

Sporotrichosis

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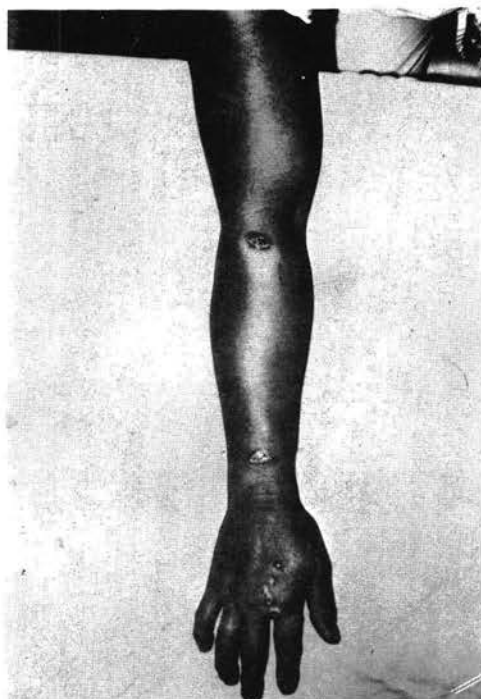
INTRODUCTION

Sporotrichosis, a subcutaneous fungus infection, was first reported in 1898 by Schenck from Europe. The fungus, *Sporotrichium schenckii* is a saprophyte on various plants and has been isolated from soil. Human infection is usually due to contamination of an injured skin. Many clinical types of sporotrichosis have been described and of these the localised lymphatic type is the commonest. It occurs sporadically in all parts of the world, and this is the first report of an incidence from Malaysia.

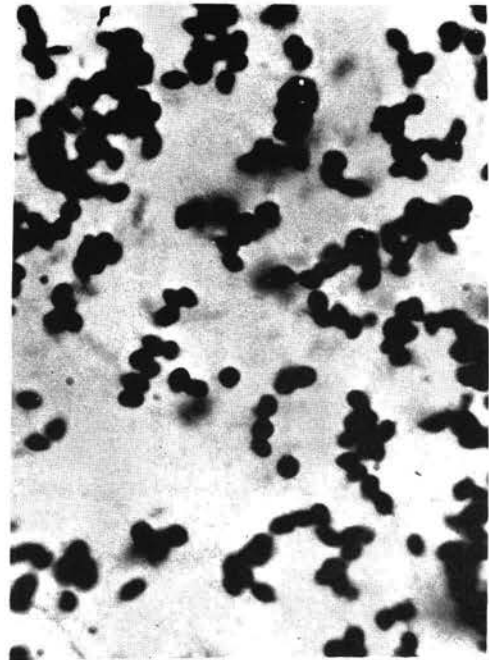
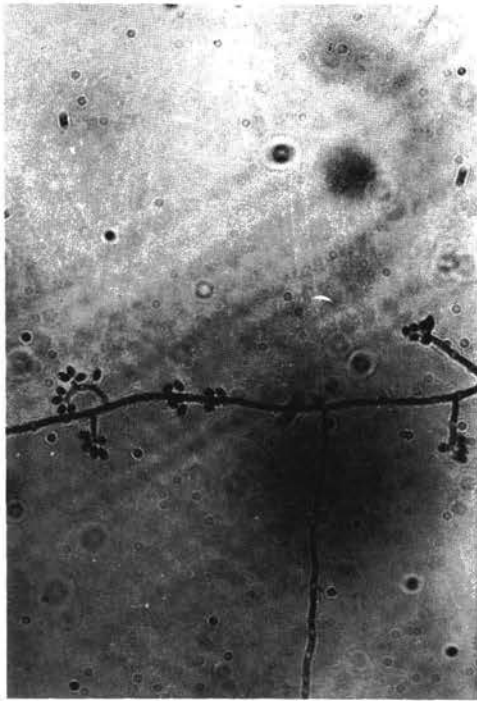
CASE REPORT

A 45 year old Chinese housewife, about nine months before the date of her visit to the Skin Clinic, sustained a superficial abrasion of the skin on her right index finger near the metacarpophalangeal joint, while opening a rusty tin. The abrasion healed but a month later she noticed a small painful nodule in the vicinity of previous injury. This grew in size and soon the skin over the nodule ulcerated with a purulent discharge. Over the duration of the next eight months, similar nodules appeared in a linear distribution, first on the dorsum of the right hand, then the wrist, over the lateral aspect of the elbow and finally on the upper arm. There were both intact and ulcerated discharging nodules (Fig. 1). There was no lymphadenopathy. The lesions had been unsuccessfully treated elsewhere as pyodermas.

