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Case Report

NASAL RHINOSPORIDIOSIS: A CASE REPORT

***Poonam Burdak, Narayani Joshi and Nag B.P.**
Department of Pathology, Mahatma Gandhi Medical College and Hospital,
RIICO Institutional Area, Sitapura, Jaipur
**Author for Correspondence*

ABSTRACT
Rhinosporidiosis is a rare infective chronic granulomatous illness endemic in some parts of the world. It is caused by *Rhinosporidium seeberi*. Clinically, the lesion presents as a polypoid, soft tissue mass, sometimes pedunculated, of the nose (primary site of the infection), the eye and its adnexa especially conjunctiva and the urethra. Here we report a case of Rhinosporidiosis in a thirty year old male who visited our hospital with six months history of spontaneous right nasal blockage, right nasal growth and disturbance of smell from right nostril. Clinically it was diagnosed as angiomatous polyp. The patient was submitted to Excisional biopsy, and sent for histopathological examination. Biopsy confirmed the lesion as Rhinosporidiosis. The only curative approach is the surgical excision.

Keywords: *Rhinosporidiosis, Nasal Cavity, Histopathology*

INTRODUCTION
Rhinosporidiosis is a rare infective chronic granulomatous illness endemic in some parts of Asia and also other parts of the world. The precise nature of this organism remains enigmatic but it is caused by *Rhinosporidium seeberi* (Jaun, 2011). It is widely believed to be fungus but some consider it to be a protozoa or a fish parasite belonging to DRIP clade (Dermocystidium, Rosette agent, Ichthyophonus and Psorospermum).
It can be visualised with fungal stains such as Gomori Methenamine Silver (GMS) and periodic Acid-Schiff (PAS) as well as Haematoxylin and Eosin (H&E) staining (Morelli *et al.*, 2006).
It is characterised by hyperplastic polypoid lesion of nasal cavity and rarely other mucous membrane (Jaun, 2011). Clinically, the lesion presents as a polypoid, soft tissue mass, sometimes pedunculated, of the nose (primary site of the infection), the eye and its adnexa especially conjunctiva and the urethra. It rarely affects children, and is more common in men at the second or third decade of life. The only curative approach is the surgical excision.

CASES
An thirty year old male came to ENT opd with six months history of spontaneous right nasal blockage, right nasal growth and disturbance of smell from right nostril.
No history of cheek swelling or pain, excessive sneezing, nasal discharge, decreased hearing, ear discharge, vertigo, complain of throat pain while deglutination, change in voice, regurgitation of food, tooth ache, eye symptoms, fever, cough. He was non-smoker, non-alcoholic with no history of hypertension, diabetes or asthma.
Patient was operated for similar complaint five years back and was also completely treated for tuberculosis seven years back.
Examination revealed healthy young man with preserved external nasal pyramid. His right nasal cavity was completely blocked by polypoid fleshy mass, covered with muco-purulent secretions arising from the inferior meatus, and presence of contact bleeding. General, systemic examination was within normal limits. Other haematological and biochemistry investigations were within normal limit.
Clinically it was diagnosed as angiomatous polyp. The right nasal mass was cleared completely under local anaesthesia after informed consent and sent for histopathological examination. The histopathological diagnosis revealed numerous globular cysts measuring upto 200nm in diameter. Each of these cyst represent a thick walled sporangium containing numerous spores (Jaun, 2011). A diagnosis of nasal rhinosporidiosis was made.

