CASE REPORT

Rhinosporidiosis: A Surgeon’s Nightmare

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ABSTRACT

Aim and objective: To assess the role of the coblation method in excision of nasal rhinosporidiosis.

Background: Rhinosporidiosis is a granulomatous disease caused by Rhinosporidium seeberi. The most common areas affected are nasal mucosa, ocular conjunctiva, and other mucosae with high chances of recurrence. Among these, the most common area affected is nasal mucosa.

Case description: We present you a case of a 55-year-old man with recurrent nasal rhinosporidiosis, operated 6 times earlier, with recurrence every time within a span of 2–3 months. The patient was then operated on by coblation method and was followed up for 1 year, postoperatively. No recurrence was seen in any follow-up.

Conclusion: Coblation technology is a novel and better technique for the excision of rhinosporidiosis with fewer chances of recurrence.

Clinical significance: The use of coblation for the excision of rhinosporidiosis is a better technique than other methods as it causes less thermal damage to surrounding tissue and less bleeding, prevents spillage to adjacent mucosa, and therefore fewer chances of recurrence.

Keywords: Coblation, Endoscopic surgery, Rhinosporidiosis.

BACKGROUND

Rhinosporidiosis is an uncommon chronic granulomatous infection that affects the nasal mucosa, ocular conjunctiva, and other mucosae. The causal agent is Rhinosporidium seeberi which forms characteristic abundant, large thick-walled sporangium-like structures containing a large number of endospores.1

The disease is most commonly seen in southern India and Sri Lanka, but sporadic cases have been reported from East Africa, Central and South America, Southeast Asia, and other parts of the world.2

The nose is the commonest site of rhinosporidiosis. The fungus causes the production of large sessile or pedunculated lesions that affect one or both nostrils. Nasal rhinosporidiosis infection is insidious in onset and the patient remains unaware of its existence till the patient develops obstruction. The lesions are pink, red, or purple in color and in most cases, the general health of the patient is not affected. The confirmatory diagnosis is by histopathological examination of tissue sections which reveal large, round, or oval sporangia up to 30 μm in diameter. The largest sporangia are filled with spores.3

We present to you a case of recurrent rhinosporidiosis who came to our center with complaints of nasal blockage and recurrent epistaxis. The patient had been operated on six times earlier at different centers but with recurrence every time within a frame of 2–3 months. Coblation-assisted excision of rhinosporidiosis was performed on the patient and postoperative evaluation was done for up to 1 year. No signs of any recurrence were seen.

CASE DESCRIPTION

A 55-year-old male patient came to our center with complaints of nasal blockage and recurrent epistaxis. The patient had been operated on six times earlier at different centers but with recurrence every time within a frame of 2–3 months. Coblation-assisted excision of rhinosporidiosis was performed on the patient and postoperative evaluation was done for up to 1 year. No signs of any recurrence were seen.

Fig. 1: Endoscopic image of nasal mass

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was seen in the nasopharynx. No growth or mass was seen in the larynx.

Under proper aseptic conditions, the patient was taken up for coblation-assisted excision of rhinosporidiosis under general anesthesia. Intraoperative findings revealed a polypoidal nasal mass arising in the left nasal cavity and lateral wall of the left nostril and extending up to the right nasal cavity. Complete excision of the mass was done and the base was ablated. EVAC 70 and Procise Xp coblation wands were used during the surgery (Fig. 2). The mass was then sent for histopathological examination.

Postoperatively, the patient was started on Tab. dapsone (100 mg) once a day and Tab. doxycycline.

The histopathological report suggested rhinosporidiosis. He was kept on Tab. dapsone (100 mg) once a day for a year. The patient was regularly followed for up to 1 year with endoscopic examination done on 1st month (Fig. 3), 6 months (Fig. 4), and 1 year (Fig. 5) postoperatively. There were no signs of recurrence in any of the follow-up.

**DISCUSSION**

Rhinosporidiosis is a condition that was initially described by Seeber in 1900, an individual from Argentina. The etiologic agent, *R. seeberi*, has never been successfully propagated *in vitro*. Initially thought to be a parasite, for >50 years *R. seeberi* had been considered to be a water mold.

Molecular biological techniques have more recently demonstrated this organism to be an aquatic protistan parasite, and it has been placed into a new class, the Mesomycetozoea, along with organisms that cause similar infections in amphibians and fish.

The term coblation is derived from “Controlled ablation”.

The procedure involves a non-heat driven process of soft tissue dissolution using bipolar radiofrequency energy under a conductive medium like normal saline. When current from the radiofrequency probe passes through a saline medium, it breaks saline into sodium and chloride ions. These highly energized ions form a plasma field that is sufficiently strong to break organic molecular bonds within soft tissue causing its dissolution.

Coblation has been recently used frequently to treat various conditions of otorhinolaryngology. The use of coblation in the excision of rhinosporidiosis has not been widely used till now and is a novel technique.

In a study conducted by Nichlani et al., the lesion was excised using a diode laser with a follow-up of 1 year. No recurrence was seen in the patient.
**Conclusion**
Coblation is a newer and better technique in the excision of rhinosporidiosis. As it is done at a temperature of around 60°C, which is far less than the other methods like laser, chances of thermal damage decrease with minimal bleeding intraoperatively and therefore fewer chances of contamination and recurrence.

**Clinical Significance**
Rhinosporidiosis if not treated early and with the right technique, is a very difficult disease to treat because of its high susceptibility to recurrence and its tendency to spread to the adjacent areas. The coblation method is a newer and alternate method to excise the polyps in rhinosporidiosis. Precise cutting and good postoperative results have made this technique one of the most emerging techniques for the treatment of rhinosporidiosis, for nasopharyngeal, oropharyngeal, and laryngeal masses.

**Compliance with Ethical Standards**

Informed Consent
Informed consent was obtained.

Ethical Approval
All procedures performed involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

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