Endoscopic Excision of Recurrent Rhinosporidiosis

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Introduction

Rhinosporidiosis is a chronic disease with frequent recurrence after surgery and occasional dissemination which is commonly seen in upper respiratory sites. It occurs worldwide, although it is endemic in South Asia with highest incidence from India and Sri Lanka. Surgery is the mainstay of treatment. A case of recurrent and extensive rhinosporidiosis managed by endoscopic surgery combined with laser is presented.

Case Report

A 39 year soldier reported with the history of right sided epistaxis of two years duration. He had undergone conventional nasal surgery for excision of rhinosporidiosis nasal mass in various peripheral hospitals in the past. Clinically he had a friable polypoidal mass arising from right middle turbinate and inferior turbinate, with white spots on the under surface giving it a classical strawberry appearance of rhinosporidiosis. He also had a large septal perforation attributable to previous surgeries. Nasal endoscopy also revealed a similar bulky polypoidal mass in the nasopharynx attached to the posterior wall (Fig. 1). This extension could not be seen by anterior rhinoscopy. Biopsy from the mass confirmed it to be rhinosporidiosis.

In view of the recurrence, endoscopic surgery under general anaesthesia was done. The throat was packed using ribbon gauze soaked in 1% povidone iodine. Complete excision of the nasal mass along with its nasopharyngeal extension was done and the base was cauterized with Nd YAG Laser (20 watt pulse). He was started on dapsone therapy after surgery for three months. He made uneventful recovery. On one year follow up after surgery he did not have any recurrence.

Discussion

Rhinosporidiosis is thought to be caused by *Rhinosporidium seeberi*. The taxonomy of causative agent is unclear, though most microbiologists consider it as fungus. Recently Ahluwalia et al [1,2], hypothesized

that causative agent was not a fungus but a prokaryotic cyanobacterium *microcystis aeruginosa*, based on the findings that this organism was isolated from both clinical specimens of patient and the pond water samples where they had bathed [1,2].

The presumed mode of infection from natural aquatic habitat of *Rhinosporidium seeberi*, is through traumatized nasal epithelium ('transepithelial infection'). The occurrence of Rhinosporidiosis in river sand workers in India and Sri Lanka is partially relevant to such a mode of infection through abrasions caused by sand particles with the pathogen in putative habitat-ground water. "Auto-inoculation" was considered by Karunaratne [3] as the explanation for the occurrence of satellite lesions adjacent to granulomas especially in the upper respiratory sites and for local spread. Spillage of endospores from polyp after trauma or surgery is thought to be followed by autoinoculation through the adjacent epithelium. Majority of the cases are sporadic. An isolated outbreak of ocular and nasal rhinosporidiosis was reported in Serbia [4].

The cases generally involve anterior nares, inferior turbinate, septum, floor, nasopharynx, larynx and soft

Fig. 1 : Endoscopic view of rhinosporidiotic mass in nasal cavity and nasopharynx

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palate. Urethral, vaginal, rectal, conjunctival mucosa, skin and lacrimal sac may also be involved rarely.

Surgical excision with cautery of base of lesion has been attempted to reduce the risk of recurrence and various medical therapies including antifungals been tried with good response [5]. Dapsone (4, 4 diamino diphenyl sulphone) is the only drug with anti-rhinosporidial effect. It arrests the maturation of sporangia and promotes fibrosis in the stroma, when used as adjunct to surgery [6].

Good results without recurrence with the use of endoscopic surgery have been reported [7]. KTP-532 laser has also been used for cauterization and vaporization on rhinosporidiosis mass [8]. It is felt that in our case nasopharyngeal mass could have been missed in the previous surgeries. The use of endoscope in such cases helps in removing the entire mass which can not be seen by anterior rhinoscopy/conventional surgery. The physical contact of the tissue with laser is less and hence the chances of seeding are reduced. Laser and endoscopic excision promises to be mainstream treatment of nasal/nasopharyngeal rhinosporidiosis in the future.

Conflicts of Interest

None identified

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Journal Scan

C Marti –Page's E. Garci'a-Di'ez L. Garci'a-Arana D. mair M. J. Biosca, X. Gimeno-Medina F. Herna'ndez-Alfaro: Minimal incision in parotidectomy. *Int J Oral Maxillofac Surg* 2007; 36: 72-6.

Conservative parotidectomy is an effective and well established technique for the treatment of parotid gland pathology with various complications. The facelift incision improves scar appearance compared to the classic bayonet-shaped incision by eliminating musculoaponeurotic system (SMAS) flap and helps in maintaining facial symmetry, dissimulating the post-parotidectomy retromandibular depression. The incidence of Frey's syndrome has been reduced due to this flap. One of the main objectives in treating benign parotid pathology is preservation of facial nerve. Limited resections with safety margins continues to be controversial. Such resections diminish surgical trauma to the nerve, improve aesthetic results and maintain pre and retroauricular incision with no extension to the hair bearing skin.

This is a retrospective study of 32 parotidectomies which include sixteen superficial parotidectomies, 11 partial parotidectomies, four total parotidectomies and one accessory parotid gland resection performed through this incision from July 2003 until July 2005 at

the Teknon Medical Centre (Barcelona, Spain) and Hospital General de Catalunya (Barcelona, Spain). There were only three complications of haematomas, seromas and transient facial nerve dysfunction. The advantage of extending through the rhytidectomy incision increases the surgical field very slightly but gives a good aesthetic result, hiding the incision in the hair. If a wider surgical field is needed, the extension can be made through the cervical region, leaving a more visible scar. Minimal incision is not the goal of treatment but rather a safe parotidectomy, with a good view of the facial nerve, removing the tumour with safety margins and avoiding capsule rupture and tumour spillage. The SMAS flap avoids a sunken facial appearance and outlines the angle of the mandible better. No patient suffered permanent injury to the facial nerve and transient temporal facial paralysis completely recovered within two months. This technique can only be used for if tumours are not superficial and involve the SMAS itself.

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