DERMATITIS CRURIS PUSTULOSA ET ATROPHICANS: CASE REPORTS

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SUMMARY

The presence of dermatitis cruris pustulosa et atrophicans in three local patients is documented and the condition briefly discussed.

INTRODUCTION

Dermatitis cruris pustulosa et atrophicans is a skin condition characterised by a protracted course of eruptions occuring symmetrically on the anterior surfaces of both legs, with follicular pustules, scaling, oedema, atrophy, shininess, and loss of skin markings.[1,2,3] The disease was first described by Clarke in 1952 in Nigerians.[1,4] Some authors have called it the 'Nigerian shin disease'[1,2] but the designation is inappropriate as cases have been reported from Trinidad[2] and India.[5] Awareness of this disease appears to be low. Though it is covered in a few texts on tropical medicine, the condition is not mentioned in several popular standard dermatology texts. This paper documents the author's experience with three cases of the condition seen at the University Hospital in Kuala Lumpur.

CASE REPORTS

Case 1

E.A.E., a 28-year-old Indian male computer operator, presented with a slightly pruritic rash on both legs of ten months duration. On examination he had a well-demarcated, symmetrical rash on both shins involving a large area extending from below the knee to just above the ankle, with follicular pustules, papules, loss of skin markings, scaling and increased shininess (Figs. 1 and 2). Pus from a pustule ruptured with a sterile needle was sent for culture and *Staphylococcus aureus* was present in the culture. No fungus was demonstrable on direct microscopy or culture. The patient was treated with cotrimoxazole, two tablets twice a day and silver sulphadiazine cream topically. After two weeks of treatment the pustules disappeared completely but the papules and some scaling remained. Continuation of the same medication for four more weeks failed to produce further improvement in the skin lesions.

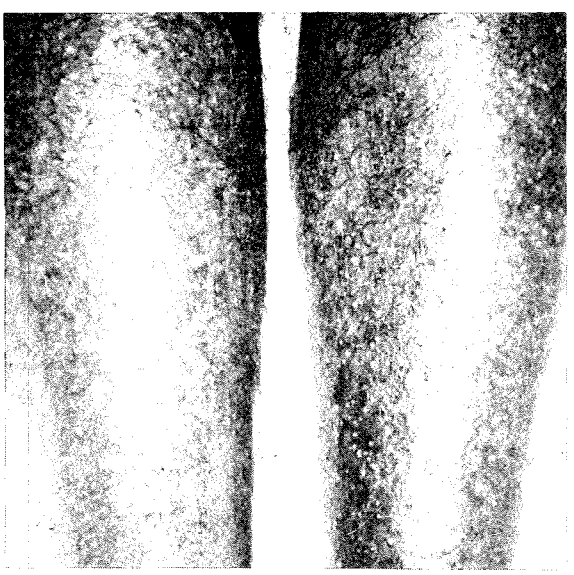

Fig. 1 Symmetrical lesions on both shins with follicular pustules, papules, scaling, loss of skin markings and increased shininess.

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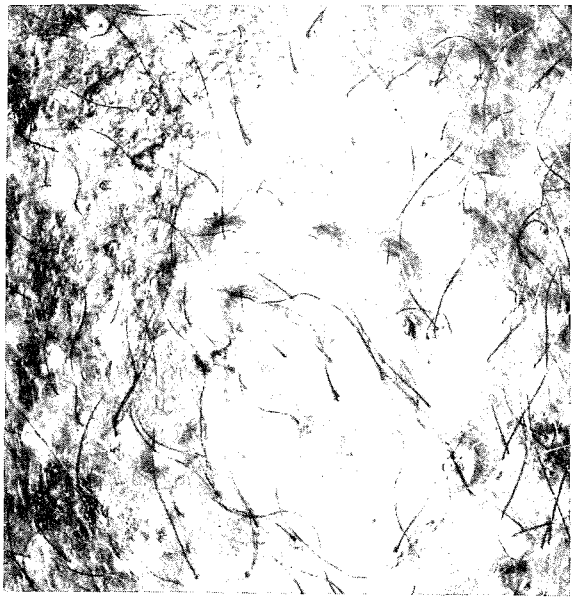

Fig. 2 Close-up of left shin showing in more detail the follicular pustules, some papules and epidermal changes.

