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# CONJUNCTIVAL RHINOSPORIDIOSIS: A CASE REPORT FROM A CONGOLESE PATIENT

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## ABSTRACT

*Purpose:* This report describes a case of conjunctival rhinosporidiosis.

*Case presentation:* A 10-year old Congolese boy (from DR Congo), presented in May 2003 with a history of a growing mass of the conjunctiva protruding through the palpebral aperture. Examination showed conjunctival polypoid mass with muco-purulent discharge from the affected eye. After surgical excision of the lesion, the microscopic diagnosis was rhinosporidiosis.

*Conclusion:* Rhinosporidiosis is a condition which both clinicians and pathologists should keep in mind when managing patients living in or coming from endemic countries with conjunctival masses.

et habitent dans des régions endémiques ou en proviennent.

## KEY WORDS

Eye, Conjunctiva, Rhinosporidiosis, *Rhinosporidium seeberi*

## MOTS-CLES

œil, conjonctive, rhinosporidiose, *Rhinosporidium seeberi*

## RESUME

*But:* description d'un cas de rhinosporidiose conjonctivale.

*Cas Clinique:* Un petit garçon d'origine congolaise (République Démocratique du Congo) a été examiné en mai 2003 pour le problème d'une masse conjonctivale faisant protrusion à travers les paupières et dont le volume avait nettement augmenté au cours des dernières semaines. L'examen réalisé a permis d'objectiver la présence d'une masse conjonctivale polypoïde et de sécrétions muco-purulentes au niveau de l'œil affecté. L'examen histopathologique de la lésion excisée a permis de poser un diagnostic de rhinosporidiose.

*Conclusion:* La rhinosporidiose est une pathologie que les cliniciens et les anatomo-pathologistes doivent garder à l'esprit lorsqu'ils sont confrontés à des patients qui présentent des tumeurs conjonctivales

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## INTRODUCTION

Rhinosporidiosis is a chronic and localized infection of the mucus membranes caused by the fungus *Rhinosporidium seeberi* (19). The disease is endemic in India and Sri Lanka. The most common site of involvement is the nose; the next in frequency are the eye and adnexa (10). We report a case of conjunctival rhinosporidiosis in a Congolese boy.

## REPORT OF THE CASE

A 10-year old Congolese boy was brought by his mother on 13 May 2003 to the eye Department in the province of Equateur (Equatorial forest) during our annual visit, with the complaint of a red growing mass of the conjunctiva protruding through the left palpebral aperture. Visual acuity was 10/10 OU. At examination, the patient presented with muco-purulent discharge from the affected eye and showed a conjunctival polypoid mass (figure 1).

The conjunctival polyp was attached to the palpebral conjunctiva with a thin stalk that did not exceed 5 mm in length. The size of the polyp was 20-40 mm in length. The polyp was painless. The rest of conjunctiva was normal. No associated nasal infection was seen in this patient. The lesion didn't respond to antibiotic or anti-inflammatory treatment.

On the basis of the clinical appearance of the lesion, diagnoses of pyogenic granuloma, papilloma or rhinosporidiosis were suggested. Surgical excision of the lesion was performed un-

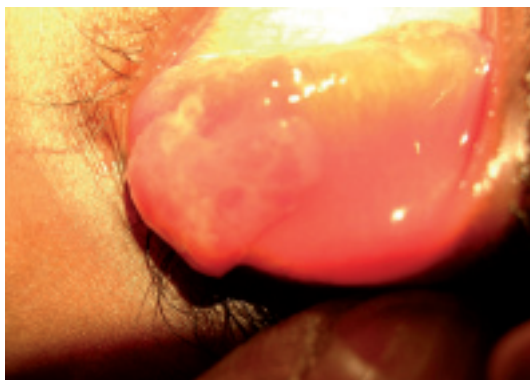


Fig. 1: Ocular rhinosporidiosis of the conjunctiva. External photograph of the eye showing a polypoid mass attached to the palpebral conjunctiva.

