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CASE REPORT

PROLIFERATING MASS OVER MEDIAL CANTHUS OF EYE: AN UNUSUAL PRESENTATION OF RHINOSPORIDIOSIS

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ABSTRACT

INTRODUCTION

Rhinosporidiosis is a chronic granulomatous disease, caused by a protozoa known as Rhinosporidium seeberi. It is a water borne disease mainly affecting individuals of low socio-economic status. Cases have been reported worldwide but maximum endemicity is seen in tropical and subtropical areas. It may initially present as nasal bleeding and in late cases as frank mass associated with nasal blockage.

MATERIAL AND METHODS

In our case, excision was done via combined endoscopic and endoscopic route.The patient was administered Dapsone post-operatively.

OBSERVATION

Our clinical suspicion of Rhinosporidiosis was confirmed by histopathological examination which revealed respiratory epithelium lined tissue along with thick walled sporangia containing multiple endospores.

CONCLUSION

This case has been described here because of its rare presentation as proliferating mass arising from fistulous opening over the lacrimal sac without any obvious nasal complaints. Though nasal cavity is the most common site of involvement, it can have unusual presentations also.

KEY WORDS

Rhinosporidiosis, Medial canthus, Proliferating mass, Nasal obstruction, Epiphora

INTRODUCTION

Rhinosporidiosis is a chronic, non-contagious, localized infection of mucocutaneous surfaces. Rhinosporidium seeberi a fungus like protozoa parasite of the class Mesomycetozoea is the causative organism. (1/2)

It is a water-borne disease, usually occurring after swimming in stagnant lake or pond water. Trauma to the mucous membrane acts as a predisposing factor. From the nasal cavity, disease can spread to adjoining areas by direct continuity or to distant sites by finger contamination. (2/3)

Because of its rare occurrence, diagnosis is not usually apparent. The initial diagnosis include tuberculosis, nasal malignancy, or papilloma. Histological examination is required for confirmation of diagnosis. (3)

Surgery is the mainstay of management. Total excision preferably with electrocautery is recommended. It has an excellent prognosis with around 10% recurrences. Death occurs rarely, in cases of disseminated disease. (1/2)

CASE SUMMARY

A 42-year-old male presented in OPD with complaints of swelling under left eye and mass coming out from medial side of left eye for 3 months. The patient had no visual complains. There was no significant past, personal or family history. On examination, there was an ill defined, boggy swelling over left infra-orbital region without any inflammatory signs or associated pus discharge (fig 1). A separate reddish, friable fleshy mass, which bleed on touch was seen arising from left medial canthus. Initially it was looking like mass arising from skin but after examination it was pedunculated and was arising from an opening over the lacrimal sac area (fig 2). Anterior Rhinoscopy revealed a reddish mass on the floor of left nasal cavity. On probing, the mass was attached to lateral wall of nose. On nasal endoscopy, mass was visualised in inferior meatus (fig 3). The ophthalmological examination was within normal limits. Computed Tomography scan of nose and paranasal sinuses revealed soft tissue density in anterior part of left nasal cavity, nasolacrimal duct and lacrimal sac. (fig 4).

Fig 1- Preoperative photograph of patient showing reddish fleshy mass and infraorbital swelling (black arrow)

Fig 2- Pre-operative photograph of patient showing reddish mass arising from left medial canthus without any attachment to skin.

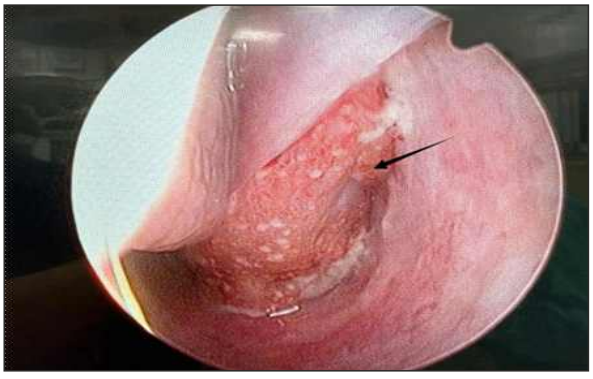

Fig 3- Endoscopic image showing reddish mass in left inferior meatus (black arrow) (1-Inferior Turbinate, 2- nasal septum)

Fig 4 and 5 - Computed Tomography image showing soft tissue content in left nasal cavity, nasolacrimal duct and lacrimal sac.

