

CLINICO-PATHOLOGICAL STUDY OF SUBCUTANEOUS PHYCOMYCOSIS

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Clinico-pathological features of seven patients of subcutaneous phycomycosis are described. The ages of the patients ranged from 1½ years to 6 years. Four patients were males and three females. The sites of involvement included leg, thigh, buttock, shoulder, upper arm, thorax and abdominal wall. Three patients had itching in the lesions and three patients were having fever. In five patients, fungal elements were demonstrated on histopathological examination. The causative fungus, *Basidiobolus haptosporus* was grown from four patients. All the seven patients responded to potassium iodide therapy.

Key words : Subcutaneous phycomycosis, Potassium iodide.

Introduction

Subcutaneous phycomycosis (SP) was first reported from Indonesia by Lie-Kian-Joe et al.¹ Thereafter, cases of the disease have been reported from Indonesia, Sudan, Uganda, Nigeria and India. Reports of the disease from India comprised mostly of single case reports. In this communication, we report clinicopathological features of seven cases of this disease.

Materials and Methods

Seven cases suspected to be suffering from SP were subjected to histopathological examination by haematoxylin and eosin and special stains for fungus. The material from the lesions was inoculated on Sabouraud's medium for fungus culture, in addition to the routine investigations. The patients were treated with potassium iodide (KI) in doses of 100 mg to 600 mg thrice daily.

Results

The age of the patients ranged from 1½ years to 6 years. Four patients were males and three

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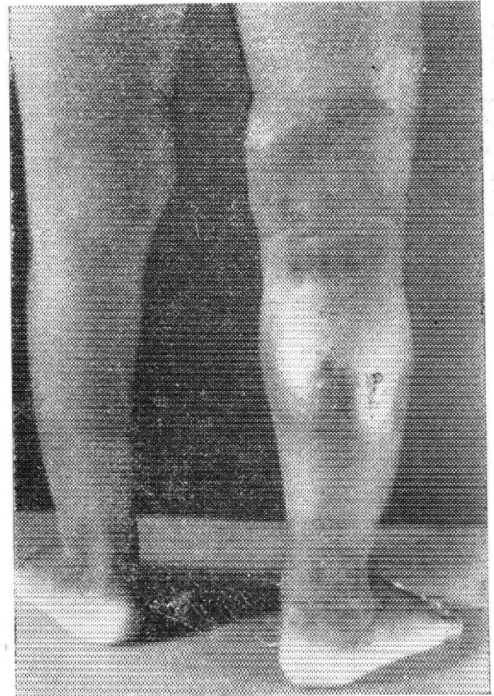


Fig. 1. A plaque on right popliteal fossa and adjoining parts of the thigh and leg (Case 3).

females. The lesions consisted of woody swellings involving the skin and the subcutaneous tissue and had clear-cut borders. The evolution of the lesions was slow and their duration on the first visit varied from 1½ months to one year.

The first patient had involvement of the posterior and the lateral aspects of the right

leg extending from the popliteal fossa to the lateral malleolus. The second patient showed involvement of the gluteal region and postero-medial aspect of the right thigh upto its middle and right side of the scrotum. The superficial inguinal lymph nodes were enlarged and tender on the right side and there was restriction of movements of the right hip joint. The third patient showed involvement of the lower one-third of the right thigh extending down to the upper two-thirds of the leg anteriorly and upper one-half of the leg posteriorly (Fig. 1). Superficial inguinal lymph nodes were enlarged on the right side. The fourth patient showed involvement of the right gluteal region and

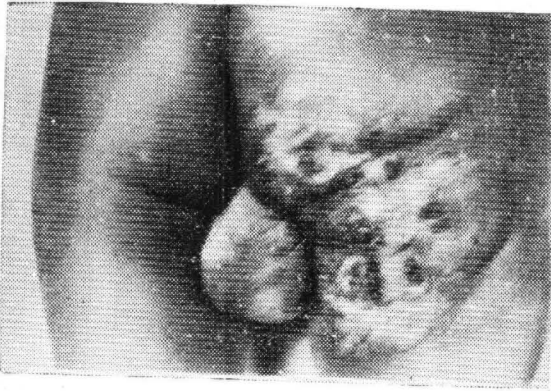


Fig. 2. A plaque with multiple sinuses on the right buttock and upper part of postero-lateral aspect of right thigh (case 4).

postero-lateral aspect of the upper one-third of the right thigh (Fig. 2). Superficial inguinal lymph nodes were enlarged on the right side. The fifth patient showed involvement of the right shoulder, right upper arm and proximal one fourth of the right forearm (Fig. 3), as well as the right hemithorax and right flank. Right axillary lymph nodes were enlarged and the patient had low grade intermittent fever. The sixth patient showed involvement of the mid-portion of the upper part of abdominal wall. The seventh patient showed involvement of the right gluteal region and had a low grade intermittent fever.

