FIXED SPOROTRICHOSIS

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SYNOPSIS

A case of fixed sporotrichosis in an elderly woman is reported. The importance of the culture of the organism from such uncharacteristic lesions is emphasised.

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INTRODUCTION

Although sporotrichosis has a spectrum of clinical manifestations, yet the development of a primary chancre at the site of inoculation of the organism is the usual denominator. This so called sporotrichotic chancre ordinarily gives seedlings along the course of regional lymphatics, resulting in multiple lesions in a few weeks or mothers (1). However, in patients with a fairly high degree of specific immunity, the initial lesion remains the sole clinical manifestation of the disease over years together. This is aptly termed fixed sporotrichosis (1). Recently, we recorded such a patient, where only the culture of the biopsied material solved the diagnostic dilemma.

CASE REPORT

D.P., a 58-year-old female, a resident of hilly areas of Utter Pardesh, presented with a 2½ year history of an erythemato-scaly plaque with frequent oozing and crusting. She had a history of a wild-berry thorn prick 3 months prior to the onset of the lesion. It was initially a painless nodule. Gradually, it transformed into a painful, erythematous plaque which time and again exuded thin purulent material. Cutaneous examination revealed a soft, tender, erythematous 3½ × 3 cm circular plaque with crusting, occupying the radial side of right wrist (Fig. 1). The removal of the crust revealed a moist, red glazed base. It was unaccompanied by the regional lymphadenitis. General physical and systemic examination showed no abnormality. A provisional diagnosis of sporotrichosis, lupus vulgaris, cutaneous leishmaniasis and a typical mycobacteriosis was made and the patient relevantly investigated.

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Laboratory investigations revealed Hb 13.2g%, TLC 8400/cu mm, DLC $P_{66}L_{30}E_2M_2$ ESR 5 mm fall in 1st hr (Westergren), Mantoux test negative, and no abnormality in skiagram of chest. Haematoxylin-eosin stained sections depicted a dense circumscribed granuloma composed chiefly of lymphocytes and plasma cells. A small 25 × 5 μ brown coloured foreign body with surrounding chronic inflammatory infiltrate could also be identified in its vicinity. Special staining procedures — Ziehl-Neelsen stains for acid-fast bacilli, silver methamine stain for fungal elements, and Giemsa stain for LD bodies — were unrewarding both from pus smear and skin biopsy.

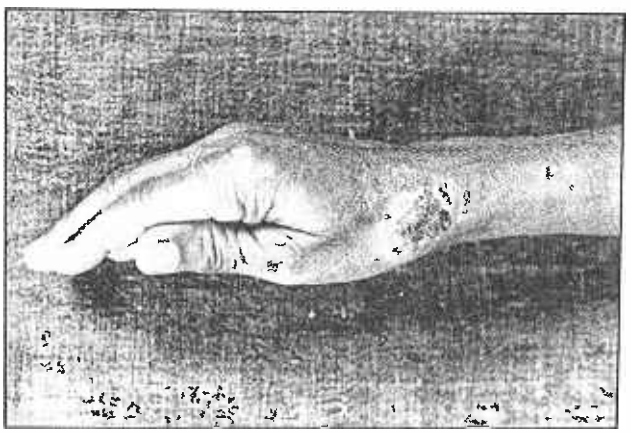

Fig. 1 A sharply demarcated circular plaque with crusting over the radial side of right wrist. The removal of the crust revealed a red glazed base. The lesion was soft and tender.

Culture after homogenization, the biopsy material was cultured on Sabourads dextrose agar incorporating chloromycetin and cyclohexidin, and in Brain Heart infusion broth, incubated at 25 and 37°C respectively. The colonies appeared after 8–10 days in both media. At 25°C, they were greyish-white, small wrinkled colonies, while at 37°C they appeared as greyish and smooth. Slide culture was also performed to study their morphology *in situ*. Microscopy revealed *Sporotrichum schanckii* as a delicate, branching, septate hyphae, with spherical microconidia arranged in circular fashion either along the hyphae or at the end of lateral branches (Fig. 2). The causative organisms were further confirmed by animal pathogenecity tests, performed on mice, and recovering and subculturing the fungus.

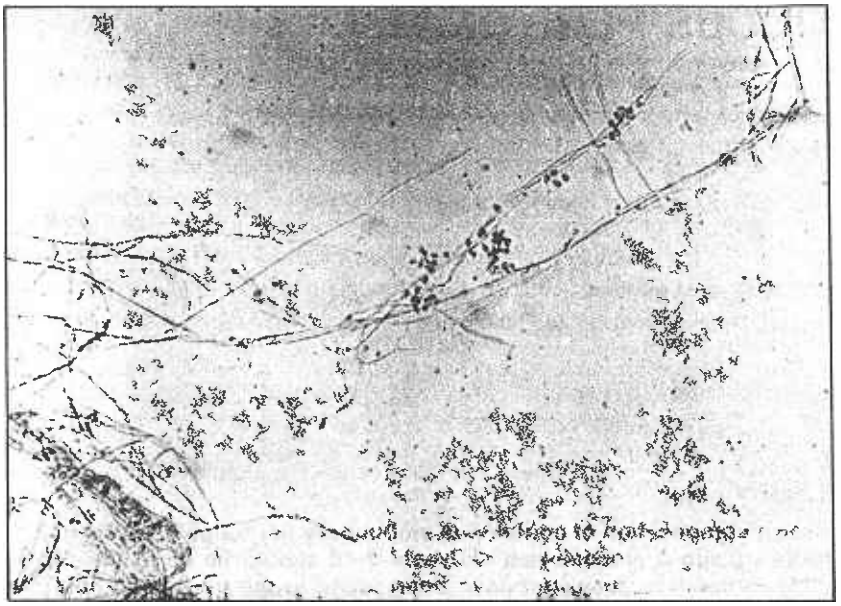

Fig. 2 Slide culture of *Sporotrichum schanckii*. Delicate branching, separate hyphae with spherical microconidia arranged in circular fashion. (Cotton blue × 160).

The patient was given orally 5 drops of saturated solution of potassium iodide. The dose was gradually built to 40 drops three times daily with meals. After 4 weeks of treatment, the lesion healed.

DISCUSSION

In its usual lymphocutaneous form, sporotrichosis has a characteristic clinical picture. However, in individuals with a high degree of immunity, the lesion remains confined to the site of trauma. This so called fixed sporotrichosis (1) differs from the usual form by the absence of metastatic lesions along the course of lymphatics, even for many years. The lesions of fixed sporotrichosis may vary from a slowly developing ulcer concealed under thick impetiginous crusts, verrucous plaque, sarcoid-like infiltrated plaque, to a patch of superficial erythemato-scaly dermatitis (1). This variegated appearance usually invites a host of differential diagnoses. Fortunately, the causative fungi — *Sporotrichum schanckii* — can readily be grown in artifical media both from the exuded pus and the biopsy material. The fungus also exhibits a thermal dimorphism i.e. it is capable of growing in mycelial and yeast form at different temperatures of incubation (2). In such patients, the sporotrichin test is strongly positive. The response to saturated solution of potassium iodide was dramatic in our patient.

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