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Case report

Erythrodermic psoriasis: a case report

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Abstract

Psoriasis is a chronic skin condition that is initiated by an intense immune system. Erythrodermic Psoriasis (EP) is an aggressive and inflammatory form, though it is uncommon among patients. The main symptom is a peeling rash on the body's whole surface. The rash itches and burns and spreads very rapidly. This type of psoriasis affects more than 75% of the surface of the body with inflammation and with/without exfoliation. It may be seen in association with psoriasis of Von Zumbusch pustular type. It is normally seen in people who have plaque psoriasis. EP generally makes the skin to lose its capacity to regulate body temperature and to protect against infections. In the beginning, the treatment generally includes a topical application of a combination of medium potent steroids and moisturizers along with wet dressings and oatmeal baths. Bed rest is also suggested. Usually it is advised to maintain and restore body fluids. General systemic therapies include the administration of methotrexate, cyclosporine and retinoid.

Key words: Corticosteroids, Dermatitis, Erythrodermic, Methotrexate, Psoriasis

Introduction

Erythrodermic Psoriasis (EP) is an uncommon but severe type of Psoriasis. Its prevalence among the patients with psoriasis is about 1–2.25%.¹ The current therapy available for the management of EP, including medium potency topical corticosteroids and moisturizers, shows unsatisfactory outcomes, hence, its management remains as a challenge for physicians. There are multiple documented and emerging causes of EP. It may arise from a previous history of any type of psoriasis at any age. EP also generally occurs due to microbial infections. Various drugs like antimalarial agents, trimethoprim, lithium and sulfamethoxazole, and environmental factors such as psychological and metabolic factors may also play a considerable role.²

At the initial level, the inflammation of the skin in erythroderma produces vasodilation and ensuing

thermoregulatory disturbances. Later, shunting of blood combined with exfoliative losses will result in increased transpiration and fluid losses, increasing the risk of septicaemia of *Staphylococcus aureus*. Due to these fluid losses and shunting, multiple electrolyte abnormalities and organ hypoperfusion effects can be observed.³

The characteristics of the disease are erythema, edema desquamation along with several symptoms such as tachycardia, fatigue, malaise, fever, chills, dehydration, electrolyte imbalance, lymphadenopathy, arthralgia, myalgia, insomnia, sweat, diarrhea, constipation, weight changes, etc. However, rarely, a high output heart failure (maybe because of excessive water loss and edema) and cachexia may also be seen.² It is a potentially fatal disease as most of the patients are elderly and the skin involvement is widespread.¹ EP has life-threatening complications such as hemodynamic, metabolic, immunologic, infectious, and thermoregulatory disturbances.³

Case report

A 13-year-old boy was presented with itchy lesions over the knee and elbow one month ago, which

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Figure 1: Severe skin desquamation over the entire body on 2nd day of admission.

then progressed to the body and scalp overall. The lesions started peeling and crusting gradually, and the patient also had a history of an on and off fever and body pains for the last month.

The boy was febrile on admission with moderate distress and had signs of moderate dehydration associated with severe malnutrition. Generalized skin redness and desquamation were seen over his entire body surface except on his face. There was no history of consanguinity, pathological, and none of the other family members affected by the same disorder. The patient was diagnosed with plaque psoriasis and had been treated with topical corticosteroids and moisturizing creams. He visited our hospital several times with similar complaints for the last six years with exacerbations during winter.



Figure 2: Significant changes after 13 days of treatment

Laboratory tests showed decreased haemoglobin levels (10.8 gm%), increased neutrophil (78%) and eosinophil (8%) count; on liver function tests it is observed that SGPT, SGOT and ALT levels were

elevated, though the chest X-ray was normal. Based on the subjective and objective evidence, the patient was clinically diagnosed with severe erythrodermic psoriasis. Induction therapy with corticosteroids, methotrexate, emollients and antihistamines was prescribed. Adverse events have not been observed during the entire course of treatment.

Discussion

EP is a rare but dangerous type of psoriasis, which is noticed by erythema of the whole body with scaling; furthermore, it is associated with considerable mortality incidences.² Enormous loss in protein and fluids, leucocytosis, anaemia, increased C-reactive protein and erythrocyte sedimentation rate, electrolyte abnormalities, temperature irregularities, abnormal liver function are generally observed in this type of psoriasis.^{1,4}

There is a deficiency of excellent medical literature on the examination and treatment options for erythrodermic psoriasis. Previous clinical trials have shown that systemic agents such as cyclosporin A or methotrexate should be started as soon as the disease is diagnosed. New immunomodulators like alefacept, efalizumab, etanercept and infliximab are recommended in mild cases, though they are used less in severe cases.⁵ Other agents like corticosteroids and emollients play a major role in treating this type of psoriasis.

The patient was prescribed with Corticosteroids [tab. Methylprednisolone (8mg BD), Clonate -F lotion (clobetasol + fusidic acid), Topisal lotion (clobetasol + salicylic acid)], Emollient [Aquadew lotion (Glycerin)], tab. Methotrexate (2.5mg BD), Anti-histamine [tab. Levocetirizine (10mg OD), tab. hydroxyzine (10mg OD)], and other drugs

like antibiotics [inj. Ceftriaxone (500mg BD), inj. Amikacin (250mg OD), and H₂ receptor antagonist [inj. Ranitidine (150mg BD)] were also prescribed. The patient was also prescribed with syrup livogen to bring his liver enzymes to normal. After four days of admission, it was observed that all the liver function tests like SGPT, SGOT & ALT levels had reached normal. A significant improvement was observed after 13 days as indicated by the disappearance of psoriatic lesions all over the body.

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