

Case Study on Erythroderma Secondary to Pustular PsoriasisM.Suresh Kumar¹, Abhisekhar², Bonela Meghana²¹Associate Professor, Department of Pharmaceutics, Avanthi Institute of Pharmaceutical Sciences²Avanthi Institute of Pharmaceutical Sciences, Cherukupally, Vizianagaram, Andhra Pradesh***Corresponding Author**

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Erythroderma secondary to pustular psoriasis, an uncommon and intricate dermatological presentation, represents a clinical conundrum demanding meticulous examination. This case study of 45 years old female navigates the complexities surrounding this severe manifestation, elucidating the diagnostic challenges, treatment modalities, and ensuing outcomes. The evolution from classical psoriatic lesions to the erythrodermic-pustular variant involves a dynamic interplay of immunopathogenic cascades, prompting a nuanced diagnostic approach for accurate identification. Therapeutically, the condition necessitates a comprehensive strategy, balancing systemic and topical interventions to address both cutaneous and systemic manifestations. This case study contributes to the broader understanding of erythroderma secondary to pustular psoriasis, serving as a crucial reference for clinicians and researchers grappling with the intricate facets of this rare dermatological phenomenon.

Keywords: Erythroderma, Pustular Psoriasis, Immunopathogenesis, Diagnostic Challenges, Severe Psoriasis, Therapeutic Strategies, Cutaneous Manifestations, Systemic Complications, Dermatological Case Study.

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**Introduction**

Erythroderma secondary to pustular psoriasis stands as an intriguing and formidable challenge within the intricate domain of dermatological disorders [1]. This unique presentation unfolds as an intricate tapestry of clinical complexities, wherein the characteristic red, scaly plaques of psoriasis metamorphose into a more severe and enigmatic manifestation, marked by widespread erythema and the emergence of sterile pustules [2]. The clinical landscape becomes a battleground where the immune system orchestrates an aberrant response, leading to a cascade of inflammatory processes that extend beyond the typical confines of psoriatic lesions [3]. This relentless assault on the integumentary system not only poses a diagnostic conundrum but also demands a sophisticated therapeutic approach. The journey from conventional psoriasis to erythroderma secondary to pustular psoriasis involves a dramatic escalation in disease severity, often accompanied by systemic symptoms and a heightened risk of complications [4]. As we navigate this clinical terrain, a comprehensive understanding of the immunopathogenic mechanisms becomes imperative, laying the groundwork for tailored interventions that address not only the cutaneous manifestations but also the systemic implications [7]. This case study embarks on an in-depth exploration of one such intricate scenario, aiming to unravel the diagnostic intricacies, therapeutic dilemmas, and ultimate outcomes associated with this rare and severe facet of psoriatic disease [5]. Through this exploration, we endeavour to contribute valuable insights to the broader discourse of dermatological science, fostering a deeper understanding of erythroderma secondary to pustular psoriasis and paving the way for more effective strategies in its clinical management [6].

Case Presentation

A 45-year-old female presented with a sudden onset of diffuse erythema covering over 90% of her body surface area, accompanied by the development of sterile pustules. The patient complained of severe pruritus and generalized discomfort. Previous treatments for chronic plaque psoriasis had provided only partial relief. Physical examination

revealed erythematous plaques with pustules, affecting the entire body surface, and the patient exhibited systemic symptoms such as fever and malaise.

Diagnostic Evaluation

The diagnostic process involved a comprehensive evaluation, including a detailed patient history and a thorough physical examination. Skin biopsies were obtained from affected areas for histopathological analysis, revealing hyperkeratosis, parakeratosis, and neutrophilic infiltrates consistent with pustular psoriasis. Laboratory investigations, including complete blood count, liver function tests, and electrolyte levels, were conducted to assess the patient's overall health status.

Diagnosis

Based on the clinical presentation, histopathological findings, and laboratory results, the patient was diagnosed with erythroderma secondary to pustular psoriasis. This severe form of psoriasis indicated a systemic involvement requiring immediate intervention.

Treatment

The patient was admitted to the hospital for intensive care and received a combination of systemic therapies. Oral retinoids, corticosteroids, and methotrexate were initiated to address the underlying inflammatory process. Topical treatments, including emollients and corticosteroid creams, were employed to alleviate local symptoms. The treatment plan was carefully tailored to balance the need for rapid control of inflammation with considerations for the patient's overall well-being.

Outcomes and Follow-Up

Following initiation of treatment, the patient exhibited a gradual improvement in skin lesions, with a reduction of erythema and resolution of pustules. Systemic symptoms abated, and the patient's overall condition improved. Regular monitoring of laboratory parameters ensured the safety and efficacy of systemic therapies. The patient was discharged with a structured outpatient follow-up plan to monitor disease progression, treatment response, and potential side effects.

Discussion

The case presented challenges in both diagnosis and management, emphasizing the need for a multidisciplinary approach. Erythroderma secondary to pustular psoriasis requires a delicate balance between aggressive systemic therapy and vigilant monitoring to prevent complications. The rarity of this condition underscores the importance of increased clinical awareness and further research to refine treatment strategies.

Conclusion

This case study exemplifies the successful management of erythroderma secondary to pustular psoriasis, highlighting the significance of prompt diagnosis and tailored treatment. The outcomes underscore the importance of a comprehensive approach to address both cutaneous and systemic manifestations. Continued research and awareness are crucial for advancing our understanding and refining therapeutic strategies for this severe dermatological manifestation.

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