

Case Report

Rare case of rhinosporidiosis: a case report from Jammu

Vinod M. K.*, Amanjoth Kaur, Kamal Devgan, Jagdeepak Singh

Department of ENT, Government Medical College, Amritsar, Punjab, India

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***Correspondence:**

Dr. Vinod M. K.,

E-mail: drvinodmk@gmail.com

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ABSTRACT

Rhinosporidiosis is an uncommon chronic granulomatous infection that affects the nasal mucosa, ocular conjunctiva and other mucosa. The disease is most common in southern India and Sri Lanka. It is rare in northern states of India. The present report of rhinosporidiosis constitutes the very few reported cases of rhinosporidiosis in a resident of Jammu and Kashmir state of India, who has no history of travel to any of the areas endemic for the disease in India or elsewhere.

Keywords: Nasal rhinosporidiosis, Jammu & Kashmir, Traumatized epithelium

INTRODUCTION

The causal agent of rhinosporidiosis is *Rhinosporidium seberi* which recently been reclassified as a member of the protactistan *Mesomycetozoa*. Rhinosporidiosis is common in the age of 15–40 years; males are more commonly affected. Nose is the commonest site, being affected in more than 70% cases.¹ About 15% of the cases have ocular involvement. Infection is presumably acquired from an aquatic habitat through traumatized epithelium, most commonly in the nasal site. It is supposedly more common in those who dive or swim in stagnant water, and those who dig earth on riverbeds.² Infection can spread in the body by lymphatic and hematogenous routes.^{2,3} We report a very rare case of recurrent rhinosporidiosis in a 21 year male who is a permanent resident of Jammu.

Rhinosporidiosis is known for over a hundred years and was first described in Argentina.² The largest reported case series of rhinosporidiosis consisting of 462 cases in India found that the disease mainly occurs in the nose and nasopharynx (81.1%) while the eye was affected in 14.2%.⁴ A case of ocular rhinosporidiosis has been reported from Jammu & Kashmir in 2015.⁵ One survey

revealed that the disease is rare in Jammu and Kashmir, Himachal Pradesh, and North eastern states of India.⁶ No much reported cases of nasal rhinosporidiosis from Jammu & Kashmir are available to our knowledge.

CASE REPORT

A 21 year male graduation student from Jammu presented to ENT OPD of Government Medical College, Amritsar with history of recurrent episodes of progressive left sided nasal obstruction and nasal bleeding for past 3 years. He had history of taking bath in common pond near his house since childhood. There was no travel history outside Jammu. He had total 3 times of recurrence of nasal mass and excision was done each time in past 3 years. He presented to us on 4th recurrence. No h/o trauma, headache, fever, sneezing, eye complaints, night sweats, progressive weight loss, diabetes, hypertension, asthma, tuberculosis etc. were mentioned.

Examination of left nasal cavity using 0 degree Hopkins endoscope showed reddish, soft, pedunculated mass attached to nasal septum above the level of inferior turbinate with granular surface studded with white spores

as shown in Figures 1,2. The mass bleeds on touch and patient had pain on touching.

Blood investigations including CBC, RBS, RFT, LFT, viral markers were normal. CECT of PNS showed a well-defined lobulated soft tissue density restricted to the left nasal cavity, abutting middle and inferior turbinates. No evidence of bony erosion; paranasal sinuses, nasopharynx and right nasal cavity were normal as in Figures 3,4.

We performed complete wide endoscopic resection of the mass and partial middle turbinectomy with cauterization of the base of the lesion under general anesthesia as given in Figures 5,6. Nasopharynx and right nasal cavity were normal. Injection mitomycin-C also used intra-operatively to prevent synechia formation and rapid regrowth.

Haematoxylin and eosin staining of tissue sections showed polypoidal fragments lined by stratified squamous epithelium. Each of subepithelial cysts represented a thick walled sporangium containing numerous "daughter spores" in different stages of development. The fibroconnective stroma showed fibroblasts and myofibroblasts and an inflammatory infiltrate of polymorphs and eosinophils as shown in Figure 7. These are characteristic of rhinosporidiosis.

