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Indian Journal of Clinical and Experimental Ophthalmology

Journal homepage: www.ijceo.org

Case Report

Ocular rhinosporidiosis- A case report

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ARTICLE INFO

Article history:
Received 09-02-2022
Accepted 23-01-2022
Available online 29-06-2022

Keywords:
Conjunctiva
Dapsone
Excision and cautery
Histopathology
Ocular rhinosporidiosis

ABSTRACT

We report the clinical manifestations of ocular rhinosporidiosis and its management.
A 25 years old male belonging from rural background, presented to Ophthalmology OPD after being referred from ENT OPD with a painless, reddish-pink, fleshy mass on white portion of the right eye. He had a similar looking mass inside his right nostril. He gave history of some unknown particle entering his right eye and nostril while watering the paddy fields and lesion developed in those places after 4-5 days.
On examination, he had a fleshy, red-coloured mass attached to the bulbar conjunctiva of his right eye, supero-nasal to cornea, about 2.5 mms from the limbus. It had an elevated surface with vessels growing over it which did not bleed on touch. There were small whitish round to oval spots on the surface of the lesion.
The patient was started with tablet Dapsone (100mg BD) for 3months and he underwent excision of conjunctival lesion under local anaesthesia along with cauterization at its base. The excised mass was sent for histopathological examination. Additionally, he was given topical Moxifloxacin (0.5% w/v) eye drops for 2weeks and systemic antibiotics (Amoxy-Clav 625mg BD for 5days) as post surgical prophylaxis. ENT surgeons excised the mass present on the nasal mucosa.
The patient was diagnosed clinically to have conjunctival rhinosporidiosis. This was confirmed by histopathological examination. The patient was followed up for18 months and was asymptomatic with no recurrence of the lesions in the eye or nose.

1. Introduction

Rhinosporidiosis is a chronic, benign, granulomatous infection of mucosal lining caused by an eukaryotic unicellular pathogen Rhinosporidium seeberi, a unique microorganism of the animal-fungal demarcation.[1] It affects all age groups, including children and adults. The most common site of infection is nasal mucosa followed by ocular structures (about 10-15%).[2] The first case of conjunctival rhinosporidiosis was described in India in 1912. The most frequent ocular site of infection is the conjunctiva, followed by the lacrimal sac.[3,4] It is acquired through traumatized nasal mucosa and spread to other sites (conjunctiva, lacrimal sac etc) by autoinoculation. The most common presentation of ocular rhinosporidiosis is a polyplike (jelly like) mass on the palpebral conjunctiva. It may also present as a diverticulum of lacrimal sac, recurrent meibomian gland polyps, jelly like conjunctival cysts, chronic follicular conjunctivitis in contact lens users, peripheral corneal infiltrations, scleral melting, staphyloma or mimic a tumour of eyelid or adjacent skin.[5–10] Large conjunctival lesions may cause mechanical ectropion. Lacrimal sac rhinosporidiosis may present with blood-stained tears.

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https://doi.org/10.18231/j.ijceo.2022.059

2. Case Report

A 25 years old male from a rural area presented to Ophthalmology OPD of RIO, RIMS Ranchi, after being referred from ENT OPD with painless, reddish-pink, fleshy mass on white portion of the right eye. He had a similar looking mass inside his right nostril for which he went to ENT OPD earlier. On enquiry about the sequence of events, he gave history of some unknown particle entering his right eye and nostril while watering the paddy fields and the lesion developed in those places after 4-5 days. There was no history of such lesions in the past and none of his family members had similar lesions.

On examination, he had a fleshy, red-colored mass, about 6×12 mm. The jelly-like reddish mass was present on the bulbar conjunctiva of the right eye, supero-nasal to the cornea, about 2.5 mm from the corneal limbus (Figure 1). It had a elevated surface and vessels grew into it but it did not bleed on touch. There were small whitish round to oval spots on the surface of the lesion. There was no discharge, itching or conjunctival congestion.

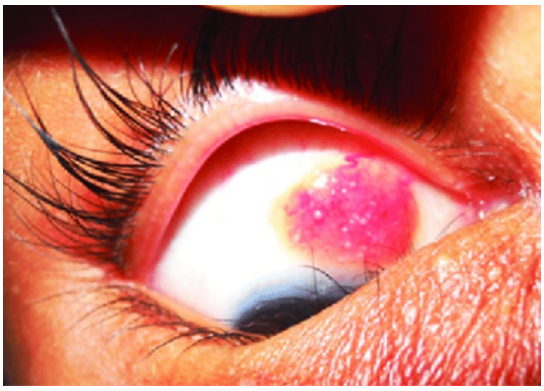

Fig. 1: Conjunctival rhinosporidiosis (RE)

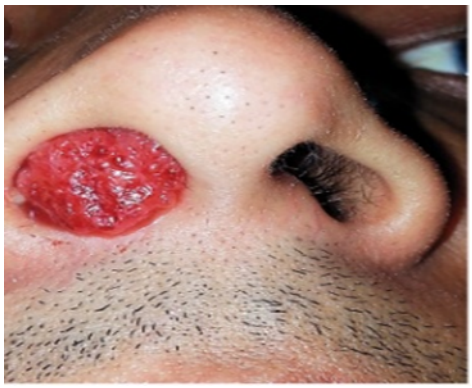

Fig. 2: Nasal rhinosporidiosis in the same patient

Provisionally diagnosed as rhinosporidiosis and excluding all other possible differential diagnoses clinically, the patient was started with tablet Dapsone (100mg BD) for 3 months and he underwent excision of conjunctival lesion under local anaesthesia along with cauterization at its base. The excised mass was sent for histopathological examination. Additionally, he was given topical Moxifloxacin (0.5% w/v) eye drops for 2weeks and systemic antibiotics (Amoxy-Clav 625mg BD for 5days) as post surgical prophylaxis.

