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Rhinosporidiosis Presenting as an Urethral Polyp

Najamul Sahar Azad, Zubair Ahmad and Naila Kayani

ABSTRACT

Rhinosporidiosis is an inflammatory disease caused by *Rhinosporidium seeberi*, a protactistan mesomycetozoa, member of a group of novel aquatic parasites, characterized by hyperplastic polypoid lesions of the nasal cavity and rarely other mucous membranes. We report an unusual presentation of rhinosporidiosis as an urethral polyp, which is only the second case of rhinosporidiosis reported from Pakistan.

Key words: *Rhinosporidiosis. Urethral polyp. Globular sporangia. Spores.*

INTRODUCTION

Rhinosporidiosis is an infectious condition predominantly affecting the nasal mucosa. Rare cases of involvement of other mucosal sites as well as disseminated cutaneous involvement have been reported.¹ Although endemic in India and Sri Lanka,² only one case of nasal rhinosporidiosis is reported from Pakistan.³ We report a case of rhinosporidiosis presenting as an urethral polypoid lesion, which, to the best of our knowledge, is the first case of its kind from Pakistan.

CASE REPORT

A 26-year-old male, resident of rural Balochistan, presented with a 3-month history of a polypoid lesion at external urethral meatus. There was a history of dysuria with bloody discharge from the lesion. Except for these local symptoms, patient was otherwise asymptomatic. No constitutional symptoms were present. The past and personal history was insignificant except for occasional bathing in stagnant rain water ponds. General physical examination and examination of nose, oral cavity and eyes, which are common sites for rhinosporidiosis, was unremarkable. On local examination, a small red, fleshy, sessile lesion was seen at the external urethral orifice measuring 0.8 x 0.5 cm, clinically resembling a caruncle. Urine DR examination showed presence of red cells and pus cells. The lesion was completely resected under the local anaesthesia. Histopathology showed numerous globular sporangia filled with spores, diagnostic of rhinosporidiosis.

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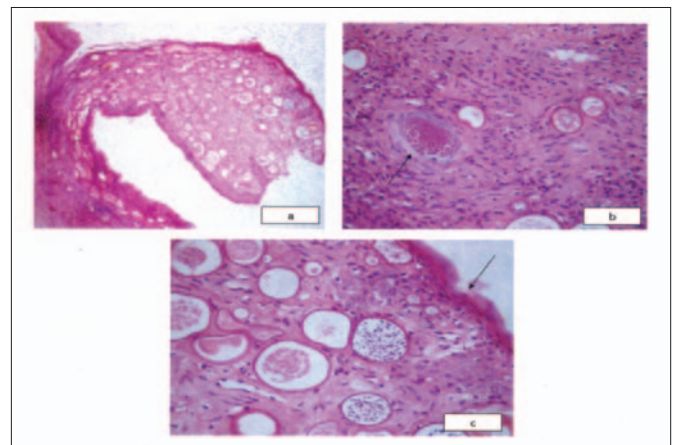


Figure 1: (a) Polypoid lesion arising from external urethral meatus showing sporangia in varying stages of maturation. H&E x 2. (b) Mature sporangia containing rounded endospores surrounded by mixed inflammation. H&E x 40. (c) Sporangia showing thick chitinous wall. Stratified squamous epithelium identified on the surface (arrow). H&E x 40.

Mild non-specific chronic inflammation was seen in surrounding stroma along with edema and congested vessels. There was no granulomatous reaction.

No other treatment was given. Patient was well after 6 months with no evidence of recurrence.

DISCUSSION

Rhinosporidiosis is a painless infectious condition caused by a protactistan mesomycetozoa, *Rhinosporidium seeberi*, which affects predominantly the mucous membrane of the nose and nasopharynx. Previously categorized as a fungus, recent molecular biological analysis of the ribosomal DNA of organism has confirmed beyond doubt its categorization as member of a group of novel aquatic parasites that flourish in hot and humid climate.⁴

Definite mode of transmission and host or natural reservoirs are largely unknown, but the disease is presumed to be transferred through infected soil and

water. Stagnant water is also suggested as source of infection as most patients are from rural background.⁴ This also explains the predilection of infection for mucosal sites where the organism gains access through traumatized epithelium. Nasal mucosa is the most frequently infected site reported in the literature followed by ocular tissue.² Rare cases of involvement of other mucosal sites, such as urethra,^{5,6} trachea,⁷ and solitary or disseminated cutaneous disease¹ have also been reported. Cases of bone involvement, where it presents as osteolytic lesions,² and as soft tissue masses⁸ are also on record.

Urethral involvement is mostly limited to penile part where the lesion presents as a vascular sessile polyp clinically resembling condyloma, caruncle or a vascular or neoplastic lesion.⁶

The typical lesion of rhinosporidiosis is a fleshy, vascular polypoidal growth with yellow or grey specks on it. Histology with haematoxylin and eosin stains is diagnostic showing sporangia in varying stages of maturation. Mature sporangia have a thick chitinous wall, measure upto 200 µm in diameter and contain rounded endospores. A variable inflammatory infiltrate is seen in the surrounding tissue showing mixed acute and chronic inflammatory cells in different proportions. A granulomatous response has also been seen in a significant proportion of cases showing epithelioid cell collections with multinucleated giant cells. Hyperplastic changes are seen in overlying epithelium.²

No systemic or local medical treatment is usually effective. Complete surgical excision is the treatment of choice. Systemic Dapsone therapy has been used prophylactically to prevent recurrence or disseminated haematological spread.⁹

The disease was previously considered to be localized to India and Sri Lanka,² however, isolated cases have been reported from other parts of the world as well.¹⁰

This may be the result of increased globalization as most cases are still seen in patients of Indian origin.¹⁰ Only a single case has been reported from Pakistan³ so far, but the actual prevalence may be much higher than reported as the climatic conditions in the country make it a fertile soil for the organism.

Rhinosporidiosis is a potentially curable infectious condition, which can behave in an aggressive manner if left untreated.¹ It should be considered in the differential diagnosis of vascular, polypoidal lesions at unusual sites.

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