

# Erythrodermic Psoriasis - A Case Report

Ambuj Garg<sup>1</sup>, Rishikesh Dessai<sup>2</sup>, Vinus Taneja<sup>3</sup>, Vikas Kumar<sup>4</sup>, P K Agarwal<sup>5</sup>

<sup>1, 2, 3, 4, 5</sup>Department of Medicine, Sir Ganga Ram hospital, New Delhi

**Abstract:** Erythrodermic psoriasis is an uncommon, inflammatory and severe variant of psoriasis. The symptoms include widespread skin erythema, scaling of more than 75% of the body surface area. Erythrodermic psoriasis has life threatening complications that include hemodynamic, immunologic, metabolic and thermoregulatory disturbances. Identifying this potentially life-threatening form of psoriasis is crucial. A detail history and detailed evaluation of the patient is necessary to establish the diagnosis. We hereby report a case of erythrodermic psoriasis and review this important disease.

**Keywords:** Erythrodermic Psoriasis, Erythroderma, Psoriasis

## 1. Introduction

Erythrodermic Psoriasis (EP) is an uncommon, inflammatory and severe variant of psoriasis. It occurs in 1-2% of affected patients. The symptoms include widespread skin erythema, scaling of more than 75% of the body surface area. There are multiple risk factors and causes of EP; main risk factor being, history of psoriasis and medications, sudden stoppage of psoriasis treatment, use of certain psoriasis medications, overuse of steroids, emotional stress, excessive alcohol consumption, allergic reactions and rashes, infections sunburns and oral steroids. There are many life-threatening complications that include hemodynamic, immunologic, metabolic and thermoregulatory disturbances. The erythroderma causes exfoliation. The erythroderma causes exfoliative dermatitis of the skin, shedding the epidermis and increasing the risk of Staphylococcus aureus septicemia. The generalized inflammation of the skin causes vasodilation and subsequent thermoregulatory disturbances. The shunting of the blood combined with the exfoliative losses causes increased transpiration and fluid losses proportional to the surface area involved. As a result of the fluid losses and shunting, there are multiple electrolyte abnormalities and organ hypoperfusion effects that can occur. Hence recognition of this potentially life-threatening form of psoriasis is imperative. We report a case of EP and review this important disease.

## 2. Case Report

A 27 year old male presented to our hospital with fever, rashes over the body for the last 30 days. There was history of generalised weakness, decreased appetite, knee joint pain, and redness over both the palms and soles associated with peeling approximately one year back. It was progressive and associated with disfigurement of nails, but, patient did not take any treatment for the same. Patient then showed it to some other hospital and was diagnosed as plaque psoriasis and was started on topical treatment, but, symptoms persisted. Patient was then started on Methotrixate for 4 weeks, when there was temporary relief of symptoms for almost 2 weeks. And then the patient stopped the treatment, and the disease flared up again to involve the entire body gradually. This time the patient came high grade fever and bilateral lower limb pain and rashes all over the body (as shown in the figures). Investigations revealed CBC: Hb:11.4 g/dl, TLC: 17,500/mcl, platelets: 3,14,000/mcl, ESR was

46mm/1<sup>st</sup>hr, PBS showed neutrophilic leucocytosis, predominantly normocytic normochromic RBCs with mild anisocytosis, SGOT: 26, SGPT: 43, Urine routine: 15-20 pus cells. Widal was negative, R Factor was negative. CXR was normal, HBsAg, anti HCV, anti HIV: negative. Patient underwent Skin Biopsy which showed hyperkeratosis, occasional focus of parakeratosis with underlying hypogranulosis. Mild acanthosis, mild spongiosis and occasional lymphocytosis exocytosis. Occasional suprapapillary thinning seen. Papillary dermis showed oedema, dilated capillaries and few extravagated RBCs. Papillary and upper dermis showed mild perivascular mononuclear cell infiltrate. Features consistent with early stage of Psoriasis. Patient was diagnosed Erythrodermic psoriasis with urinary tract infection. Patient was started on parenteral antibiotics and supportive measures. The reports started improving. So patient was started on steroids and immunosuppressants (cyclosporine 100mg twice daily). Repeat CBC: Hb:10.2 g/dl, TLC: 12,300/mcl, platelets: 3,00,000/mcl, Urine routine: 3-5 pus cells, steroids were gradually tapered and immunosuppressants continued.



