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# EXFOLIATIVE DERMATITIS SECONDARY TO PSORIASIS. A CASE REPORT AND A REVIEW OF THE LITERATURE

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## ABSTRACT

A 40-year-old male "second hand" cloth dealer, presented with a 3-year history of generalized pruritus and a scaly and exfoliating skin lesion. He was in apparently good health, prior to the onset of the illness. The illness was characterised by relapses and remissions but there was no identifiable aggravating or relieving factors. Several treatments from orthodox and alternative medical practitioners proved abortive.

Examination revealed a chronically ill-looking man with generalised pruritic papular skin eruptions extending to all parts of the body including the scalp, palms and feet. He had a beefy glossitis and alopecia. There was associated low-grade fever, palpitations, facial and leg swellings. A skin biopsy showed features consistent with psoriatiform Dermatosis. Examination for LE cells was negative.

He responded to treatment with both topical and parental steroid, antihistamines and antibiotics and was discharged home after 4 weeks of treatment in the hospital.


**KEYWORDS**: Exfoliative, Dermatitis, Psoriasis

## INTRODUCTION

Exfoliative Dermatitis (ED) is a chronic form of dermatitis characterised by continuing epidermal exfoliation. The term erythroderma is sometimes applied when exfoliation is not a conspicuous clinical feature. The distinction is artificial and the terms are best regarded as synonymous.

ED is usually characterised by redness, oedema, scaliness and exudation of fluid in various parts of the body. Secondary diffuse alopecia is also a frequent accompanying feature (Rock and Wilson 1974; Burton 1990; Kerakayli et al 1999; Pilcer et al 2001).

Although the traditional classification into primary and secondary ED are no longer acceptable, in about 15 – 45% of cases no primary cause is found despite serial examinations and tests. This idiopathic variant is referred to as Redman Syndrome. The aetiology of the secondary variety of ED is variable and include adverse reactions to some drugs such as (a) anticonvulsants e.g. phenytoin, barbiturates (b) antihypertensives e.g. captopil (c) antiarrythmics e.g. quinidine and (d) heavy metals such as mercuric and arsenic compounds. Other aetiological factors include cutaneous diseases such as psoriasis, eczema, dermatophytosis, lichen planus and in some cases systemic diseases such as lymphomas, leukemias, multiple myeloma, carcinomas and immuno-deficiency states including HIV and AIDs.

Although the history of a prior skin disorder, incriminating medications or an underlying systemic disease is important, this may not always be obtained and the presentation may remain predominantly that of skin exfoliation together with constitutional symptoms and features of multiple organ involvement.

## CASE REPORT

Mr. CPE, a 40-year-old male "second hand" dress dealer presented with a 3-year history of generalised pruritus and a scaly and exfoliating skin lesion. He was in apparently good health until about three years ago when he noticed fissuring and scaliness of the palms and feet that were associated with pruritus and papular eruptions in the hands extending proximally to the forearms. He had an associated low-grade fever, facial and leg swellings. He received treatment from both orthodox and alternative medical practitioners to no avail.

He however observed that the illness sometimes remits for two to three weeks and then reappears without any identifiable aggravating or relieving factor.

He is single and gave no history of casual sex or multiple sexual relationships. He neither smokes nor indulges in alcoholic beverages.

Examination revealed a chronically ill-looking early middle-aged man, mildly febrile (temperature 37.6°c) with moderate pallor, mildly icteric, acyanotic, had onycholysis with inguinal lymphadenopathy. (See pic. I, II, III).

Vital signs and systemic examination were essentially normal.

Investigations revealed a haemoglobin of 8g/dL, WBC – 9.4 x $10^9$/L, Neutrophils – 76%, lymphocytes – 20%, monocytes – 2%, Eosinophils – 2%, platelets – 180,000/L. Blood film showed anisocytosis, macrocytosis, microcytes, hypochromasia, and toxic granulations with moderate left shift of neutrophils. Urinalysis was normal. Liver function tests; urea, electrolytes and creatinine were all within normal limits. Examination for LE cells was negative. HIV screening was non-reactive.

