Polymorphic ecthymatoid dermosporidiosis

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ABSTRACT

We report the case of a young Chhattisgarhi male with polymorphic dermosporidiosis (cutaneous rhinosporidiosis). He had multiple subcutaneous nodules and an ecthymatoid skin lesion along with nasal rhinosporidiosis. The diagnosis was confirmed by demonstration of sporangia with endospores in fine-needle aspiration cytology (FNAC), histopathology, and imprint smear from the skin lesions. Treatment was by surgical excision, electrocoagulation, and dapsone. There was no recurrence. Dermatologists should be aware of the diverse cutaneous manifestations of this primarily nasal disease. This is the second published report of polymorphic dermosporidiosis, and the first one reporting an ecthymatoid lesion.

Key Words: Dermosporidiosis, Rhinosporidiosis, *Rhinosporidium seeberi*

INTRODUCTION

Rhinosporidiosis usually presents to the otolaryngologist as friable polyp/s on the nasal mucosa with a history of bleeding. The disease has been reported from several parts of the world; it is endemic in Sri Lanka and the southern parts of India. Interestingly, a number of cases of cutaneous and nasal rhinosporidiosis have been previously reported from Chhattisgarh State in India.[1-5]

CASE REPORT

A 20-year-old villager presented with multiple asymptomatic skin lesions on his right leg of 8 months' duration. There was a history of bleeding off and on from his nose since the last 1 year. There was no history of local application to the leg lesion and no family history of similar skin lesions or of any nasal problem. Since early childhood he was accustomed to bathing in the common village pond, in which cattle were also watered and bathed.

Cutaneous examination showed a nontender, firm, mobile subcutaneous swelling about 7 cm × 3 cm in size over the lateral aspect of his right thigh. The overlying skin was stretched, erythematous without any rise in local temperature. A similar smaller swelling was seen on the anterior aspect of his right thigh near the knee. A thickly crusted, dry, ecthymatoid, hyperpigmented, and firm plaque was seen over the middle part of his right leg on its lateral aspect [Figure 1]. Nasal examination showed a bright red, granulomatous, polypoidal lesion in the left nares of about 0.2 cm diameter. There was no lymphadenopathy.

Figure 1: Subcutaneous nodules over thigh and ecthymatoid ulcer over leg

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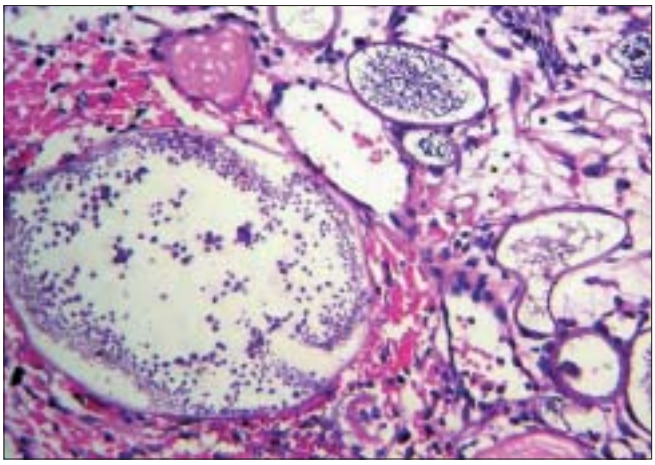

Figure 2: Histopathology showing multiple sporangia with endospores in the dermis (H & E stain, ×400)

Systemic examination, routine hematology, and x-ray of the limbs were normal. Fine needle aspiration cytology and histopathology from the bumpy lesion and imprint smears from an erosion underneath the ecthymoid lesion revealed multiple sporangia with several endospores [Figure 2]. The skin and nasal lesions were excised, with electrocautery of the base. He was also put on tablet dapsone, 100 mg daily. There was no recurrence during the 7-month follow-up period.

DISCUSSION

The causative organism of rhinosporidiosis, *Rhinosporidium seeberi* has now been demonstrated to be an aquatic protistan parasite of the Mesomycetozoea class along with organisms causing similar infections in amphibians and fish from the DRIPs clade.[6]

Rhinosporidiosis is more common in males, probably due to their increased chances of exposure, and is usually seen between the second and the fourth decade.[4] The exact mode of its transmission is unclear, but it might be acquired through contaminated dust, water, infected clothing, or fingers. Exposure to stagnant water, bathing in ponds where cattle are also bathed, and repeated trauma have been blamed for its acquisition.[1-3,7]

Cutaneous rhinosporidiosis may occur as satellite lesions of the nasal papillomas, in the form of disseminated lesions with or without nasal involvement, or as primary skin lesions.[5] They may spread to other parts of the body by inoculation of the organism through scratching and through blood, as has been suggested earlier.[3,7]

Various types of skin lesions of rhinosporidiosis have been described earlier.[1-3] They may resemble verruca vulgaris, tuberculosis verrucosa cutis, granuloma pyogenicum and, on the genitalia, venereal warts or donovanosis.[1,5] The term 'dermosporidiosis' has been suggested by the author in a recent publication to denote rhinosporidiosis with predominant skin lesions, which might present to the dermatologist.[2]

The location of cutaneous rhinosporidiosis over the cooler sites of the body (over the leg in the present case) might be because the organism needs lower temperatures (23°C) for optimum growth.[8] The present patient had both nodular as well as ecthymatoid skin lesions. Scratching or minor trauma might have led to the discharge of infectious material from the bigger lesions, resulting in an ecthymatoid lesion. Disseminated skin lesions and systemic involvement in rhinosporidiosis have also been reported, which may be due to direct infection, finger-borne autoinoculation or, rarely, due to a hematogenous spread.[7,8]

The coexistence of bumpy and verrucoid skin lesions in the same patient and at the same site has been documented earlier.[3] However, ecthymatoid skin lesions of cutaneous rhinosporidiosis as seen in this case have not been described earlier. The present report reemphasizes the diverse cutaneous manifestations of rhinosporidiosis, aptly designated as dermosporidiosis.

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