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Generalised Pustular Psoriasis in a 39years old female: A rare and challenging case

Velisetti Kranthi swaroopa, Surla Poojitha, Shaik Safiya mohiddin, A.B.S.D.Padma sri, Bobby samba

[1,]*Pharm D Intern, Department Of Pharmacy Practice, Aditya College Of Pharmacy, Surampalem, Andhra Pradesh, India.*

Corresponding Author: Velisetti Kranthi swaroopa

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ABSTRACT: Pustular psoriasis is a severe variant of psoriasis marked by the presence of pus-filled blisters on the skin, which differentiates it from the more common form of psoriasis. These blisters can be either widespread or localized and are often painful.We present the case of a 39-year-old patient with a 10-year history of psoriasis who developed pustular psoriasis, presenting with red lesions on the face, neck, trunk, abdomen, and legs for the last six months. The patient had been on methotrexate treatment, but symptoms worsened, leading to the appearance of pustular lesions and hypoalbuminemia. A skin biopsy confirmed the diagnosis, prompting an adjustment in treatment by discontinuing methotrexate and continuing acitretin. The patient also developed scabies, which was treated with ivermectin and permethrin. The patient made significant progress throughout the two-week hospital stay and was sent home with continued care. This example highlights the necessity of prompt diagnosis, individualized treatment, and management of coexisting illnesses in individuals with psoriasis.

KEYWORDS: Pustular psorasis, Blisters, Psoriasis vulgaris, Lesions, Scabies, Erythematous

I. INTRODUCTION

Pustular psoriasis is a serious form of psoriasis characterized by the development of pus-filled blisters (pustules) on the skin. These lesions can be widespread or localized and often feel tender.Pustular psoriasis can be categorized into generalized and localized forms. Generalized types include Von Zumbusch, Annular, Exanthematic, and Impetigo herpetiformis, with symptoms ranging from widespread lesions to systemic issues(1)(2)Acute generalized pustular psoriasis (GPP) can be triggered by factors like systemic corticosteroid use or withdrawal,pregnancy (impetigo herpetiformis), infections, stress, and certain drugs such as NSAIDs, terbinafine, ustekinumab, TNF-α inhibitors, and methotrexate(2). Corticosteroid withdrawal, in particular, can cause an inflammatory flare.Infections activate neutrophils, contributing to disease onset, while some treatments like ustekinumab may cause GPP flare-ups. Genetic factors, including mutations in the IL36RN and IL1RN genes, are also involved, leading to increased inflammation, although not all patients have these(3).GPP typically presents with pustules, scaling, dryness, redness, pain, itching, and a burning sensation(5). Diagnosis involves abnormal lab findings, including leukocytosis, lymphopenia, elevated ESR and C-reactive protein, and increased plasma globulins like IgG and IgA. Blood tests may show hypoproteinemia, hypocalcemia, and elevated BUN and creatinine. Liver function tests may reveal elevated enzymes, while urinalysis could show albumin, indicating kidney damage. Bacterial cultures may detect secondary infections(4). Non-biologic systemic therapies for generalized pustular psoriasis (GPP) include methotrexate, cyclosporine, and retinoids. Methotrexate, while effective for autoimmune conditions, has a slow onset and potential side effects like liver toxicity and increased infection risk. Cyclosporine offers temporary relief but is limited by recurrences and side effects like hypertension and nephrotoxicity. Retinoids, particularly acitretin, show some effectiveness in clearing skin lesions but may cause relapse upon discontinuation and are associated with significant side effects, including teratogenicity and liver toxicity. Further research is needed to refine treatmentapproaches(5).

II. CASE REPORT

A 39 yrs old female patient was brought to the dermatology ward with complaints of red

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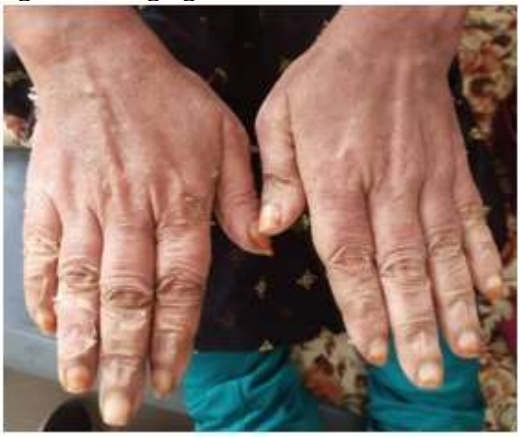
coloured lesions over face ,neck, ear, retroauricular area, trunk, abdomen, legs since 6 months.Patient was apparently normal 10 yrs ago , then she developed psoriasis and taken medications for 2 yrs then it is subsisded with no lesions for next 6 years, then since 2 yrs new lesions over abdomen, upper limb, lower limb, back have been appeared then the patient is on methotrexate from March 2023- Dec 2024. Patient had a historyof psoriasis since 10 yrs ago.Upon examination all the vitals are normal but developed white plaque on the scalp, pitting sensation in nails, lesions on thighs, Itching and myalgia all over the body.

