Ocular Rhinosporidiosis Presenting As A Rapidly Growing Conjunctival Papilloma

Kanika Jain, Taru Dewan, Purnima Paliwal, Manav Deep Singh, Sonali Gupta
Department of Ophthalmology, Dr RML Hospital, PGIMER, New Delhi, India

A 24 year old male, resident of Delhi, presented with complaints of a painless progressive reddish lump on the lower surface in the left eye since the past two months. On examination, a sessile 10 X 6 mm wide fleshy pink, highly vascular mass was present in the middle 2/3rd of the lower palpebral conjunctiva of the left eye. The patient was clinically diagnosed as a case of conjunctival papilloma and underwent wide surgical excision. Histopathological evaluation revealed this to be ocular rhinosporidiosis. No history suggestive of as to how the infection was acquired was obtained 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 South Western India found that the disease mainly occurs in the nose and nasopharynx (81.1%), while eyes were affected in 14.2%. Many case series of ocular rhinosporidiosis from South and Southwestern India have been reported but no case reports could be found from Northern India. This case highlights the importance of histopathological evaluation of all conjunctival lesions which helps in the proper diagnosis of the case and its appropriate management.

Keywords: ocular rhinosporidiosis, rhinosporidium seeberi, conjunctival papilloma

Introduction
Rhinosporidiosis is a chronic granulomatous infection of mucous membranes (nasal, oral, ocular, genital and rectal) caused by Rhinosporidium seeberi. 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 protist classified under Mesomycetozoa “meso-in the middle of, “-myceto-fungi and “-zoa” -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 a 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 rhinorhrea. Ocular rhinosporidiosis most often presents as a polypoid mass of the palpebral conjunctiva. It may also present as a lacrimal sac diverticulum, recurrent chalazion, conjunctival cyst, chronic follicular conjunctivitis in contact lens wearers, peripheral keratitis, scleral melting, ciliary staphyloma or simulate a tumour of eyelid or periorbital skin. 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.

Case Presentation
A 24 year old male, resident of Delhi since the past five years, presented to our hospital in November, 2016 with complaints of a appearance of a painless progressive reddish lump on the lower surface in the left eye since the past two months. The patient belonged to a lower socio-economic strata and there was no history of recent travel, ocular trauma, swimming in stagnant water or water where animals bathe. On examination, a sessile 10 x 6 mm wide fleshy pink mass was present in the middle 2/3rd of the lower palpebral conjunctiva of the left eye (Figure 1a and 1b). It had a papilliform, friable surface and was a highly vascular lesion with scarring at the end of the stalk of the growth. There was no associated petechiae, bleeding points, pigmentation, ulceration, discharge, conjunctival injection and the rest of...
the ocular examination was normal. A clinical diagnosis of conjunctival papilloma was made and the patient underwent wide surgical excision with cautery of the base under local anaesthesia. Histopathological examination showed tissue lined by hyperplastic stratified squamous epithelium with neutrophilic micro-abscesses. The subepithelium showed edema, mixed inflammatory infiltrate and many intact/ ruptured sporangia of rhinosporidiosis. Abundant fibrino-suppurative exudate was also noted (Figure 2 & 3). A diagnosis of ocular rhinosporidiosis was made. With this diagnosis in mind, the patient underwent detailed nasopharyngeal and genital evaluation to rule out any other site of rhinosporidial inoculation. Three month follow up following excision showed no recurrences (Figure 4).

Discussion

The case presented with a highly vascular rapidly growing lesion in the left lower palpebral conjunctiva. The patient was clinically diagnosed as a case of conjunctival papilloma and underwent wide surgical excision with cautery 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 and other mucous membrane were unaffected which were evaluated postoperatively to rule out other sites of inoculation. The largest reported case series of rhinosporidiosis of 462 cases in South western India found that the disease mainly occurs in the nose and nasopharynx (81.1%), while eyes were affected in 14.2%. Another case series of 34 patients from South India found nasal and nasopharyngeal involvement in 85% while eyes were affected in 9% of cases. A case involving multiple mucous membranes has also been reported in India. Many case series of ocular rhinosporidiosis from South and Southwestern India have been reported but no case reports could be found from Northern India. This case highlights the importance of histopathological evaluation of all conjunctival lesions which helps in the proper diagnosis of the case and its appropriate management.

