Enigma of Rhinosporidiosis

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Rhinosporidiosis

- A slow growing, chronic lesion
- Caused by *Rhinosporidium seeberi* or *kinealyi*
- Predominantly affects the mucus membranes of the nose and nasopharynx.
- Strawberry-like, fragile polypoidal mass.
- Affecting mainly young males.
- 95% cases are cited from India and Sri Lanka.
Rhinosporidiosis

- The condition commonly involves the nose, nasopharynx, lacrimal sac, larynx and conjunctiva in that order of frequency.
- The infection is transmitted to humans by direct contact with spores via dust, infected clothing or swimming in stagnant water contaminated with spores.
- The involvement of tracheo-bronchial tree is very rare, having been reported in occasional case reports.
**Rhinosporidium seeberi**

- Previously considered to be a bizarre fungus
- The etiological agent Rhinosporidium seeberi, in recent studies has been established as an aquatic protistan parasite.
- Currently included in a new class, the Mesomycetozoa, along with organisms that cause similar infections in amphibians and fish.
Epidemiology

- Source: stagnant water, Horse and cattle dung.
- Mode of transmission: Dust borne / Water borne
- Climate: hot and humid
- Geographical distribution: Indian & Sri Lanka
- Age: 10 to 40 years
- Sex: Male > females: 4 : 1
- Occupation: Farmer
Site of occurrence

Localized:
- Nasal (78%)
- Nasopharyngeal (16%)
- Mixed (naso-nasopharyngeal, nasolacrimal) (05%)
- Bizarre (Conjunctival / Tarsal / Cutaneous) (rare)

Generalized:
Nodulo-ulcerative lesions all over the body but mainly on the face, thorax and extremities (rare)

Recurrence: very common due to escape of spores in sub epithelial tissues & also due to incomplete removal.
Clinical features

- Nasal obstruction, Epistaxis, Rhinorrhoea, Headache (due to sinusitis)
- Nasal mass may be visible through anterior nose.
- Mass arise from mucocutaneous junction near nasal vestibule.
- Nasal mass is papillomatous or polypoid, granular, friable, bleeds on touch, pedunculated or sessile
- Pink surface is found to be studded with white dots: Strawberry appearance.
Differential diagnosis

- Infected Antrochoanal polyp
- Inverted Papilloma
- Rhinoscleroma
- Tuberculosis
- Leprosy
- Fungal (aspergillosis, mucormycosis)
- Malignancy of nose / paranasal sinus
Histopathological study

- Well defined cysts with hyperplastic epithelium.
- Large sporangia approach 300 um in diameter containing spores those mature at different rates.
- Mature sporangiospores are approximately 7-9 um in size and escape through a pore that develops in the sporangial wall.
- Polymorphonuclear inflammatory reaction with abscess formation, and some tissue necrosis.
- Granulation tissue and scarring
Medical Treatment

- Diaminodiphenyl sulfone (Dapsone).
- Dapsone arrests maturation of spores (inhibits folic acid synthesis) & increases granulomatous response with fibrosis.
- 100 mg OD orally (with meals) for one year.
- Side effects: Methemoglobinemia & anemia.
- Supplements: Iron & Vitamins.
Surgical procedure

- Local surgical excision: the treatment of choice.
- Under general anesthesia with Oro-tracheal intubation. 2% Xylocaine (with 1:200,000 adrenaline) infiltration
- Wide excision with electro coagulation of the base has been promoted to decrease recurrences
- Endoscopic surgery helps to identify base and prevent recurrences.
- Laser excision causes minimal bleed
- Postoperative follow-up must be made on a long-term basis for the risk of recurrences.
NASAL & NASOPAHRYNGEAL Rhinosporidiosis

NASAL FLOOR

NASOPAHRYNGEAL
EXTRA NASAL – DACRYOCYSTITIS

Chronic

Acute
EXTRA NASAL
CHEEK CYST – Nasal Mass extending into CHEEK

CHEEK MASS – from Nose

4/7/2013 Dr Rakesh Gupta, Dr Sudhakar Vaidya
EXTRA NASAL dacryocystitis
HUGE Rhinosporidiosis MASS
Rhinosporidiosis Nose
Rhinocystis Nose
Surgical Specimen
Rhinosporidiosis  Nasopharynx
Rhinosporidiosis Nose