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Letter to Editor

Pathology Section

A Rare Case of Disseminated Cutaneous Rhinosporidiosis

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A 22-year-old male student came to the surgery department of a tertiary care hospital in South, Tamil Nadu (India) with complaint of recurrent multiple subcutaneous swellings, presenting as tumour like nodules, biggest over the anterior abdominal wall measuring 12 cm in diameter [Table/Fig-1,2]. The nodules were big, disfiguring and some of them showed ulceration. Clinically the patient was symptom free. Blood investigations done showed no signs of immune suppression. Internal organs were free of any lesion in CT. He had past history of surgery for nasal mass seven years back. He developed all these masses since 10 y. He also developed mental depression due to disfiguring masses and had been on antidepressant therapy for the same. The biggest mass in the anterior abdominal wall was surgically excised.

Gross examination of the excised mass from abdomen wall [Table/Fig-3] showed a nodular, firm, solid, whitish mass measuring 12 x 12 x 6 cm just below the skin.

Histopathological examination of the sections showed hyperplastic stratified squamous epithelium with underlying subcutis enclosing many well-defined thick walled sporangia of varying shapes. The sporangia were in various stages of development and showed many endospores inside [Table/Fig-4-7]. Immature and collapsed sporangia were also present.

Rhinosporiodosis is a chronic granulomatous disease [1]. The causative organism was first reported by Malbran but later described by Guellermo Seeber and hence its name, *Rhinosporidium seeberi*. Few authors have suggested cyanobacterium Microcystis aeruginosa as the causative agent [2] for rhinosporidiosis.

It is more commonly seen in men than in women [3,4]. Bathing in water bodies like lakes filled with stagnant water in areas endemic for Rhinosporidiosis has been considered as a major risk factor [5] because *Rhinosporidium seeberi* is an aquatic parasite [6]. In India, the disease is reported to have higher prevalence in West Bengal and Tamil Nadu [7,8].

Rhinosporidiosis can manifest in various forms as nasal, ocular, mucosal, cutaneous or disseminated (rare) [9]. Dissemination to anatomically unrelated sites is mainly attributed to haematogenous spread [5]. Disseminated cutaneous lesions are very rare [10-12] and are generally associated with mucosal lesions [9]. About 20 cases of disseminated cutaneous rhinosporidiosis have been reported in the literature till date [4]. Ours is one such case. Cutaneous rhinosporidiosis present as warty papules or nodules with whitish spots, crusting, and bleeding on the surface. Careful inspection of the surface of warty lesions and concurrent or previous history of nasopharyngeal lesions usually help in the diagnosis of cutaneous rhinosporidiosis.

Three types of skin lesions can occur: [9]

(1) Satellite lesions, in the skin adjacent to the nasal Rhinosporidiosis;

(2) Generalized cutaneous type with or without nasal involvement, occurring through hematogenous dissemination of the organism;

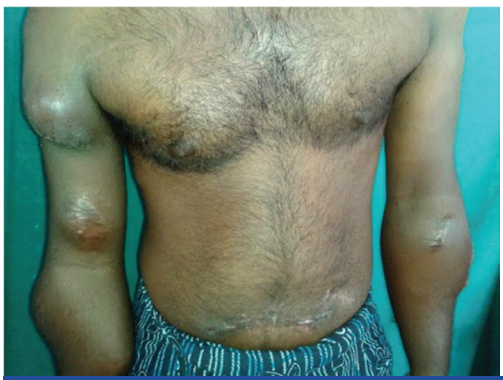
(3) Primary cutaneous type associated with direct inoculation of organisms on to the skin [13].

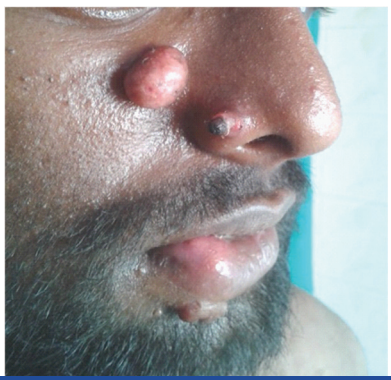
Our case belong to generalised Cutaneous type of Rhinosporidiosis.