Case 2

A.U., a 37-year old male Malay driver complained of a rash on the shins of nine months duration. On examination both shins showed atrophy of the skin with shininess, some follicular pustules and partial loss of hair follicles. The fasting blood sugar was normal (104 mg/dL). Culture of the pus grew *Staphylococcus aureus.* The pustules cleared with a two week course of cotrimoxazole but the other skin changes did not improve. Over the next three years he had several recurrent episodes of pustular eruptions with progressive loss of hair follicles and more atrophy.

Case 3

T.S.H., a 19-year-old Chinese male student, presented with a pruritic rash on the shins of three months duration. On examination, each shin had a large well-demarcated area showing follicular pustules with scaling, loss of skin markings and shininess. The patient was treated with erythromycin 250 mg, six-hourly for a week, together with 3% tetracycline ointment applied topically. When seen three weeks later the pustules had cleared and the scaling was less. The patient was subsequently lost to follow-up.

DISCUSSION

Dermatitis cruris pustulosa et atrophicans (DCPA) has to be distinguished from common pyogenic infections of the skin. It is differentiated from simple staphylococcal folliculitis by the constant pattern of symmetrical involvement of both shins, the remarkable demarcation, the epidermal changes like scaling, oedema and atrophy, and the resistance to treatment. Fungal folliculitis is ruled out by negative mycological studies. Folliculitis decalvans of Pardo-Castello[2] affects arms and legs equally, progresses to other sites and is associated with formation of bloody crusts. Epilating folliculitis[2] of the skin presents on the lower limbs as atrophic plaques surrounded by follicular pustules. The individual plaques are non-confluent and end in alopecia with pin-head scars.

DCPA is common in certain countries. In Nigeria it constitutes 2.2 – 4.8% of all dermatological outpatients.[2,3] Saguthan, Zachariah and Joy[5] reported seeing 79 patients in a single year in Kerala (in Southern India). In the author's experience, the condition appears to be uncommon in Malaysia and only three cases were encountered over a three-year period.

The three patients in this report were all males and the ages varied from 19-37 years. The reported sex ratio in the literature has varied in different reports. Harman[2] and Jacyk[3] have reported an almost equal sex distribution. Clarke[4] and Saguthan *et al.,*[5] however, have reported a male predominance. The condition is mainly seen in young adults and it has been stated[2] that the condition is not seen in those above 30 years of age in Nigeria. It is interesting to note in this respect that one of the three patients reported here was 37-years-old. Saguthan *et al.,*[5] have also reported that though the majority of their patients (from India) were young adults, in 30% of the group the disease started after 30 years of age. Thus it appears that the age distribution may be slightly different in Asians when compared to Africans.

Of the three patients in this report, one was Indian, one Chinese and one Malay, indicating that the disease is not peculiar to any race in this country.

The occurrence of the condition in the Chinese and Malay is worthy of note since reports of the conditions have been confined to Africans, West Indians and Indians so far.

Saguthan *et al.*,[3,5] have distinguished four grades in the course of the condition, namely, grade I – follicular pustules only, some with surrounding erythema; grade II – predominant follicular pustules but also a significant number of infiltrated papules, plus scaling; grade III – a number of infiltrated papules, with scaling, atrophy, shininess, marked alopecia and few or no pustules; grade IV – atrophic shiny scaly skin with almost complete alopecia, few papules and no pustules. According to this classification all the three cases in this report would fall in the grade II to grade III category of severity.

The aetiology of DCPA is still unclear. It has been suggested that *Staphylococci* of a specially virulent type such as type 71 might be responsible for a clinical picture which included oedema and desquamation as well as pustular folliculitis.[2] However, culture of pus from the pustules in several studies[1,2] have yielded only *Staphylococcus aureus* that on phage typing have turned out to be a mixed collection of strains common as secondary invaders. A number of alternative causes have been suggested, namely, the injurious effects of walking through tall grass, wearing puttees or coarse stockings and the regular medicinal or cosmetic application of various organic oils.[1,2] In the three patients reported here no such external irritant or injurious factors could be elicited in the history.

Treatment of DCPA is problematic and several workers[1,2,4,5] have commented on the remarkable resistance of the condition to therapeutic manipulations. Arsenicals, vitamins, lassar's paste and tar have been tried with no success.[1,4] Temporary and equivocal improvement have been reported with tetracycline oitment,[4] weak tincture of iodine and systemic tetracyclines.[2] Recently Jacyk[3] have reported favourable results after prolonged treatment with cotrimoxazole. The three patients in the present report had quick resolution of follicular pustules with courses of antibiotics of varying duration but the associated epidermal changes showed little or no improvement. One patient had a long follow-up over three years and there were recurrent eruptions of pustules as well as progressive development of more atrophy over the years.

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