Abstract
Psoriasis is a disease of considerable clinical and histopathological diversity. We report a rare case of elephantine psoriasis responding very well to methotrexate. Histopathology revealed abnormal papillomatosis with finger-like projections in addition to alternating orthokeratosis with overlying hypergranulosis and parakeratosis with overlying hypogranulosis. We believe that this finding may represent an odd histopathologic type in elephantine psoriasis.

Key Words: Elephantine psoriasis, hypergranulosis, hypogranulosis, ILVEN, papillomatosis

Introduction
Psoriasis is a disease of substantial clinical and histopathological diversity. Elephantine psoriasis is a rare variant of psoriasis. A PubMed search of articles indexed for MEDLINE did not reveal any reports of elephantine psoriasis or its histopathology. We report a rare case of elephantine psoriasis and discuss the unique histological features.

Case Report
A 55-year-old man presented in our hospital at out-patient department with a 6-month history of large, itchy plaques over the legs. On cutaneous examination, symmetrical, large extensive thick scaly plaques were seen over extensor surface of both legs. The borders were well defined and convex, but interrupted at certain parts. Few adjacent small circular plaques of different sizes were present as satellite lesions. A circular thick scaly plaque of similar consistency of 1.5 cm diameter was present on the left thigh [Figure 1]. Rest of the body was not involved. The scales were silvery white in color with positive Auspitz sign and Grattage test. There was no history of a similar lesion in the family. He had no history of trauma and did not receive any drug known to induce or exacerbate psoriasis. He had received treatment with topical corticosteroids with no improvement. Routine investigations revealed no abnormalities other than mild leukocytosis (probably due to resolving upper respiratory infection). Human immunodeficiency virus and veneral disease research and laboratory (VDRL) tests were negative. Histopathologic examination of two punch biopsy specimens from hyperkeratotic plaques from leg revealed hyperkeratosis, parakeratosis, microabscess of Munro, acanthosis, severe papillomatosis, dermal vascular dilatation, and perivascular lymphohistocytic infiltration [Figures 2 and 3]. The striking histopathological features were abnormal papillomatosis leading to finger-like projections and alternate thinning and thickening of stratum granulosum [Figure 4]. Parakeratosis and orthokeratosis were noted overlying hypogranulosis and hypergranulosis, respectively [Figure 5]. The clinical and histopathological features were consistent with elephantine psoriasis. We started the treatment with methotrexate 10 mg per week and all lesions healed completely in 10 weeks [Figure 6].

Discussion
Psoriasis is classified morphologically into plaque, guttate, pustular and erythrodermic forms. Chronic plaque type of psoriasis includes few rare subtypes like...
annular (ring-shaped plaques with central clearing), lichenified and hyperkeratotic forms. The hyperkeratotic form, rarely reported in the literature, is further classified into ostraceous, rupioid and elephantine types.\textsuperscript{[1,2]}

Lesions with firmly adhered thick scales, varying color and surface resembling an oyster shell are typical features of ostraceous psoriasis.\textsuperscript{[1,4]} The rupioid form is
characterized by hyperkeratotic, concentric, circular and limpet like cone-shaped plaques.\(^{[3-5]}\) Elephantine psoriasis lesions are defined as large, thick, flat long-standing plaques, typically found in the dorsal area, buttocks, upper limbs\(^{[1,2]}\) and often on lower limbs.\(^{[4]}\) Some authors do not distinguish between hyperkeratotic forms of psoriasis and use the terms interchangeably.\(^{[6]}\)

In our patient, multiple enlarging circular plaques have coalesced to form large extensive elephantine forms on both legs. The interrupted convex margins of the plaques also suggested so. Most cases of hyperkeratotic psoriasis described in the literature were resistant to topical treatment, possibly because of the overlying thick scaly surfaces on lesions. There are reports of ostraceous psoriasis subsiding with immunosuppressive and immunobiological drugs.\(^{[7-9]}\) Our patient was a poor farmer and so immunobiologic therapy was never considered. Our patient responded very well to 10 mg of weekly dose of methotrexate and all lesions completely subsided in 10 weeks.