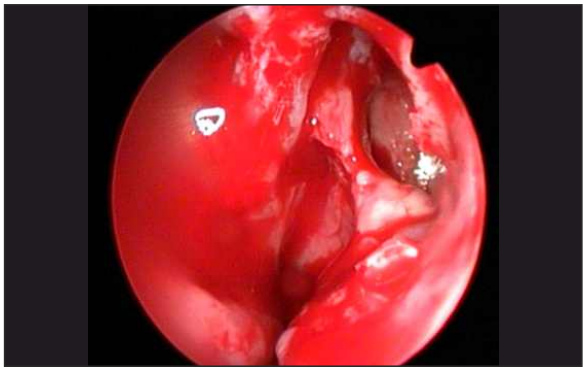

Fig 6- Intra-operative photo showing posterior wall of maxillary antrum and complete excision of medial wall of maxilla via Modified Denker's approach.

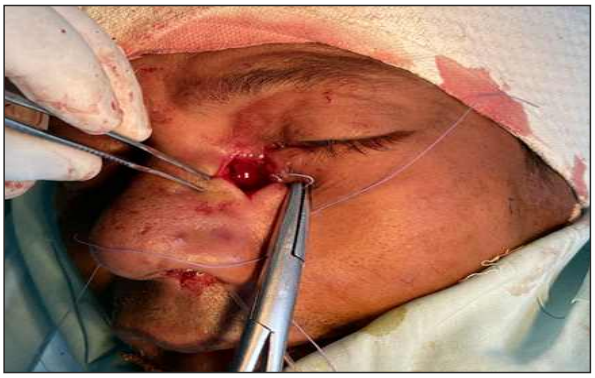

Fig 7- Surgical excision of lacrimal component via external route.

After complete pre-anaesthetic work-up, patient underwent surgery under general anaesthesia. A complete excision of nasolacrimal drainage system was done. Nasal component was managed endoscopically via Modified Denker's approach while the lacrimal component was excised via external route (Fig 6 and 7). Post-operative period was uneventful. Patient was given Dapsone 300 mg BD, per-orally for a period of 3 months.

Histopathological examination revealed respiratory epithelium lined tissue, interspersed with thick walled sporangia with multiple endospores, accompanied with mixed inflammatory infiltrate (fig 8). The findings were consistent with Rhinosporidiosis

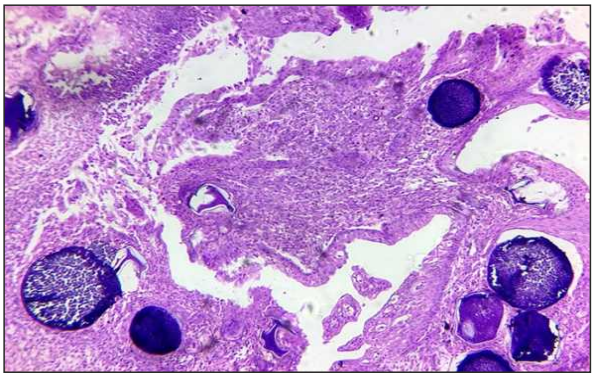

Fig 8- Histopathological image showing thick walled sporangia with multiple endospores.