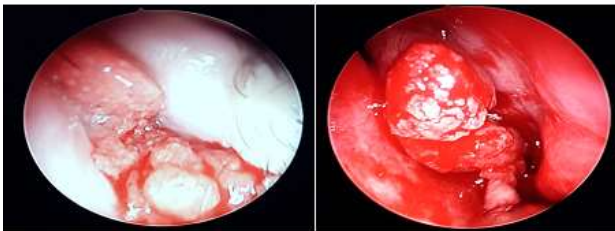


Figure 1 and 2: Reddish, soft, pedunculated nasal mass with granular surface studded with spores which bleeds on touch.

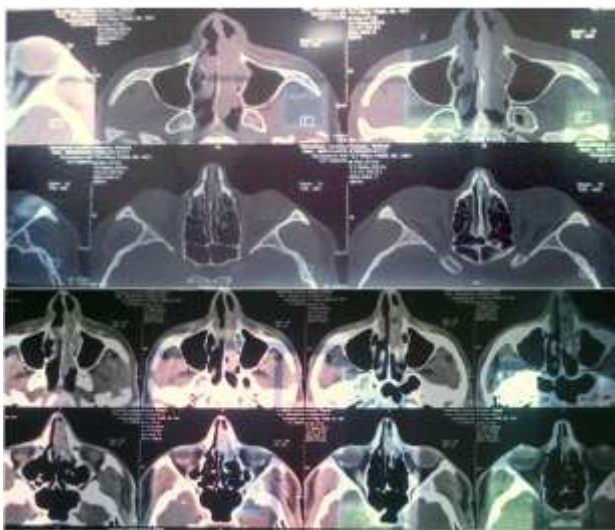


Figure 3: CECT PNS showing left nasal cavity mass.

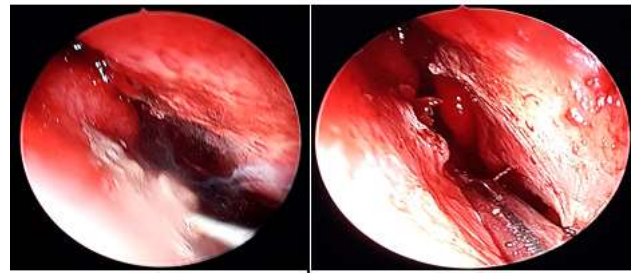


Figure 5 and 6: Complete endoscopic excision of the mass with cauterization of the base.

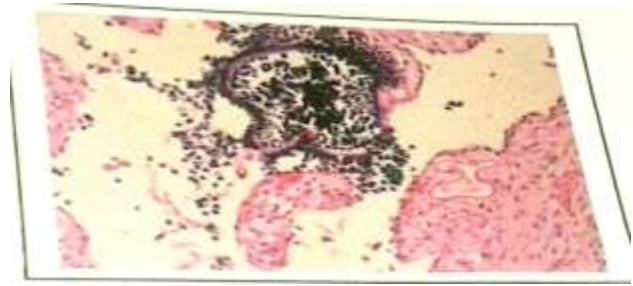


Figure 7: Tissue staining with H & E showing sporangiospores of rhinosporidiosis.

DISCUSSION

The organism *Rhinosporidium seberi* produces large sessile or pedunculated lesions of one or both nostrils. Rhinoscopic examination reveal papular or nodular, smooth-surfaced lesions that become pedunculated and acquire a papillomatous or proliferative appearance with pink, red or purple colour.¹ In contrast to inflammatory polyps which often arise from the middle meatus, nasal rhinosporidiosis frequently involves the mucosal lining of the anterior nares, inferior turbinate, septum, or the floor. Thus, nasal polyps arising from these sites should always raise a high index of suspicion.⁷ The diagnosis is established by histopathologic examination of tissue sections.

The mainstay of treatment for rhinosporidiosis involves meticulous, wide surgical excision, this if followed by electro-cautery of the base may abate recurrence resulting from the spillage of endospores. Conservative medical therapies have been tried using Dapsone (4,4-diaminodiphenyl sulphone) with some effectiveness. Its probable mode of action is to arrest the maturation of the sporangia and promote fibrosis. Antifungals like Griseofluvin and Amphoterecin-B have no tangible result.^{2,8}

CONCLUSION

Nasal rhinosporidiosis is uncommon disease in our environment which mimics neoplasm. It is imperative for clinicians and pathologist to consider nasal rhinosporidiosis as a differential diagnosis of nasal mass even it is not endemic. Suspected nasal masses should be

sent for histopathological examination. Complete and wide endoscopic excision with cauterization of the base has been tried to ablate recurrence and results are awaited.

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