Histologic picture of fully developed lesion of psoriasis is characterized by (a) acanthosis with regular elongation of rete ridges with thickening in lower portions, (b) suprapapillary thinning of epidermis with occasional spongiform pustules, (c) diminished to absent granular layer, (d) confluent parakeratosis, (e) Munro microabscesses, (f) elongation and edema of dermal papillae, and (g) dilated and tortuous capillaries. Our patient’s histological findings were compatible with diagnosis of psoriasis. It also had parakeratosis and orthokeratosis overlying hypergranulosis and hypogranulosis respectively. Though the latter may be very rarely present in psoriasis, it is the very characteristic of inflammatory linear verrucous epidermal nevus (ILVEN).\(^{[10]}\)

ILVEN is a relatively rare, linear lesion presenting during childhood, most of them arising in first 6 months of life. Scaly, erythematous papules coalesce to form linear psoriasiform plaques following the lines of Blaschko and are often associated with significant pruritus. In the literature, there is a debate on independent existence of linear psoriasis as well as ILVEN and each has been opined to be a variant of the other. Few people think that ILVEN is only a mosaic form of psoriasis.\(^{[11]}\) Dupre and Cristol defined histological criteria of ILVEN as psoriasiform changes in addition to distinct alternate bands of hypergranulosis and hypogranulosis.\(^{[12]}\) The parakeratotic areas are slightly raised, with agranulosis or hypergranulosis, whereas the orthokeratotic areas are slightly depressed with hypergranulosis.\(^{[13]}\) Histopathology of ILVEN is often indistinguishable from psoriasis and only a immunohistochemical study may differentiate them conclusively. Ito and colleagues showed that involucrin expression is increased in ILVEN in the orthokeratotic epithelium, but is minimally expressed within parakeratotic regions. By contrast, in psoriasis, involucrin is expressed in all layers of the epidermis except the basal layer.\(^{[14]}\) Other authors have suggested that the behavior of other markers (elastin, antikeratin 10, antikeratin 16, Ki-67) may be useful to differentiate between psoriasis and ILVEN.\(^{[15]}\) In our patient immunohistochemistry was not considered as the facility was unavailable in our institute and he could not afford it from outside.

There is a considerable overlap between the two entities, that is, nevoid or linear psoriasis and ILVEN. In our patient, the histopathological findings of psoriasiform dermatitis along with alternate hypergranulosis and hypogranulosis were very typical of ILVEN. But here distribution of lesions was not linear. Our patient presented with symmetrical, large extensive, long-standing thick scaly plaques over extensor surface of both legs. The morphological, histopathological and topographical features of the lesions, predominantly in extensor areas, favored the diagnosis of elephantine psoriasis.

Erkek and Bozdogan suggested that the presence of finger-like projections due to exaggerated papillomatosis is an odd histologic characteristic, especially in verrucous and rupial histology.\(^{[16]}\) Our case also showed exaggerated papillomatosis in addition to parakeratosis and orthokeratosis overlying hypo- and hypergranulosis, respectively. Though the latter may be very rarely present in psoriasis, it is very characteristic of ILVEN. So far we know that any case report of elephantine psoriasis is very rare. As histopathology report of elephantine psoriasis has never been documented before, it may be too early to conclude this as classical histopathological feature. But we definitely propose this to be an unusual variant of histopathology in elephantine psoriasis.

**What is new?**
- A case of elephantine psoriasis and its histology is reported
- Excellent response of elephantine psoriasis to methotrexate
- Histopathology revealed abnormal papillomatosis with finger-like projections in addition to alternating orthokeratosis with overlying hypergranulosis and parakeratosis with overlying hypogranulosis.

**References**

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How to cite this article: Koley S, Mandal RK, Chatterjee K, Hassan SM, Pathak S. Elephantine psoriasis with papillomatosis and alternating hypogranulosis and hypergranulosis. Indian J Dermatol 2015;60:264-7.

Received: August, 2014. Accepted: December, 2014.

Source of support: Nil. Conflict of Interest: Nil.