DISCUSSION

Rhinosporidiosis is a parasitic infection caused by Rhinosporidium seeberi. It commonly affects the nose and nasopharynx and is characterized by reddish pink mulberry like polypoidal mass with a tendency to bleed. [2]

It has been reported in around 70 countries involving almost all the continents but its highest incidence and endemicity is in the tropical and subtropical regions. India and Sri Lanka is the main contributors accounting to 90% of cases. [4]

In aquatic and marshy environments, transmission occurs through contact with the free spores as compared to airborne spore transmission in arid areas.[4]

The mature form of the microorganism known as sporangia is a thick walled spherical structure which contains multiple sporangiospores. It ruptures and releases multiple sporangiospores. They come in contact with tissues and cause local invasion. they subsequently mature into trophocytes (early and late), and the cycle continues.[3,4]

The disease can occur in several forms:

1) Nasal- patient usually presents with a feeling of a foreign body along with unilateral obstruction and epistaxis. Although the lesion is initially sessile, it eventually progresses to friable, pinkish, peduncular polyps.
2) Ocular- This also begins as a sessile growth, later degenerating to friable peduncular polyps. Patient can present with eye redness, discharge, photophobia, lid eversion, and conjunctival infection.
3) Cutaneous- The lesions occur next to mucocutaneous tissues and rarely become peduncular.
4) Disseminated- Rarely, it can involve bone, liver, lung, spleen, and brain.[1]

Though patients of all age groups can be affected, the highest incidence is seen between 15 to 40 years. There is a male preponderance with a male to female ratio of approximately 3:1.[4]

Nasal mucosa is involved in 70% cases, followed by ocular involvement in 15% cases. Most common symptoms are nasal obstruction, nasal mass, and epistaxis. The soft, polypoidalreddish masses, are typically painless and bleed easily. The presence of whitish spots on the masses is a suspicious feature of the disease..[2,3]

Histological examination reveals a hyperplastic epithelium thick-walled sporangia just under the surface. Parasites in various stages of development can be seen, surrounded by vascularized fibromyxomatous connective tissue. Plasma cells, polymorphonuclear cells, lymphocytes, and histiocytes infiltratation can also be seen.1 (fig 8)

CT scan imaging typically shows a well-defined, lobulated, or irregular moderately enhancing soft tissue mass primarily centered in the inferior nasal cavity. The site of attachment of lesion plays determines the degree of blood supply and resultant enhancement. Polypoidal lesions arising from oropharynx, larynx, and bronchus show minimal enhancement as compared to nasal lesions.the lesion can spread from inferior meatus to the NLD, through which it can involve the lacrimal sac. There might be some bony changes such as irregularity, erosion of inferior turbinate,

thinning of medial wall of maxillary sinus, and septal erosion.[5]

Surgical excision along with cauterization of the base is considered as treatment of choice.Medical treatment has no role. However, Dapsone can be used as an adjuvant to surgery, which works by arresting the maturation of the sporangia and promotingstromal fibrosis. In our case, surgical excision was done via combined endoscopic and external approach following which patient was kept on Dapsone.(3)

Surgical treatment for ocular Rhinosporidiosis depends on the grading. Recurrence can occur following incomplete eradication of disease. Patients must be counselled regarding the need for follow up and routine diagnostic endoscopy, along with improvement in hygiene levels and avoidance of outdoor bathing to prevent disease. (2)

CONCLUSION

Rhinosporidiosis is an infectious disease. Typically, they present as reddish painless masses with tendency to bleed. There are no characteristic findings on CT scan but it can help in determining the extent of disease. The diagnosis can be confirmed only after histopathological examination. It mainly affects the nasal cavity. However, other sites can also be involved. In our case, patient presented with complaints of infra-orbital swelling and mass coming out from medial side of left eye, which was excised via combined endoscopic and external approach, following which patient was kept on Dapsone for 3 months. The histopathological examination was consistent with Rhinosporidiosis, which confirmed our diagnosis. Therefore, it should be considered as a differential diagnosis in atypical locations also.

DECLARATION

Ethics approval and consent to participate: No ethical approval is required

Author's contribution: All the authors contributed to the study conception and design.

Competing interests: The authors declare that they have no competing interests

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