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RHINOSPORIDIOSIS MASQUERADING AS SOFT TISSUE SARCOMA: A RARE TUMORAL CUTANEOUS PRESENTATION

General Surgery

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ABSTRACT

We report a case of a 56-year-old male who presented with a large, rapidly enlarging mass over his right thigh that was initially misdiagnosed and managed as filariasis. The lesion progressed rapidly and developed surface ulceration and bleeding. USG and MRI was suggestive of a soft tissue tumor. Wide local excision was performed, and histopathology revealed Rhinosporidiosis, a rare presentation as a solitary tumoral cutaneous lesion. Despite complete excision and postoperative dapsone therapy, he developed recurrent lesions on the back five months later. This case underscores the importance of considering infectious lesions mimicking as neoplastic soft tissue masses in endemic areas, and hence the significance of prompt use of histopathology, and the challenging management and recurrence risk of tumoral cutaneous rhinosporidiosis(1,2).

KEYWORDS

Pedunculated soft tissue mass, Surgical excision, Recurrence, Cutaneous Rhinosporidiosis

INTRODUCTION

Rhinosporidiosis is known for over a centuary and was first described in Argentina. The etiologic agent, Rhinosporidium seeberi, is closely related to several fish pathogens. It is an aquatic protozoan and was previously considered to be a fungus, however its taxonomic position is unclear. The infection commonly affects nasal mucous membranes and ocular conjunctiva of humans and animals, producing slowly growing masses that degenerate into pink to purple and friable polyps. Four forms of the disease are recognized, which includes nasal, ocular, cutaneous and disseminated (rare)[1]. Infection of the nose and nasopharynx is observed in 70% of patients of Rhinosporidiosis. Infection of the palpebral conjunctivae or associated structures (including the lacrimal apparatus) is observed in 15%. Cutaneous lesions are infrequent and are generally associated with mucosal lesions. Final diagnosis is mainly clinical and histopathological, with surgical excision being the primary mode of treatment. Cutaneous lesions are rare in occurrence, usually caused by hematogenous dissemination.[2]Both hematogenous and lymphatic spread could cause generalized cutaneous lesions, while direct inoculation results in the primary type.[3] The multifaceted presentation of cutaneous rhinosporidiosis includes sessile polyps, subcutaneous nodules, cutaneous horn, verruca vulgaris like, and ulcerated lesions, causing diagnostic dilemma to the unsuspecting physician.

Geographical Distribution: Rhinosporidiosis is most commonly found in India and Sri Lanka, with sporadic cases reported in Africa, the America, and other parts of Asia.

Mode of Transmission: The exact mode of transmission is not fully understood, but it is believed to occur through contact with contaminated water, soil, or dust. Bathing in stagnant water bodies is a significant risk factor.

Case Study

A 56 year gentleman presented with a progressively enlarging, painless swelling over his right thigh for 2 years. He first noticed a 2x2 cm lesion two years ago, which increased slowly and was initially managed as filariasis following cytology report. In the last three months, the swelling increased in size, reaching 15x15 cm, and developed surface ulceration with blood discharge. There was no history of fever, trauma, restricted movement, similar lesions elsewhere, or significant comorbidities. Examination revealed a solitary, broad-based pedunculated swelling (15x12 cm) over the medial right mid-thigh, with erythema, edema, and a 1x1 cm ulcer showing blood and necrotic discharge. The mass was non-tender, not fixed to muscle, and regional lymph nodes were not palpable.

Systemic examination was normal. Blood tests showed leukocytosis (TLC 11,390/mm³) and anemia (Hb -10.2 g/dL), with negative viral markers; coagulation study was normal. Ultrasound demonstrated a heteroechoic, subdermal mass with internal vascularity and debris. MRI revealed an exophytic, well-defined, STIR hyperintense, T1 hypointense, solid lesion (85x71x32 mm) in the subcutaneous fat of the right thigh, sparing muscle—findings highly suspicious for soft tissue malignancy. Histopathological evaluation confirmed rhinosporidiosis, characterized by numerous sporangia and endospores of Rhinosporidium seeberi, chronic inflammation, and a giant cell reaction. The postoperative course was uneventful; the drain was removed on day nine, and he was discharged on day twenty with dapsone 100 mg daily prescribed for six months. At five months follow-up, the patient presented with multiple new swellings over the left upper back, each occasionally bleeding and discharging. On examination, there were a cluster of multiple pedunculated swellings in the infra-scapular region of varying size (4 × 4 cm, 2 × 2 cm, 1 × 1 cm), nontender, with no surrounding skin changes but active discharge. Intraoperatively, two papillomatous lesions were identified (the larger 6 × 4 cm, showing necrosis and bleeding, the second 0.5 × 0.5 cm), both firm, along with a lateral subcutaneous cystic swelling. Histopathology of these recurrent lesions again confirmed rhinosporidiosis, with features of Rhinosporidium seeberi involving both epidermis and dermis, accompanied by extensive foreign body giant cell reaction. The patient underwent complete excision of the recurrent lesions, with continued follow-up for further recurrence.

