Recurrent Rhinosporidiosis

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Abstract

Rhinosporidiosis is a rare, chronic granulomatous disease, caused by aquatic protistan parasite Rhinosporidium seeberi [1]. It affects predominantly mucous membrane of nose and nasopharynx but occasionally lips, palate, uvula, maxillary antrum, conjunctiva, lacrimal sac, epiglottis, larynx, trachea, bronchus, scalp, penis, vulva & vagina. In Nepal it occurs in Terai belt mainly Janakpur, Sarlahi & Rajbiraj districts. We report a case of recurrent rhinosporidiosis affecting nasal cavity, nasopharynx & oropharynx. Patient is 3 yrs old female from Janakpur who previously underwent surgical excision twice. She now presents recurrent, flesh like lesion at previous excision sites. This time surgical excision with base cauterization was done. Wide local excision with electro cauterization is the treatment of choice with postoperative systematic Dapsone that may be prescribed for up to 1 year. However, local recurrence remains a problem, likely secondary to auto-inoculation during the surgical trauma.

Introduction

Rhinosporidiosis is a rare chronic granulomatous disease, caused by the parasite Rhinosporidium seeberi [1-3]. The disease is commonly found in the anterior nares, the inferior turbinate, septum and floor of the nasal cavity; however, it can also affect extranasal sites including the oral cavity, trachea and uvula [1,4-11]. Infection is usually limited to surface epithelium but sometimes there may be wide dissemination with visceral involvement [11]. It is usually a result of direct traumatic inoculation with the organism. Trauma from surgery has also been cited as potential mode of transmission [1,7,9,10]. The disease progresses with local replication of R. seeberi and results in hyperplastic growth of host tissue and associated local immune response [1,2]. The disease is prevalent mainly in Nepal, Indian subcontinent [1,8], and Sri Lanka. Definitive guidelines regarding surgical and medical treatment are poorly covered in the literature. Although rare in other countries, immigration from areas of the world where it exists increases the likelihood of incidence of the disease [3]. We report a case of recurrent rhinosporidiosis in a Nepalese female affecting nasal cavity, nasopharynx & oropharynx, who presented with globus pharyngeus and dysphagia. Surgical excision & base cauterization was done.

Case Report

We present a case report of a 31yrs old female from Janakpur, Nepal, presented to Bir Hospital, 11 years ago with complain of dysphagia and feeling of lump in her throat. Her symptoms were progressive. Nasopharyngolaryngoscopy showed nasopharyngeal soft tissue mass. She underwent surgical excision & was on regular follow up. Seven years later she again presented to Bir Hospital with similar complaint. Nasopharyngolaryngoscopy showed signs of recurrent lesion in nasopharynx and left nasal cavity. She underwent excision of mass under General anesthesia & was better. She now presents with complains of lump in throat from past 4 yrs. She also had complains of bilateral nasal obstruction from past 3 months. Nasal obstruction was insidious in onset, gradually progressive complete and associated with pain over dorsum of nose, hyponasal voice, intermittent bleeding from bilateral nasal cavities, mouth breathing and excessive nasal discharge.

On examination, a flesh-like, reddish, exophytic and lobular mass was seen to occupy oropharynx (Figure 1). It was non-pulsating or expansile & did not bleed on touch. The mass had a pedicle attached to the nasopharynx, which suggested it to be its origin. The rest of his oral cavity was unremarkable. Anterior rhinoscopy showed bilateral pinkish polyposidal mass filling both the nasal cavities. The nasal mucosa was swollen, hyperemic, and covered with copious viscid secretion. On patency test, there was B/L decreased air entry. There was no cervical lymphadenopathy. Nasopharyngolaryngoscopy was performed which confirmed the origin of the lesion from uvula, soft palate & nasopharynx. Further evaluation with a CT scan demonstrated soft tissue density in Right nasal cavity (Figure 2).
She was planned for surgical excision. Under General anesthesia, patient was placed in supine in Reverse trendelenberg position. Root of the tumor in the nasopharynx was exposed by placing Boyles Davis mouth gag with tongue blade. Nasopharyngeal mass was excised transorally using monopolar suction cautery (Figure 3). Zero degree rigid endoscope was inserted through nasal cavity to assess pathology of mass. Polypoidal mass in bilateral nasal cavities were excised and sent for histopathological examination. Attachment sites of mass cauterized with monopolar cautery. Bilateral posterior nasal packing placed. Per operative finding showed pale polypoidal mass along with some pinkish masses with irregular surface and few sporangia on them (Figure 4) with multiple attachments:

- a) Posterior surface of uvula
- b) Superior surface of soft palate
- c) Poster superior wall of nasopharynx
- d) Around margin for of bilateral choana
- e) In right nasal cavity: attachment is along anterior half of superior turbinate
- f) In left nasal cavity: attachment is along inferior surface of bulla.

Patient was advised with Dapsone 50mg PO OD for 3 months. Follow-up evaluation 3wks later with nasopharyngolaryngoscopy demonstrated no local recurrence.

Discussion

The mode of treatment for rhinosporidiosis has widely been anecdotal with little literature to support it [3]. Wide local surgical excision with electrocauterization of the base of the lesion is the treatment of choice [1-7,9,10]. Additionally, systematic dapsone may be prescribed for 1 year to prevent recurrence. Its mechanism is shown to arrest the maturation of sporangia and promote fibrosis in stroma [1-7,9]. There is a greater paucity of literature for the treatment of recurrent disease [3]. Surgery is effective at removing the lesion; however, resection with electrocautery can potentially cause localized tissue trauma that potentiates the possibility for inoculation [1,5]. Our patient had an uneventful surgical resection with the use of monopolar suction cautery. The Harmonic scalpel has been described in the literature to have superior hemostasis while preserving the integrity of local tissue [3,11].

Conclusion

In this case report, the identification of recurrent rhinosporidiosis re-emphasized the importance of combined
surgical and medical treatment to decrease local recurrence \[3,12,13\]. Incomplete removal & lack of base cautery is the major cause of recurrence of rhinosporidiosis. Dapsone has been shown to reduce the rate of recurrences. However its mechanism of action is unknown.

References