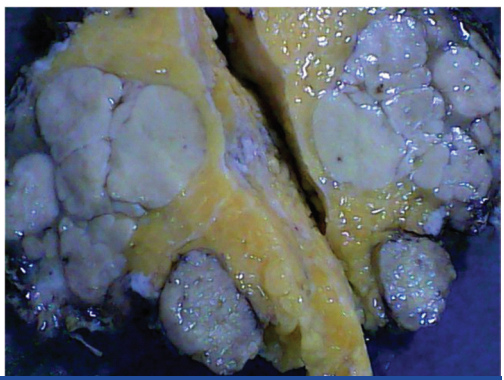
The various clinical differential diagnoses include warts, verrucous tuberculosis and granuloma pyogenicum [9]. Microscopically it has to be differentiated from Coccidiomycosis which would show spores of smaller size (less than 60 mu in diameter).

R seeberi cannot be isolated in synthetic media,but it grows well in cell culture. Recent studies have shown the importance of performing aspiration cytology in such cases for early diagnosis [4,5]. The diagnosis can also easily be clinched by performing a Giemsa-stained imprint smear [9]. However, histopathology is essential for a definitive diagnosis of Rhinosporidiosis [4].

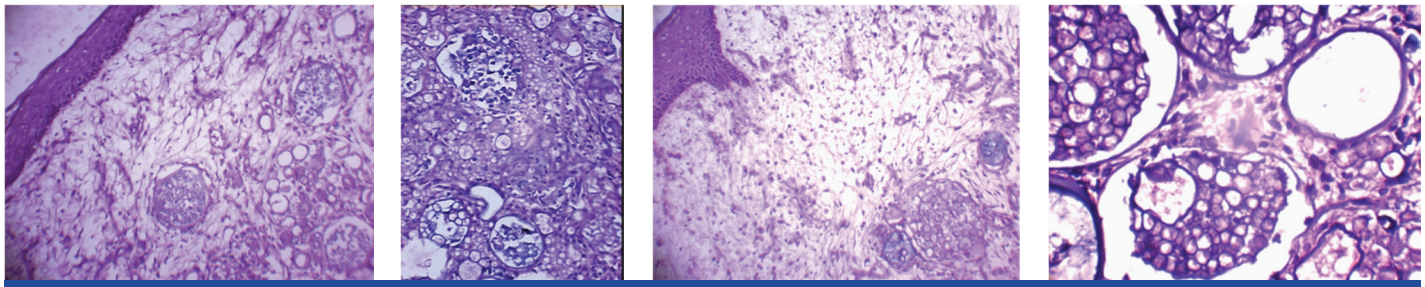
The treatment for rhinosporidosis consists of surgical excision followed by cauterization of the base. Medical therapy with Dapsone has proved beneficial. Our patient, who had a pharyngeal lesion, which was surgically excised came with recurrent multiple disseminated cutaneous lesions. Development of a cutaneous lesion may be an indication of early dissemination and thorough search should be made to exclude systemic involvement. However, our patient did not reveal any systemic lesions.







[Table/Fig-1]: Multiple disfiguring tumour like nodules over the body **[Table/Fig-2]:** Multiple disfiguring tumour like nodules over face **[Table/Fig-3]:** Gross appearance of the excised abdominal mass



[Table/Fig-4,5]: Microscopic appearance (H&E 5X) showing skin overlying large sporangia with numerous endospores in different stages of development
[Table/Fig-6,7]: High power view (H&E 20X and 40X)showing skin with underlying thick walled sporangia containing spores

Our case was treated with excision diathermy and dapsone therapy, despite the fact that it is quite ineffective. This case is presented for its rarity and also to highlight its presentation as Cutaneous and pharyngeal lesions.

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