Conclusion

Ocular rhinosporidiosis mimicking a conjunctival papilloma with a short history of growth can occur in the affluent areas of Delhi.

References

1. Arsecularatne SN. Rhinosporidiosis: what is the cause? Curr Opin Infec Dis 2005; 18:113-8.
2. Morelli L1, Polce M, Piscioli F, Del Nonno F, Covello R, Brenna A, et al. Human nasal rhinosporidiosis: an Italian case report. Diagn Pathol 2006; 1:25.
3. Ghosh AK, De Sarkar A, Bhaduri G, Datta A, Das A,
Bandopadhyay A: Ocular rhinosporidiosis. *Indian J Med Assoc* 2004; 102:732-64.

4. Varshney S, Bist SS, Gupta P, Gupta N, Bhatia R. Lacrimal sac diverticulum due to Rhinosporidiosis. *Indian J Otolaryngol Head Neck Surg* 2007; 59:333-6.

5. Mukhopadhyay S, Shome S, Bar PK, Chakrabarti A, Mazumdar S, De A, et al. Ocular rhinosporidiosis presenting as recurrent chalazion. *Int Ophthalmol* 2015; 35:705-7.

6. Lavaju P, Arya SK, Kumar B, Upadhaya P. Conjunctival rhinosporidiosis presenting as a cystic mass—an unusual presentation. *Nepal J Ophthalmol* 2010; 2:157-9.

7. Suh LH, Barron J, Dubovy SR, Gaunt ML, Ledee DR, Miller D, et al. Ocular rhinosporidiosis presenting as chronic follicular conjunctivitis in a contact lens wearer. *Arch Ophthalmol* 2009; 127:1076-7.

8. Bhomaj S, Das JC, Chaudhuri Z, Bansal RL, Sharma P. Rhinosporidiosis and peripheral keratitis. *Ophthalmic Surg Lasers* 2001; 32:338-40.

9. De Doncker RM, de Keizer RJ, Oosterhuis JA, Maes A. Scleral melting in a patient with conjunctival rhinosporidiosis. *Br J Ophthalmol* 1990; 74:635-7.

10. Talukder AK, Rahman MA, Islam MN, Chowdhury MH. Ciliary staphyloma: very rare sequelae of conjunctival rhinosporidiosis. *Mymensingh Med J* 2004; 13:86-7.

11. Sharma KD, Shrivastav JB, Agarwal S. Ocular rhinosporidiosis simulating a tumour. *Br J Ophthalmol* 1958; 42:572-4.

12. Vallarelli AF, Rosa SP, Souza EM. Rhinosporidiosis: cutaneous manifestation. *An Bras Dermatol* 2011; 86:795-6.

13. Mithal C, Agarwal P, Mithal N. Ocular and adnexal rhinosporidiosis: the clinical profile and treatment outcomes in a tertiary eye care centre. *Nepal J Ophthalmol* 2012; 4:45-8.

14. Sudarshan V, Goel NK, Gahine R, Krishnani C. Rhinosporidiosis in Raipur, Chhattisgarh: a report of 462 cases. *Indian J Pathol Microbiol* 2007; 50:718-21.

15. Makannavar JH, Chavan SS. Rhinosporidiosis—a clinicopathological study of 34 cases. *Indian J Pathol Microbiol* 2001; 44:17-21.

16. Mallick AA, Majhi TK, Pal DK. Rhinosporidiosis affecting multiple parts of the body. *Trop Doct* 2012; 42:174-5.