

Generalised Pustular Psoriasis Masquerading as Lepromatous Leprosy: A Case Report

Dr. Aishwarya Kitture¹, Dr. Vishal Indurkar², Dr. Anamika Wagh¹, Dr. Ramesh Gosavi³

¹Junior Resident, ²Professor, ³Professor & Head, Department of Dermatology, DVVPF's Medical College & Hospital, Ahmednagar, 414111, Maharashtra, India

Abstract:

The relationship between psoriasis and leprosy is debatable since ages. The varied clinical manifestations of leprosy may resemble other skin diseases, but there is no documented literature of skin lesions of psoriasis mimicking leprosy. We report a case of generalised pustular psoriasis (GPP) presented with the lepromatous leprosy like clinical features in a 60 year old male. The histopathological examination confirmed the diagnosis. Patient was then treated with Methotrexate 7.5mg weekly and showed improvement in subsequent visits. We report this rare possibility to raise awareness among clinicians to allow accurate diagnosis since leprosy still carries stigma in society.

Key words: Psoriasis, Generalised Pustular Psoriasis, Leprosy, Methotrexate

Introduction:

Psoriasis is the chronic, non-infectious, inflammatory disease precipitated by various factors in a genetically prone people and commonly affecting skin and joints with numerous associated comorbidities. It has varied clinical presentations one of it is localised or disseminated pustules. Generalised pustular psoriasis (GPP) also known by von Zumbusch psoriasis is one of the rare, severe and life-threatening variants of psoriasis. It is clinically characterized by pustular eruption on erythematous and inflamed base and very often it is present as erythroderma like picture on subsiding pustules which is seen in our case. Diagnosis of pustular psoriasis is based on the history, clinical presentation and histopathological examination especially when clinical features are not typical. We here present a case of generalised pustular psoriasis, which initially came to us with lesions resembling as of lepromatous leprosy.

Case report:

A 60 year old newly diagnosed Diabetic male presented to us with history of generalized redness of skin and swelling of both lower limbs since 2

months. The patient was treated symptomatically from local doctor but no improvement was noted. There was no history of similar complaints in past or in the family. On general examination, patient was afebrile with right sided lymphadenopathy and bilateral pedal pitting oedema. (Fig -1) On local examination, patient had madarosis, with sparse hair all over the body, the skin over hands and legs was dry and shiny, ulnar nerves were bilaterally thickened, bilateral soft tissue swelling was present over wrist and single, well defined, erythematous plaque of approximately 3x3 cm over medial aspect of right knee with intact sensation was present, posterior tibial nerves were bilaterally thickened and diffuse erythema was seen over the trunk. (Fig- 1) The provisional diagnosis of lepromatous leprosy was considered.

All routine investigations were within normal limits. Ultrasonography (USG) of both the wrists showed mild soft tissue collection in subcutaneous plane. All tendons of the wrist joint showed altered echogenicity and thickening. These findings on USG were suggestive of tenosynovitis of tendons of palm and dorsal aspect (Dorsal > palmar).

Corresponding Author: Dr. Aishwarya Kitture

Email ID: ashkitture@gmail.com

Address: Department of Dermatology, DVVPF's Medical College & Hospital, Ahmednagar 414111, Maharashtra, India

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The Slit skin smear was negative. Punch biopsy from right leg lesion showed large foci of spongiosis and neutrophils (neutrophilic spongiosis) in the epidermis and spongiform pustules in the upper epidermis. The stratum corneum showed mounds of parakeratosis containing pyknotic neutrophils. Histopathological findings were suggestive of pustular psoriasis.(Fig-2)

The patient was then started on tablet methotrexate 7.5mg per week, significant response was observed in 3 weeks.



