi and “-zoeta” - animals. This is a heterogenous group of microorganisms at the animal fungal boundary. These are a small group of protists, which are mostly parasites of fish and other animals. The disease is endemic in South India, Sri Lanka, South America and Africa. It is presumed to be transmitted by exposure to the pathogen when taking bath in stagnant water pools where animals also bathe. Traumatic auto-inoculation from one site to another is common. It affects both adults and children. Floor and inferior turbinate are the most common sites of inoculation presenting as unilateral nasal obstruction, epistaxis or rhinorrhea. Ocular rhinosporidiosis most often presents as a polypoid mass of the palpebral conjunctiva.³

It may also present as a lacrimal sac diverticulum,⁴ recurrent chalazion,⁵ conjunctival cyst,⁶ chronic follicular conjunctivitis in contact lens wearers,⁷ peripheral keratitis,⁸ scleral melting,⁹ ciliary staphyloma¹⁰ or simulate a tumour of eyelid¹¹ or periorbital skin.¹² The diagnosis is confirmed by histopathology of the biopsied specimen. Definitive management is wide surgical excision with wide area electrocoagulation of the lesion base. Recurrences are rare.¹³

II. Case Series

A total of 5 cases were observed in our rural hospital located in Virudhunagar district, Tamil Nadu over a period of 4 months. The cases which presented to the hospital were found to be young males in the age group of 8-16 years. All of them presented with history of painless mass of short duration with varied appearance arising from conjunctiva. The patients did not give history of ocular trauma, swimming in stagnant water or water where animals bathe.

All patients underwent detailed history taking and clinical examination. Detailed history included duration of symptoms, personal habits, area of residence, bathing habits. Diagnosis was made on the basis of detailed history, clinical examination. All the cases were managed by surgical resection with cauterization of the base under local anaesthesia and the excised specimens were sent for histopathological examination for confirming the diagnosis.

With this diagnosis of ocular rhinosporidiosis in mind, the patients underwent detailed nasopharyngeal and genital evaluation to rule out any other site of rhinosporidial inoculation. Three month follow up following excision showed no recurrences in any of the patients.

III. Results

Clinical Features

The growths were pink or red, granular, lobulated sometimes flattened out like a pancake to accommodate itself between the lids and the globe. [Figure 1-4] They appeared to be vascular with few white spots at the apex. Rest of the ocular examinations was within the normal limit. These were either sessile or stalked.

Differential Diagnosis

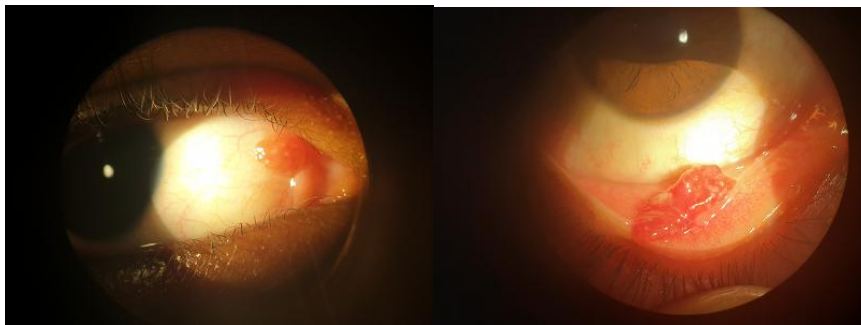
Conjunctival growths should be differentiated from the granuloma of a burst chalazion, a haemangioma. White seed like sporangia on the surface should distinguish rhinosporidiosis from other conditions.

Ocular findings

Table 1. Shows ocular findings observed among the patients.

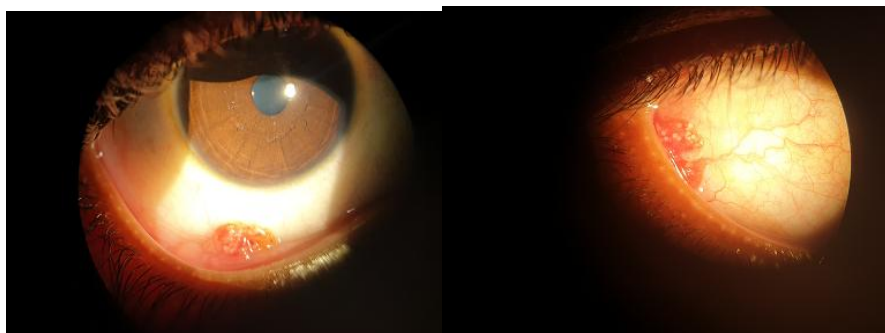
Table no. 1

Patient	Age	Findings
1 st patient	13yrs/male	Pedunculated mass of 5 mm x 5 mm arising from the upper palpebral conjunctiva near medial canthus of the right eye.
2 nd patient	8yrs/male	Sessile mass of arising from bulbar conjunctiva near medial canthus of right eye. [Figure 1.]
3 rd patient	13yrs/male	Pedunculated mass of 6 mm x 3 mm arising from the lower palpebral conjunctiva of right eye. [Figure 2.]
4 th patient	14yrs/ male	Pedunculated mass of 4 mm x 3 mm arising from the lower palpebral conjunctiva of right eye. [Figure 3.]
5 th patient	16yrs/male	Pedunculated mass of 5 mm x 2 mm arising from the bulbar conjunctiva near lateral canthus of right eye. [Figure 4.]



[Figure 1.]

[Figure 2.]



[Figure 3.]

[Figure 4.]

IV. Discussion

In this case series the growth was found exclusively in males with youngest patient aged 8 years old and oldest aged 16 years with all having right eye involvement. Only one case gave history of trauma preceding infection. However minor trauma to the eye of which the patients were not aware of cannot be excluded. The growths were found arising from palpebral conjunctiva of both upper and lower lid as well bulbar conjunctiva. The patients underwent surgical excision with electrocautery of the base. The specimen on histopathological evaluation revealed this to be ocular rhinosporidiosis. No history suggestive of as to how the infection was acquired was obtained from remaining 4 cases and other mucous membranes were unaffected which were evaluated postoperatively to rule out other sites of inoculation. The largest reported case series of

rhinosporidiosis of 462 cases in Southwestern India found that the disease mainly occurs in the nose and nasopharynx (81.1%), while eyes were affected in 14.2%.¹⁴ Another case series of 34 patients from South India found nasal and nasopharyngeal involvement in 85% while eyes were affected in 9% of cases.¹⁵ A case involving multiple mucous membranes has also been reported in India.¹⁶ Many case series of ocular rhinosporidiosis have been reported from South and Southwestern India in the past and most of them were found to be common among adult males but no case reports have been reported recently from this area or found to be common only among young males¹⁴⁻¹⁸ This case series highlights the importance of histopathological evaluation of all conjunctival lesions which helps in the proper diagnosis of the case and its appropriate management.

V. Conclusion

In conclusion, this case series emphasizes that health professionals and microbiologists must have greater awareness and surveillance for cases of rhinosporidiosis with varied presentation in endemic and non-endemic areas. The identified cases should be adequately monitored to exclude the possibility of recurrence, and to decide the best treatment for the disease.

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