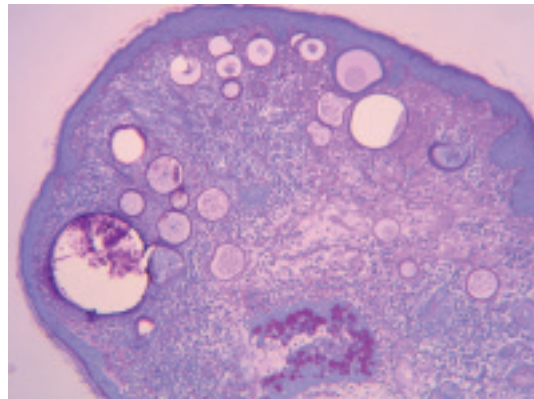


Fig. 2: Histology (Photomicrograph). Multiple cystic lesions consisting of sponranga in various stages of degeneration are visible in the subepithelial stroma. Mature spores are starting to protrude in the stroma. The sporangia are surrounded by a mononuclear inflammatory infiltrate. Pas stain (original magnification X25).

der local anaesthesia. Histological analysis performed at the laboratory of the Department of Ophthalmology (Catholic University of Leuven) confirmed the diagnosis and showed the characteristic features of rhinosporidiosis (figure 2).

## DISCUSSION

Rhinosporidiosis is a common chronic granulomatous disease. It is worldwide in distribution but relatively more common in India and Sri Lanka (17). It is seen on the African continent mainly in Malawi, Kenya, Uganda and Congo (7,14,22). Infrequently, isolated cases were reported in other parts of the world, mainly due to the socio-cultural phenomenon of migration. *Rhinosporidium seeberi* is the aetiological agent. *R. seeberi* has been definitively classified using molecular biological tools in a new class - the Mesomycetozoea, along with 10 parasitic and saprogenic microbes (4).

*R. seeberi* can cause infections of the nose, throat, ear, eye and its adnexa, and even the genitalia in both sexes (5). The majority of cases occur in upper respiratory sites, notably the nostrils, the nasal cavity, the nasopharynx, the larynx, the soft palate, and the buccal cavity. About 15% of cases present in an ocular location, either bulbar or palpebral conjunctiva, the lacrimal sac, or nasolacrimal duct (9,16,19,20). Scleral melting has been documented as a com-

plication of conjunctival infection, and it may even be a finding at initial presentation (6,21). The disease can also manifest itself as a cutaneous granuloma (24). Systemic disease is rare. Conjunctival rhinosporidiosis is a rare infectious disease that typically occurs in young people. It was described as a pathogen in humans a century ago (18). Most reported ocular infections have occurred in hot, dry climatic regions (11).

Rhinosporidiosis is an infectious disease where the pathogen is always found in the tissue of the lesion. There is no evidence, however, that this disease is contagious, since transmission has not been documented (3,8). The majority of cases are sporadic. The presumed mode of transmission is from the natural aquatic habitat of *R. seeberi* through traumatized epithelium, most commonly via nasal sites, but also via the external urethral meatus, the conjunctiva or the skin (1).

Frequent bathing in ponds and lakes filled with stagnant water in endemic areas has been considered as a major risk factor (15). Water and soil are believed to be the reservoir of infection, given the high incidence of the disease in sandworkers, paddy cultivators and people bathing in stagnant waters.

Clinically, ocular rhinosporidiosis presents as a friable, richly vascularized polypoid mass that may be pedunculated or sessile. The surface is covered with tiny white spots consistent with underlying mature sporangia beneath the epithelium (3,8). The gross appearance, though distinctive, is not of diagnostic value. This entity should be included in the differential diagnosis of well-vascularized polypoid conjunctival lesions. Definitive diagnosis requires histopathologic confirmation.

The treatment for rhinosporidiosis consists in surgical excision. Meticulous excision is the treatment of choice, although rare cases of spontaneous regression have been reported (2,3,19). The potential for recurrence is due to spillage of endospores on adjacent mucosa. Recurrences are rare and can be prevented by cauterization of the base of the lesion or alternatively by cryotherapy (2,19). Medical therapy is still controversial since cultures of *R. Seeberi* have been unsuccessful in all artificial media thus making sensitivity determination impossible. Some authors have proposed a medical therapy with

dapsone (13, 23). Dapsone is the only drug that has had some success in treating *R. seeberi*. It acts by arresting the maturation of sporangia and accelerating their degenerative changes (24).

Rhinosporidiosis is a condition which both clinicians and pathologists should keep in mind when managing patients living in or coming from endemic countries and who consult for conjunctival masses (12).

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