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NASAL RECURRENT RHINOSPORIDIOSIS

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ABSTRACT

One of the differential diagnosis for Epistaxis with nasal mass is Rhinosporidiosis. Most of those patients will have history of bathing in contaminated ponds. Since the organism could not be cultured, Histopathological examination confirms the diagnosis. Treatment includes surgical excision of the lesion with cautery ablation at the base to ablate vessels feeding the lesions.

KEYWORDS

Case History:

A 56-year-old man with no known co-morbidities presented to our outpatient department with complaints of recurrent left-sided nasal mass associated with bleeding episodes for the past two years. He was previously operated on thrice for left nasal rhinosporidiosis in 1991,1997,and 2001. The patient had a history of frequent baths in ponds. He took Tablet Dapsone 100 mg for one year in 2001. On examination, the external Osseo- cartilaginous framework was normal. Vestibule showed a reddish pedunculated friable mass seen in the left nasal cavity protruding externally and obscuring the entire nasal cavity. It was attached to the left nasal vestibule and the septum medially on probing. On the anterior rhinoscopy, a small reddish mass was found lateral to the middle turbinate (Figure 1).

Figure1: Clinical photograph showing lesion beyond the left nostril (A)Front view ;(B) Lateral view.

Diagnostic Nasal endoscopy showed the same findings with bilateral nasopharynx free of mass. Contrast-Enhanced Computed Tomography(CECT) of the nose and paranasal sinus showed soft tissue density in the left nasal cavity protruding beyond the vestibule and reaching the inferior turbinate superiorly and posteriorly till the middle third of the inferior turbinate, and the choana was free (Figure 2).

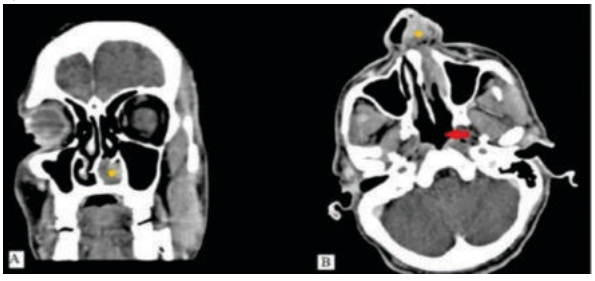

Figure 2: CT showing (A) soft tissue density in the left nasal cavity protruding beyond the vestibule (yellow dot) (coronal view); (B) Choana and Nasopharynx free of disease(red arrow)(axial view).

The patient underwent Surgical debridement using a debrider and co ablator to cauterise the base. The Postoperative biopsy of the patient confirmed the diagnosis as Rhinosporidiosis (Figure 3).The patient was asymptomatic post-op and on followed up one month later.

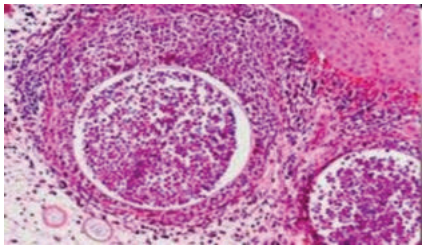

Figure 3: HPE showing sporangia and cysts at various stages of development

DISCUSSION:

Rhinosporidiosis is a granulomatous disease caused by Rhinosporidium seeberi, an aquatic protozoan belonging to the Mesomycetozoa family. It belongs to DRIP (Dermacystidium, Rosette agent, Ichthyophonus, Psorospermium) clade called Mesomycetozoa with 18S r RNA gene in phylogenetic analysis. It is endemic in the Indian subcontinent and Africa because of high temperature and humidity.(1,2) They primarily present in patients who have a history of taking baths in ponds and other contaminated water bodies. The mode of infection include auto-inoculation, hematogenous and lymphatic spread. Manifestations of the disease include nasal, ocular, cutaneous and disseminated. Common sites involved are traumatised epithelium which mainly is seen in the nose. Hence rhinosporidiosis presents as a reddish friable mass frequently in the nasal region. Other areas affected include nasopharynx, oropharynx, larynx, soft palate, skin, bulbar and palpebral conjunctiva, lacrimal sac, nasolacrimal duct, external genitalia and urethral meatus (2). Satellite lesions are also seen adjacent to the granuloma due to the phenomenon of autoinoculation.(3) The patients generally present with nasal obstruction nasal or oral bleeding complaints. Rhinosporidiosis has a history of recurrence post debridement. Multiple patients with a history of various events of debridement are common. The clinical picture of the patients is a strawberry-like mass studded with white spots, causing repeated bleeding episodes. The differential diagnosis could be Coccidiomycosis and it can be differentiated by its small size of sporangia(60µm) and absence of Muciramine staining. The diagnosis can be clinched by a histopathological analysis showing various stages of development of sporangia and spores. Treatment is

by surgical excision with cautery of the base to prevent recurrence by ablating any blood vessel and viable spore in the mucosa. Usage of CO_2 and KTP LASER have advantages over cold surgeries like complete removal, less operative time, minimal trauma to nearby tissues and less chance of recurrence. No particular effective treatment for rhinosporidiosis has been suggested. Multiple drugs have been tried like Griseofulvin, Amphotericin B , Trimethoprim-Sulphadiazine and Sodium stibogluconate with varied success.(4) But Dapsone has shown to interfere with the spores maturation and promote fibrosis.(5) Dapsone for a period of 1 year is known to prevent recurrence.Recurrent lesions are common in nasal and nasopharyngeal lesions and require multiple follow ups and surgeries.

Declarations

1. Funding: The authors did not receive support from any organization for the submitted work
2. Conflicts of interest/Competing interests (include appropriate disclosures): None
3. Availability of data and material (data transparency): Not applicable
4. Code availability (software application or custom code): Not applicable

Compliance With Ethical Standards:

1. Disclosure of potential conflicts of interest : Nil
2. Research involving human participants and/or animals: Not applicable
3. Informed consent: Obtained from the patient for participation

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