**Figure 1:** Rashes, scaling over upper limbs. Before treatment



**Figure 2:** Scaling over trunk and scalp. Before treatment



**Figure 3:** Rashes, scaling over lower limb. Before treatment



**Figure 4:** Scaling over scalp improving after treatment



**Figure 5:** Rashes on the lower limb improving after treatment

### 3. Discussion

Erythrodermic Psoriasis is a rare and severe variant of Psoriasis. It may arise from any type of psoriasis. Psoriasis is characterised by papulosquamous lesion, which may involve skin, nail and joint with multifactorial etiology. It affects 1-2% of the general populations. The different types are Guttate Psoriasis, Sebopsoriasis, Plaque Psoriasis, Pustular Psoriasis, Erythrodermic Psoriasis. EP has a rare clinical presentation. May arise from any type of psoriasis. The triggering factors include trauma, infections, drugs (lithium, antimalarials, cotrimoxazole), Environmental, psychological and metabolic factors. It manifests as erythema, edema, desquamation, systemic compromise (fever, dehydration, malaise, and malnutrition). There can be nail changes associated like pitting in nail plate, subungual hyperkeratosis, onycholysis and dystrophy. The supportive management includes maintaining hydration and nutrition. Definitive treatment includes steroids, immunosuppressants, Methotrexate, Cyclosporine and Biologicals like Infliximab, Efalizumab, Etanercept, Alefacept, and Golimumab.

### 4. Conclusion

Psoriasis is a treatable disease. Erythrodermic Psoriasis is a very rare variant. It is very important to recognise and avoid the triggering factors. Immunosuppressants and biologicals may be used to treat the severe forms.

### References

- [1] M. Rosenbach, S. Hsu, N. J. Korman et al., "Treatment of erythrodermic psoriasis: from the medical board of the National Psoriasis Foundation," *Journal of the American Academy of Dermatology*, vol. 62, no. 4, pp. 655–662, 2010.
- [2] S. Boyd and A. Menter, "Erythrodermic psoriasis," *Journal of the American Academy of Dermatology*, vol. 21, no. 5, pp. 985–991, 1989.
- [3] E. Schmidt, D. A. Wetter, S. B. Ferguson, and M. R. Pittelkow, "Psoriasis and palmoplantar pustulosis associated with tumor necrosis factor- $\alpha$  inhibitors: the Mayo clinic experience, 1998 to 2010," *Journal of the American Academy of Dermatology*, vol. 67, no. 5, pp. e179–e185, 2012.
- [4] R. Goiriz, E. Daudén, S. Pérez-Gala, G. Guhl, and A. García-Díez, "Flare and change of psoriasis morphology during the course of treatment with tumour necrosis factor blockers," *Clinical and Experimental Dermatology*, vol. 32, no. 2, pp. 176–179, 2007.
- [5] K. A. Potter, K. Motaparathi, J. J. Schoch, and J. J. Schoch, "Erythrodermic psoriasis after discontinuation of ixekizumab," *JAAD Case Reports*, vol. 4, no. 1, pp. 22–23, 2018.
- [6] E. N. Kop, J. E. M. Kořver, D. Van Ruyssevelt et al., "Erythroderma in two patients with psoriasis upon discontinuation of efalizumab treatment," *Journal of Dermatological Treatment*, vol. 20, no. 1, pp. 67–69, 2009.
- [7] J. H. Prystowsky and P. R. Cohen, "Pustular and erythrodermic psoriasis," *Dermatologic Clinics*, vol. 13, no. 4, pp. 757–770, 1995.