During laboratory investigations, the following was noted:

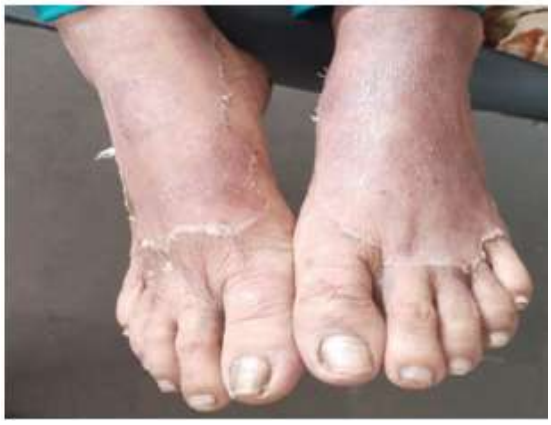
- Hemoglobin-11.6 g/dl
- WBC count- 17,700 cells/cumm
- RBS- 178 mg/dl
- Serum albumin-2.1 g/dl
- CRP- 64.42mg/l

Investigation: Slien biopsy s/o- Pustular psoriasis

Diagnostic imaging



The image shows the hands of a patient with pustular psoriasis. This type of psoriasis is characterized by the appearance of white pustules on the skin, often surrounded by red areas. The pustules usually contain pus and can be itchy or painful. Pustular psoriasis can affect any part of the body, but it is most common on the hands, feet, and scalp. It is a



The image depicts signs of pustular psoriasis, characterized by excessive skin peeling, dryness, and inflammation on the feet. The peeling indicates rapid skin turnover, a hallmark of psoriasis, while the dryness and cracking increase discomfort and risk of secondary infections. These symptoms are consistent with localized pustular psoriasis, requiring prompt treatment with topical and systemic therapies to control

Treatment

Following diagnosis confirmation, the following regimen was implemented as part of th standard treatment:

- Injection methotrexate 15mg intravenously once a day(During night)
- Capsule Acitretin 25mg orally once in a day
- Tablet Folvite 5mg orally once in a day
- Tablet Shelcal 500mg orally once in a day
- Tablet Acivor 400mg orally thrice a day
- Tablet Ivermectin 120mg orally weekly once
- Tablet Dazit 5mg orally once in a day
- Tablet Ultracet 1tab orally SOS
- Tablet Teazine 5mg orally once in a day
- Tablet Livogen XT 1tab orally once in a day
- Proteinex powder orally thrice a day in glass of milk
- Diprobate plus lotion on scalp
- Moisturex soft lotion twice a day
- Salisia KT shampoo
- Glymed soap

Monitoring parameters

- Monitor signs for Itchiness and dryness
- Observe for appearance of any lesions and papules
- Monitor for any pain, redness and burning sensation

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Outcome and follow up

Following a 14-day hospital stay, the patient was discharged with a decreased lesions on the body, reduced itching and burning sensation whole over the body.The patient was also prescribed with tablets and moisturex lotion for affected area, Diprobate lotion for scalp, Salisia KT shampoo, Glymed soap and also counseled to show significant improvement for Pustular psoriasis.

III. DISCUSSION

Generalized pustular psoriasis (GPP) is a rare form of psoriasis marked by widespread, painful pus-filled blisters(6). Treatment approaches typically involve a mix of retinoids, methotrexate, cyclosporine, corticosteroids, TNF-alpha inhibitors, and phototherapy. TNF-alpha inhibitors may require co-treatment with methotrexate due to potential antibody development(7). Topical therapies, including corticosteroids, Vitamin D analogs, and calcineurin inhibitors, are key in psoriasis management due to their safety and patient tolerance.Tazarotene is used for maintenance therapy, and new formulations like gels and foams improve patient compliance(8).

IV. CONCLUSION

This caseillustrates the challenges in managing generalized pustular psoriasis, especially when complicated by coexisting conditions like scabies. The patient's shift from stable psoriasis on methotrexate to the onset of pustular lesions and hypoalbuminemia highlights the unpredictable course of the disease. Early diagnosis, biopsy confirmation, and prompt treatment adjustments were key to the patient's improvement. The treatment, including both systemic and topical medications, focused on managing psoriasis symptoms, controlling itching, and preventing further complications. The patient was discharged with continued medication instructions.Pharmacists play a crucial role in everything from medicine dispensing to ADR monitoring at every stage, with the main goal being to promote rational therapeutic practice from the very beginning.

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