A skin biopsy was done and histopathology revealed acanthosis with elongation of rete-pegs, dense dermo-

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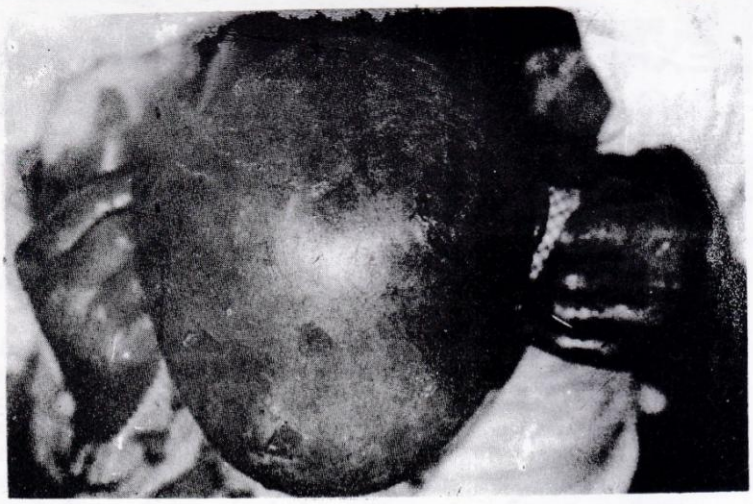
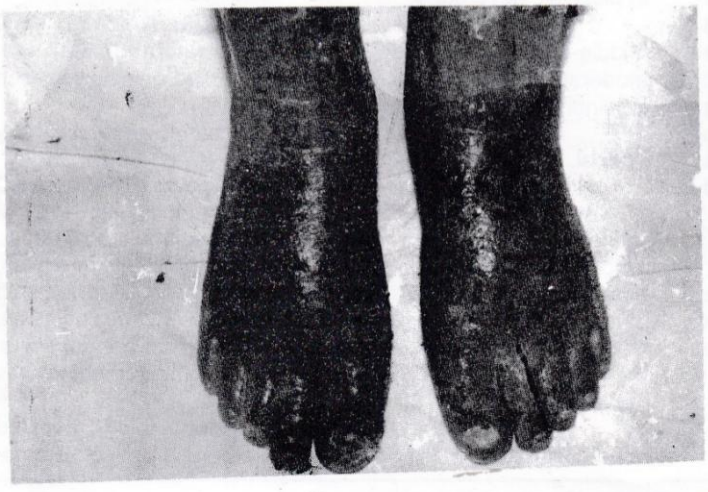
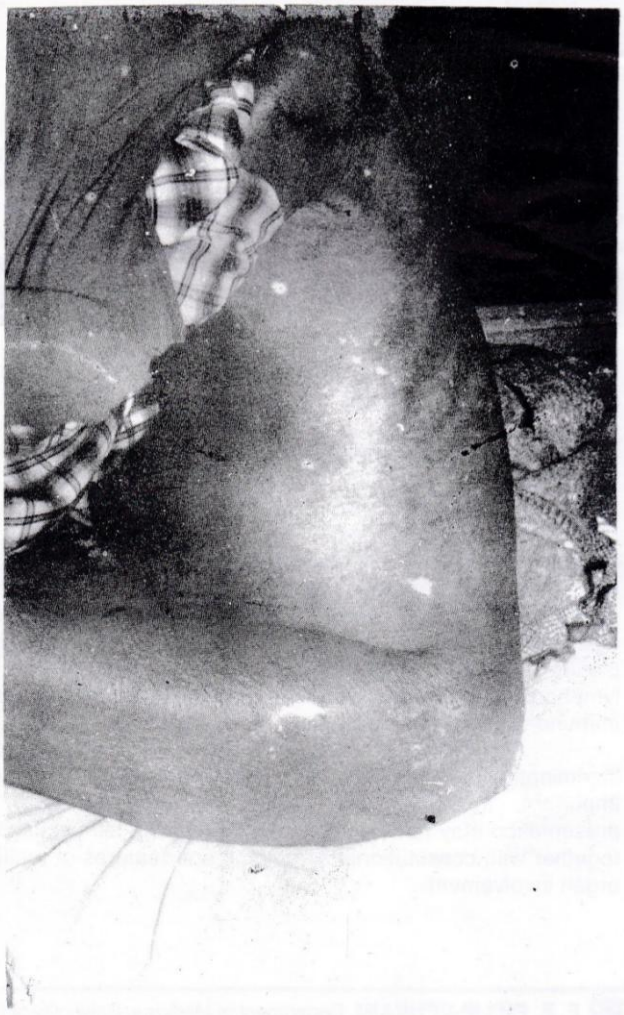
PIC. 1