HPE revealed mild epithelial hyperplasia and multiple sporangia in various stages of development and regeneration in bulbar conjunctival tissue of right eye (Figure 3). Inflammatory cells including neutrophils, lymphocytes, plasma cells, and multinucleated giant cells were present around the sporangia. Periodic acid-Schiff (PAS) stain highlighted the thick walls of the sporangia in various stages of the life cycle. Mature sporangia revealed a surface pore with release of spores. The findings were consistent with conjunctival rhinosporidiosis.

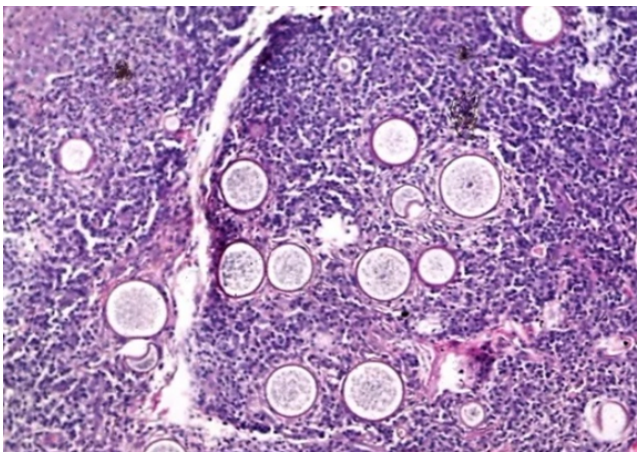

Fig. 3: Multiple sporangia with mixed inflammatory cell infiltrate

The patient was regularly followed up initially every 15 days up to 2months and then monthly up to 6months, followed by annual follow-up. No recurrence of any ocular or nasal lesions were seen in 6 months.

The surgical wound on bulbar conjunctiva of the right eye completely healed with time and no residual scars were present after 45days of surgery.

3. Discussion

Although rhinosporidiosis is an infectious disease, there is little knowledge about its mode of transmission. Human to human or animal to human transmission is very rarely reported. It is presumed to be transmitted by trauma or contact with stagnant water, where spores from soil or water come in contact with the mucosal surface.

Diagnosis is confirmed by excision biopsy of the lesion followed by histopathology, which shows sporangia in different stages of development. Systemic medication, especially dapsone or Amphotericin-B may be considered

but efficacy remains unclear. There is no definite role of topical antibiotics and antifungals in these cases, as reported by literature. In our case, topical and systemic antibiotics were given for short duration after excision and cauterization of the conjunctival lesion, just as a post-surgical prophylaxis. Recurrence rates are relatively low in the conjunctiva and lacrimal sac.

Differential diagnosis of ocular rhinosporidiosis includes-

1. Pyogenic granuloma
2. Squamous papilloma
3. Sebaceous adenoma
4. Sebaceous carcinoma
5. Squamous cell carcinoma
6. Conjunctival cyst
7. Inflammed pingecula

Although lesions may look almost similar with naked eyes, a complete clinical history along with proper examination may clinically differenciate conjunctival rhinosporidiosis with other similar looking lesions. The most common site of occurance of pingecula is nasal limbus although it may also be present on temporal side. A long-standing history of exposure to sunlight is usually present. Squamous carcinomas generally occur in older age and maybe multifactorial. Growth maybe aggressive and lesion bleeds on touch. HPE of lesion confirms the diagnosis. Squamous papilloma has a finger-like protruded appearance and strong association with HPV infection (associated with cutaneous warts). Conjunctival impression cytology confirms the diagnosis. Conjunctival cyst may mimic rhinosporidiosis but on detailed examination, it will be filled with clear or blood-mixed fluid and will show a different consistency. Additionally no white spots will be seen on its surface, unlike rhinosporidiosis.

4. Conclusion

Conjunctival rhinosporidiosis has a characteristic presentation with a typical history of exposure to vegetative material. This patient was managed with the standard of care, surgical excision with cauterization of the base of the lesion, both of the conjunctiva and nasal mucosa. Histopathological examination confirmed the diagnosis. There was no recurrence of the lesion at six months follow up.

Ophthalmologists and ENT surgeons must be aware of this entity and its clinical presentation in order to ensure prompt and appropriate treatment and optimal outcome.

5. Source of Funding

None.

6. Conflict of Interest

None.

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Cite this article: Mukherji P, Shilpy N. Ocular rhinosporidiosis- A case report. *Indian J Clin Exp Ophthalmol* 2022;8(2):295-297.