Fig 1: (A) skin over hands dry, shiny and wrist swelling (B) bilateral pedal pitting oedema (C) Erythematous plaque over medial aspect of right knee

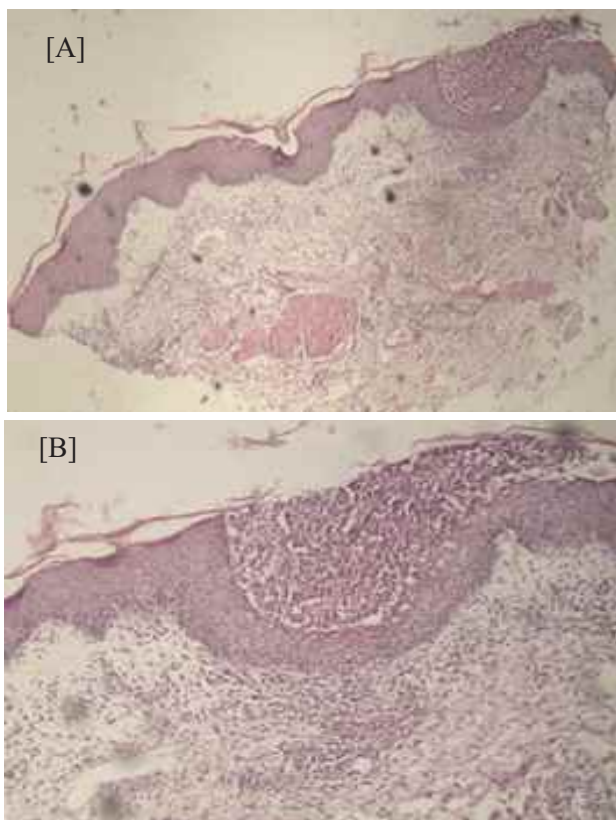


Fig 2: (A) Scanner view (B) High power view shows large foci of spongiosis and neutrophils (neutrophilic spongiosis) in the epidermis and spongiform pustules in the upper epidermis. The stratum corneum showed

mounds of parakeratosis containing pyknotic neutrophils.

Discussion:

Psoriasis is a chronic skin disease due to dysregulation of immunity in genetically susceptible individual. Pustular psoriasis is one of the variant of psoriasis, it presents in many ways such as GPP, impetigo herpetiformis, and two types of localized pustular psoriasis (palmoplantar pustulosis and acrodermatitis continua of Hallopeau).[1,2] Triggers for GPP includes gestation, infections, hypocalcemia and drugs like glucocorticoids, amoxicillin and pegylated interferon.[3] Generalized pustular psoriasis (GPP) is frequently associated with systemic symptoms. Unlike classic psoriasis, the pathoimmunogenesis of GPP is still poorly understood, although mutations in genes encoding interleukin-36 antagonists that dysregulate the neutrophil-chemokine axis are believed to play a central role in the disease.[4]

Psoriasis clinically resembling leprosy is an uncommon, though the leprosy mimicking psoriasis has been reported. Bhushan Kumar *et al*.[5] states that patients with leprosy may be protected against psoriasis and vice versa. In Leprosy *Mycobacterium Leprae* involved nerve which results in neuritis and nerve damage. Studies on the pathogenesis of psoriasis explain the role neuropeptides such as substance P (SP), vasoactive intestinal peptide (VIP), and calcitonin gene-related peptide (CGRP), which is responsible for inflammatory and proliferative process and development of psoriatic lesion.[6-8] It has been concluded that nerve damage in leprosy thereby reduction in neuropeptides is the reason psoriatic lesion not occur simultaneously in skin already affected by leprosy.[9] It is also provided genetic factors may have some role in protecting psoriatic patients from leprosy.[9] Still concurrent occurrence of these two diseases is published in the literature, may be due to partial regeneration of nerves in treated patients of leprosy.[9] In our case following clinical features misled the diagnosis were shiny skin, madarosis (as over time skin loses its elasticity, hair follicles to become brittle and fall out), nerve thickening may be due to fibrosis associated with aging and bilateral pedal oedema may be secondary to age related venous insufficiency.

In our case histopathological examination help us to rule out leprosy, after ruling out leprosy we have started patient on methotrexate 7.5mg weekly and patient responded well with clinical improvement in subsequent visits.

Conclusion:

The skin lesion of psoriasis mimicking leprosy is rare presentation. Leprosy is “the great imitator”, therefore clinicians need to raise suspicion of other skin diseases such as psoriasis for prompt treatment and better prognosis. This case report also highlight the importance of histopathological examination in diagnostic conundrum.

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