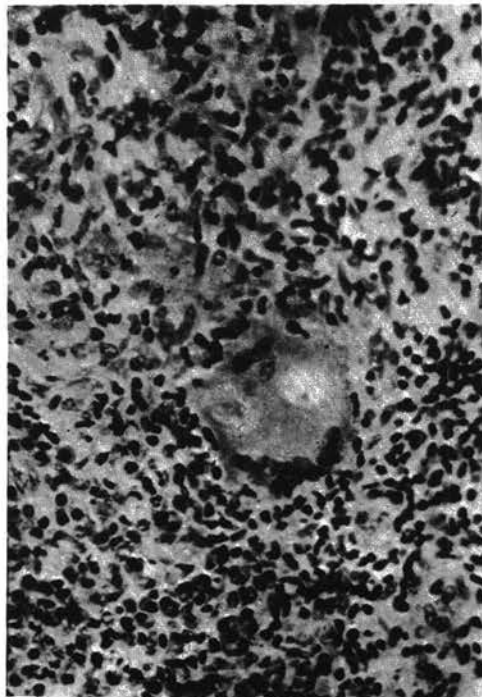
Investigations: Hb. 8 gm %. WBC 7,000 per cu. mm. ESR 15 mm/hr. VDRL: negative. The serum protein electrophoretic pattern was normal and radiological examination showed no bone or pulmonary lesion.



Mycology: The purulent material from an ulcerated lesion was inoculated onto Sabouraud's medium but no fungal growth was noticed. An intact nodule was excised and a half of this was homogenised, and then inoculated onto Sabouraud's medium and kept at room temperature. After five days fungal growth was seen. Initially, the colonies were brownish in colour and had a moist wrinkled surface. After two weeks the colonies turned black and there was no aerial mycelium. Microscopic examination of the young colonies showed delicate, branching and septate hyphae with conidia borne laterally on the hyphae or in clusters at the end of lateral branches. The shape of the conidia were



pyriform, ovoid, or spherical (Fig. 2). The fungus was subcultured in Sabouraud's medium at 37°C. The hyphae were converted into the yeast phase with elliptical and ovoid bodies which exhibited budding (Fig. 3).



Histology: The other half of the skin nodule was blocked in paraffin, sectioned and stained by Haematoxylin and Eosin, Weighert Van Gissen and Ziehl-Neelsen methods. Ptyalin and maltase digested preparations were subjected to periodic acid Schiff reaction and Gomori's silver impregnation for fungi. The H & E preparation showed a dermal lesion composed of fibrogranulomatous tissue exhibiting a few Langhan's type of giant cells which were surrounded by a dense infiltrate of lymphocytes, plasma cells and neutrophils. Ill-defined pale staining round structures were present in some of the giant cells (Fig. 4). Acid-fast bacilli and *Nocardia* were not seen. Despite the special methods used, neither fungal bodies nor asteroid structures were found in the skin nodule.

DISCUSSION

Sporotrichosis presents such a characteristic clinical picture that the diagnosis, especially of the localised lymphatic variety, can be established from the clinical findings alone (el-Mofty, et al, 1965). Further in our patient, the history of preceding trauma, and the mode of development of the linear distributed lesions were helpful in an accurate clinical diagnosis. The associated cord-like thickening of the lymphatic vessels between the nodules, and the regional lymphadenopathy reported by Mikkelsen, et al (1957) were absent in this patient.

Sporotrichium schenckii is a dimorphic fungus, existing in mycelial form in saprophytic life and in yeast form in animal tissue. Though there have been reports of identifications of tissue forms of this fungus, the asteroid bodies (Moore et al, 1946) and cigar bodies, demonstrations in tissue sections even with periodic acid Schiff reaction is difficult, and definitive diagnosis is dependent on cultural studies. The histologic appearance of the lesion is that of a non-specific granulomatous process with central necrosis and is not diagnostic.

Though isolation of the organism by culturing the exudate alone is possible, it is necessary to use materials from intact nodules, as was done in our patient, for a higher positive rate of mycological cultures. The colony appearance of the fungus in mycelial phase is characteristic but conversion into the yeast phase is necessary for identification of the fungus.

SUMMARY

A patient with lymphatic variety of sporotrichosis is described. The history and the clinical

appearance of the lesion were of diagnostic significance. Unless fungus infection is thought of and specimens are cultured, the lesions may be mistaken for pyodermas, as had been in our patient. Mycological identification is easy as the fungus grows readily in the commonly available Sabouraud's medium. Potassium iodide by mouth is the most effective drug and the patient's lesions healed in six weeks from starting the therapy.

ACKNOWLEDGEMENT

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