DISCUSSION

Cutaneous rhinosporidiosis is rare and may closely resemble soft tissue tumours, creating diagnostic

Figure 1: Pre operative, surgical site after wide local

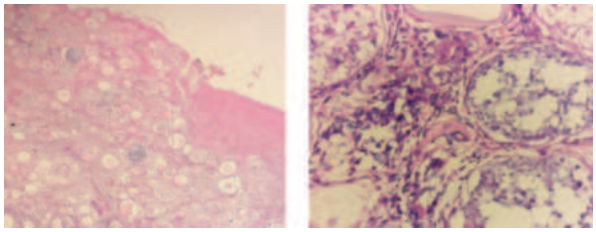

Figure 2: Numerous sporangium in different stages of maturation & released endospores.

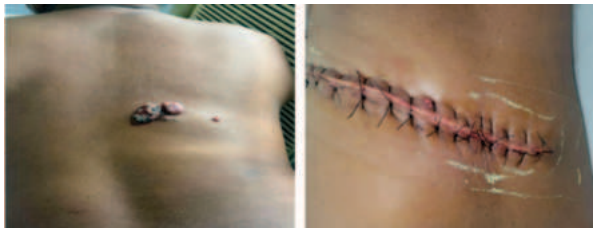

Figure 3: Recurrent lesion on the back with multiple subcutaneous nodules, post-operative sutured incision.

DISCUSSION

Cutaneous rhinosporidiosis is rare and may closely resemble soft tissue tumours, creating diagnostic uncertainty. Presentation as a large, rapidly growing, ulcerated lesion is extremely uncommon; suspicion often only arises after treatment-resistant progression and imaging suggestive of neoplasia. Histopathology remains the diagnostic gold standard, displaying characteristic sporangia/endospores in a granulomatous and giant cell background[1,2]. Wide excision is the mainstay of management, with dapsone as adjuvant therapy to reduce recurrence by inhibiting sporangial maturation and inducing stromal fibrosis[2,3]. However, recurrence rates remain high, as seen in this case. For patients in endemic areas, clinicians should maintain a broad differential, including rare infectious processes, for atypical or rapidly changing soft tissue masses[4,5,6].

CONCLUSIONS

Cutaneous rhinosporidiosis can closely mimic soft tissue malignancy, especially when presenting with rapid growth and ulceration. Histopathology is essential for diagnosis of atypical, rapidly enlarging soft tissue masses.

Wide excision is first-line therapy; adjunctive dapsone may reduce recurrence, but relapse remains common. (1,3) Clinical suspicion should be high for infectious mimics in patients from endemic regions, especially when empirical management fails (4,5,6). Prevention should prioritize patient education regarding avoiding exposure to stagnant/contaminated water.

REFERENCES:

[1] Sen S, Agrawal W, Das S, Nayak PS. Disseminated Cutaneous Rhinosporidiosis: Revisited. Indian J Dermatol. 2020;65(3):204–7.
[2] Pulimood S, Priya SK, Dinesh MG, Thomas M. Deep Fungal Infections: Other Diseases. In: IADVL Textbook of Dermatology. 5th ed. Bhalani Publishing House; 2022.
[3] Pappo AS, Parham DM. Pediatric soft tissue sarcomas. J Clin Oncol. 2015;33(9):291-302.
[4] Blay JY, Soibinet P, et al. Soft tissue and visceral sarcomas: ESMO clinical practice guidelines for diagnosis, treatment, and follow-up. Ann Oncol. 2014;25(suppl_3): iii102- iii112.
[5] Weil GJ, Bogus J, Christian M, et al. Diethylcarbamazine alone or with albendazole for lymphatic filariasis. N Engl J Med. 2012;367(12):1128-1139.
[6] Mehta KK, Dave DR. Clinical approach to filariasis. J Clin Med. 2017;6(2):20-28.