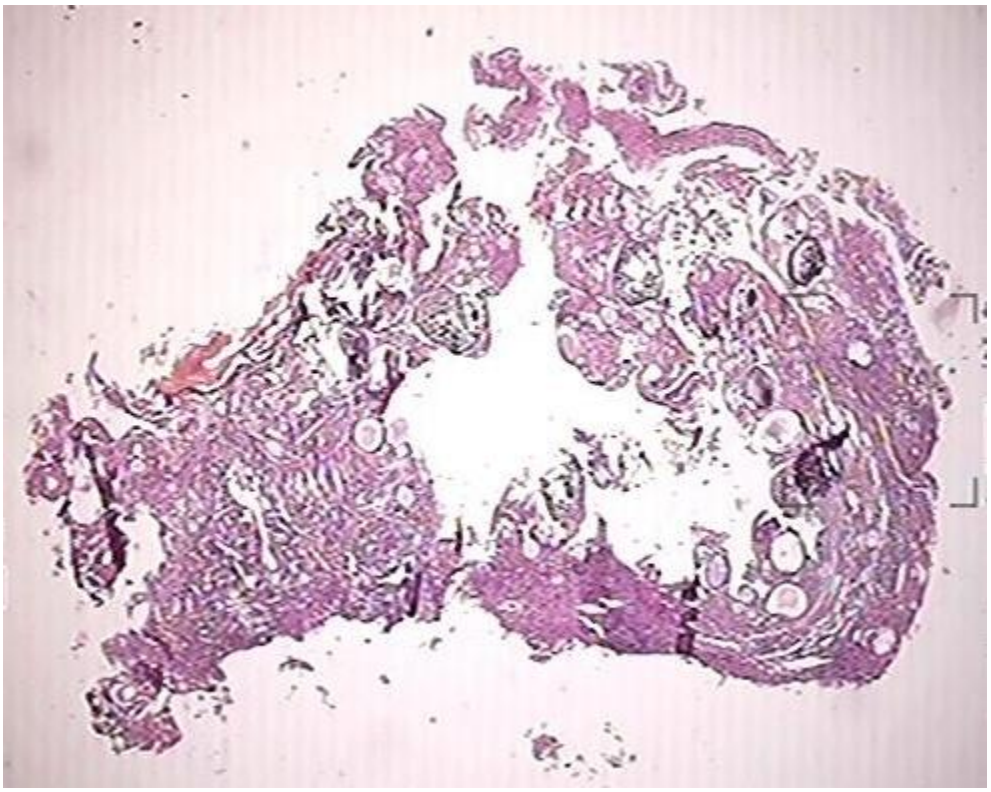

Figure 1: Histopathology section of the nasal mucosa seen on scanner

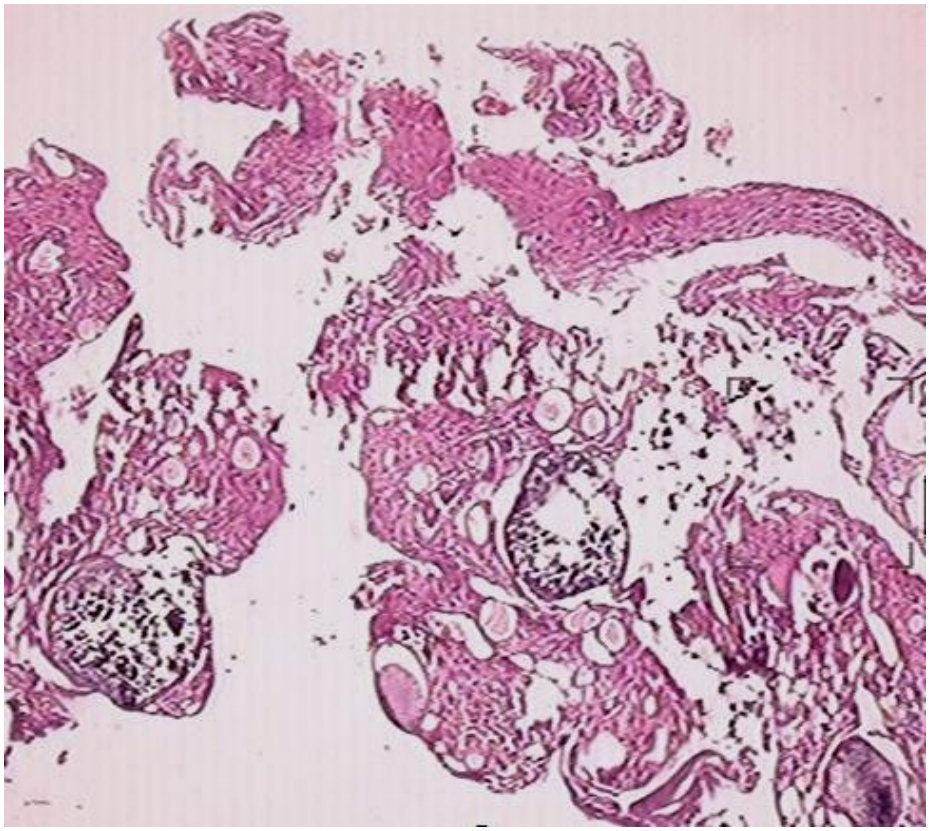

Figure 2: Histopathology section of the nasal mucosa showing sporangia (H&E X 10)

