

LETTER TO THE EDITOR

Deck chair sign in lepromatous leprosy

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The 'deck chair sign' (DCS) defines a peculiar clinical pattern observed in patients with erythroderma characterised by a selective sparing of skin folds like axillary, inguinal, submammary and flexures.¹ This clinical sign was initially described in patients with papulo-erythroderma of Ofuji (PEO) and has been considered the clinical hallmark of this controversial entity. We describe a 51 year old man who presented with lepromatous leprosy (LL) manifesting the DCS. To our knowledge, this is the first case of leprosy described with DCS.

A 51 year old male presented with the symptoms of decreased sensation and weakness of both hands and feet for the past year. On examination, diffuse infiltration of the face, ears and trunk was noted. However, there was a striking sparing of the abdominal creases, antecubital fossa and the popliteal fossa (Figures 1 and 2).

The patient had glove and stocking anesthesia. Ulnar, radial cutaneous, lateral popliteal and sural nerves were thickened along with ulnar claw hand. Slit skin examination revealed BI of 5+ and MI 5%. Histopathology from the trunk showed features suggestive of LL with foam cell macrophages and numerous intracellular bacilli.

The DCS is an intriguing phenomenon. Besides PEO, DCS has also been observed in angio-immunoblastic lymphoma,² cutaneous Waldenstrom's macroglobulinemia,³ acanthosis nigricans,^{1,4} erysipelas, discoid lupus and acute contact dermatitis.¹ In a study of 90 patients with erythroderma, Pal and Haroon observed DCS in 5.5% of the cases.⁵ This observation opens the interesting question of how the compression of a skin area can save it from inflammation. Clinical evidence suggests that the DCS is typical but not pathognomonic of PEO. Debate continues regarding whether PEO is a distinct clinical entity or merely a manifestation pattern of several underlying diseases.^{1,6} A recent review concluded that most cases are idiopathic but some are associated with atopy, malignancies, including cutaneous

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Figure 1. Characteristic sparing of the abdominal creases.

lymphomas and internal malignancies, infections and drugs.^{1,7} The mechanism by which the DCS appears still remains unclear. It is likely that some “occlusive dressing effect” of topical corticosteroids used in inflammatory dermatoses may have something to do with this phenomenon because, in skin folds, topical corticosteroids stay longer and penetrate deeper, hence leading to a stronger clinical effect in interrupting formation of the rash.

In our case, the sparing of skin creases may be due to the higher temperature in these areas as *Mycobacterium leprae* (*M. leprae*) tends to spare the warmer areas of the body. *M. leprae* prefers a growth temperature of less than 37°C. Certain anatomical sites like scalp, eyelids, axillae, groin, perineum, midline of back and a transverse strip of skin over lumbosacral region are considered relatively unsusceptible to the development of leprosy by many workers. This relative sparing is attributed to the warmth of these regions. Palms and soles are also included in the ‘relatively spared zones,’ as fibro-fatty tissue and a thick epidermis provide an insulating property and help to maintain a high nerve bed temperature, which renders the palmoplantar localization of *M. leprae* less likely.⁸

The clinical significance of DCS or sparing of skin creases is obscure. However, the present case provides another example reiterating that it is not a specific feature of PEO but rather a pattern of expression in several inflammatory dermatoses as mentioned in the literature. Although in leprosy, we can hypothesise that the sparing of skin creases is probably due to skin compression in folds increasing the local temperature, the precise pathogenesis and clinical significance of the DCS remains to be elucidated.



Figure 2. Sparring of the antecubital fossa.

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