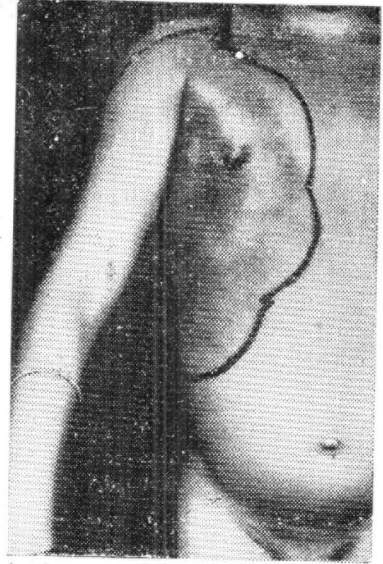


Fig. 3. A plaque on right shoulder, right side of chest and right arm (case 5).

Three patients complained of itching over the lesions. Three patients had low grade intermittent fever. Four patients had enlargement of the regional lymph nodes.

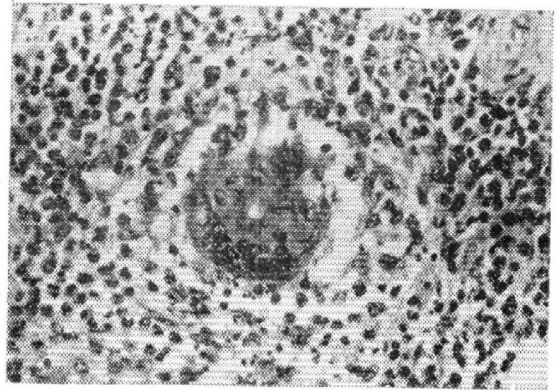


Fig. 4. Fungal hypha (arrow) in the centre of a giant cell surrounded by an inflammatory infiltrate of eosinophils (H & E X 400).

All the seven patients showed histopathological features of chronic inflammation. In five patients, fungal elements could be demonstrated in II and E and PAS stained sections (Figs. 4 and 5). In two patients, the fungus

could not be demonstrated on histopathological examination.

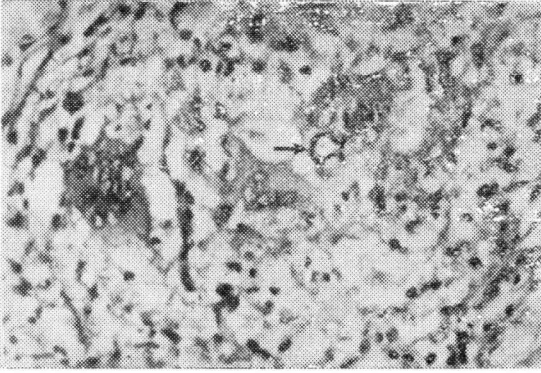


Fig. 5. Fungal hypha (arrow) with a PAS positive cell wall surrounded by an inflammatory infiltrate consisting of eosinophils and giant cells (PAS X 400).

Basidiobolus haptosporus was grown in four cases, which included two cases in whom the fungus was not demonstrated on histopathological examination. In one case, contaminant fungi grew, while in the remaining two cases there was no growth.

All the seven patients showed improvement within a week of starting the treatment with KI and the lesions subsided satisfactorily. Two patients showed recurrence of the lesions after 7 and 4 months of stopping the treatment. On restarting treatment with KI, the lesions started subsiding again. One patient showed nasal catarrh 10 days after starting KI. Another patient showed excessive lacrimation and salivation 30 days after starting KI.

Comments

Majority of the cases of SP occur in children and adolescents. Among 78 patients, 46% were under the age of 10 years and 82% under 21 years.² The age of our patients is lower, all the patients being 6 years old or less.

According to Clark,² males predominated among the 78 patients reported. Burkitt et al³ found male to female ratio to be 3 to 2 among

their 31 cases. Amongst our patients, 4 were males and 3 females.

According to Emmons et al,⁴ the lesions occur most often on the arms, upper body including the neck and face, and the buttocks. Among the 31 cases reported by Burkitt et al,³ the sites involved were thigh in 14 cases, buttock in eleven cases, upper arm in five, leg in four, perineum in three, forearm in three and pectoral region in one. In our cases, thigh and buttock were involved in two cases each and leg, shoulder, upper arm, thorax and abdominal wall in one case each.

Three of our patients had itching in the lesions. This feature has not been reported previously.

Three of our patients had fever. This is an unusual feature in this disease. Irregular and intermittent fever was observed in cases reported by Tunnel et al⁵ and Shah and Robert.⁶

Four of our patients showed involvement of the regional lymph nodes. The regional lymph nodes were enlarged in the cases reported by Kini,⁷ in one of the cases reported by Koshi et al,³ and the case reported by Kamalam et al.⁹

According to Clark,² most cases of the disease responded to KI. All our seven patients responded to KI. The patient reported by Shah and Robert⁶ did not respond to KI but responded to amphotericin-B. A case reported by Ive¹⁰ did not respond to amphotericin-B but responded to KI rapidly.

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