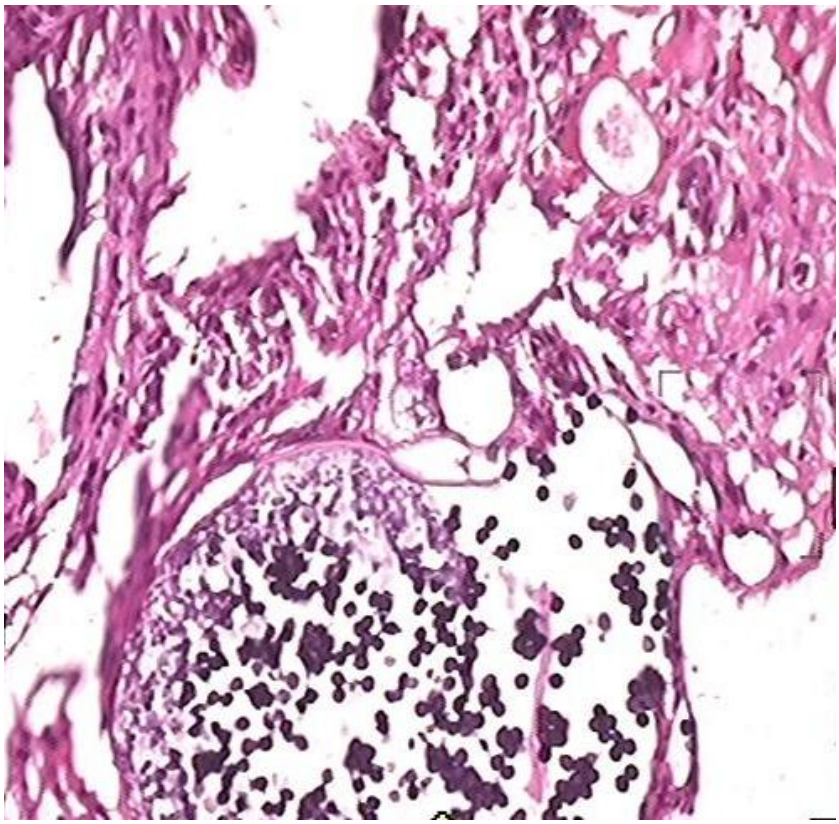

Figure 3: Histopathology section of the nasal mucosa showing sporangium (H&E X 40)

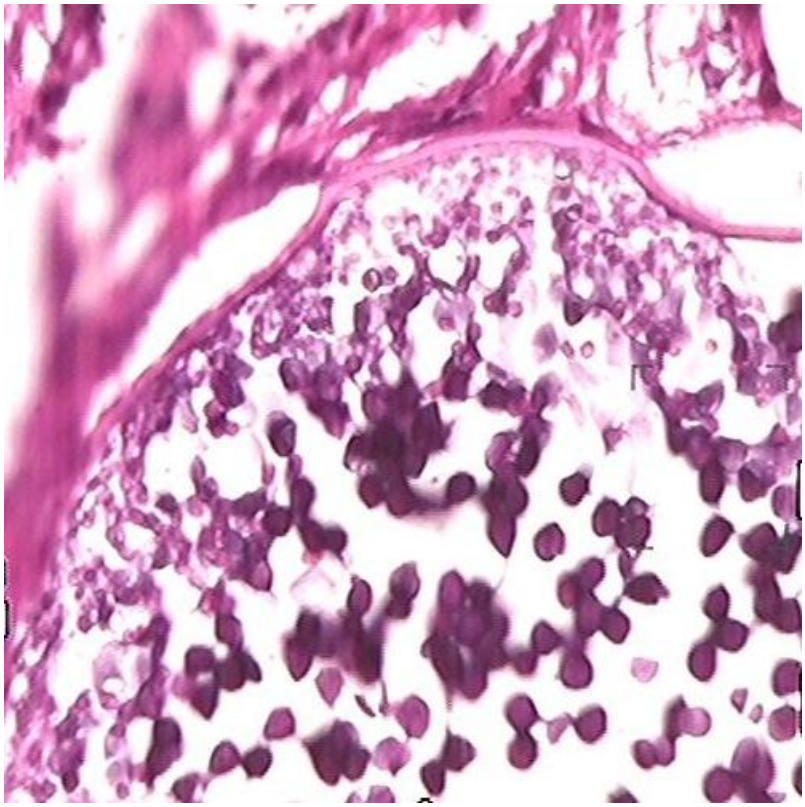

Figure 4: Histopathology section of the nasal mucosa showing sporangium (H&E X 100)

DISCUSSION

Rhinosporidiosis is an infective chronic disease that was discovered initially in Latin America over a century ago. It rarely affects children, and is more common in men at the second or third decade of life. The route of transmission to human is not clearly defined, however most researchers believes that direct contact with the spores through dust, soil or prolonged exposure to stagnant water are potential risk factor of contracting the disease (Arseculeratne, 2002). Usually patients' presents with history of gradual nasal growth, occasional nasal bleeding, nasal itching and sneezing as in the index case who presented with spontaneous right nasal growth.

Nasal rhinosporidiosis is characterised by development of single pedunculated polyp, multiple sessile polypoid masses or combination of both. 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 (Ngamdu *et al.*, 2014).

The histopathology of the biopsied mass from the lesion is paramount important for definitive diagnosis of rhinosporidiosis. It shows several sporangia, oval or round in shape and filled with spores which may be seen bursting through its chitinous wall (Dhingra and Shruti, 2014). The mainstay of treatment for rhinosporidiosis involves meticulous, complete and wide surgical excision.

Conclusion

Rhinosporidiosis is an uncommen infective chronic granulomatous illness which may mimics neoplasm in its clinical features. The organism is difficult to culture and the diagnosis is based on microscopy and histological examination of the lesion. In the index case histological examination is the gold standard method of diagnosis as it was clinically suspected as an angiomatous polyp.

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