PIC. 2



PIC. 3



PIC. 4

epidermal inflammatory cell infilterate with intra-epidermal abscess and keratolysis. Features were in keeping with Psoriatiform Dermatosis.

He was treated with prednisolone, which was later tapered down when there was improvement. He also had frusemide, ketoconazole, antibiotics and haematinics. Topical steroid – clobetasol was used. Within one month of commencement of therapy, he showed remarkable improvement (see pic III and iv)

## DISCUSSION

The terminology of Exfoliative Dermatitis is applied to any inflammatory skin disease, which affects more than 90% of the body surface. There is usually a uniform scaly erythema and until the disease is controlled it is often impossible to be sure of the underlying cause (Burton 1990; Umar and Kelly 2002; Freedberg 1996). It is commoner in males, with a male-to-female ratio of 2: 1 and occurs in all races. Persons 40years and above are most frequently affected and mortality could be as high as 30%. In a report of an autopsy study of 103 patients (Pilcer et al 2001); 87 (81%) died from various underlying causes. However no specific cause was found in the remaining patients. It is therefore interesting that our index case was male aged 40.

Furthermore our patient was HIV negative suggesting that, ED may not necessarily be a marker for HIV disease. Nonetheless an extensive study of ED and HIV disease will be needed to ascertain any relationship. The metabolic effects associated with ED can be overwhelming due to a markedly augmented blood flow to the skin with consequently increased heat loss from the body. There is also the loss of normal vasoconstrictive function in the dermis, decreased sensitivity to the shivering reflex and extra cooling that results from the evaporation of the fluids leaking out of the weeping skin lesions. The resultant effect is dysfunction in thermoregulation resulting in either hypothermia or hyperthermia. With the ensuring catabolic state, a significant weight loss can be expected. Although our index patient did not demonstrate any significant weight loss, this may have been masked by his peripheral oedema. The fluid retention probably arose in part from the marked protein loss from the skin as reflected in the hypoproteinemia found in serum. It has been estimated that protein loss in ED can be up to 9.0g/m$^2$. Anaemia with the resulting hyperdynamic cardiac activity, producing high cardiac output failure may also have contributed to the fluid retention. Although laboratory studies of ED patients are useful for clinical evaluation, they do not contribute much to diagnosis, as they are generally non-specific. The patient did well on treatment while on admission and a few months later before he was lost to follow-up.

Laboratory evaluation of patients with erythroderma may or may not be very helpful in determining a specific diagnosis since the results are often non-specific. Typical laboratory findings include mild anaemia, leucocytosis, eosinophilia, elevated erythrocyte sedimentation rate, abnormal serum protein electrophoresis with a polyclonal elevation in the gamma globulins and elevated IgE levels (Sigordsson et al 1997; Sehgal and Skivastava 1999; Wongks et al 1988).

In general, hospitalization and dermatologic consultations may be indicated in some cases to ensure good assessment and management of the patient. Fluids and Electrolyte balance are closely monitored and corrected as appropriate.

Secondary infections should be treated promptly. In the acute phase before determination of the etiology, treatment should consist of measures to sooth the inflamed skin such as bed rest, soaking with water, bland emollients and oral antihistamines to minimize itching.

Retinoids if available are used in exfoliative dermatitis caused by psoriasis. Although exfoliative dermatitis is a complex disorder involving many factors, the underlying disease is usually the key determinant of the course and prognosis. Drug-induced exfoliative dermatitis is usually short-lived once the culprit medication is withdrawn and appropriate supportive therapy is administered. The common causes of death in patients with severe exfoliative dermatitis are pneumonia, septicemia and heart failure.

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