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Impact of Patient Counseling and Improvement on Erythrodermic Psoriasis- Case Study

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Abstract
Erythrodermic psoriasis may ascend from any type of psoriasis and occurs in all age groups. The generalized manifestations of the disease are erythema, edema, desquamation and systemic compromise like fever, dehydration, malaise and malnutrition.
Case Presentation: *A 70 year old male patient was admitted to the hospital with skin lesions all over the body for past 6 months. His dermatological examination revealed generalized lichenification and exfoliation all over the lower extremities. He was on regular counseling and the improvement was marked by before and after picture illustrations.*
Conclusion: *It's a role of pharmacist to emphasize the importance of patient counseling as Psoriasis can have episodes of recurrence, so they should be on a regular counseling and follow ups to improve the treatment efficacy and to improve their quality of life.*
Keywords: *Case study, Erythrodermic psoriasis, Edema, Exfoliations.*

Introduction

Erythrodermic psoriasis is a rare type of psoriasis, which is an inflammatory form that affects most of the body surface. The lesions are not clearly defined. Wide spread, fiery redness and exfoliation of the skin characterize this form of psoriasis accompanied with itching and pain. Therapy of psoriasis may include systemic or combinational therapy including local and systemic agents. Immunomodulators such as Efalizumab, Infliximab, Alefacept, Etanercept are used in milder cases.

The treatment of Erythrodermic psoriasis should include rigorous control of a patient's hydration and nutrition and Systemic therapy includes drugs such as oral retinoids, Methotrexate and Cyclosporine. Demonstrating the severity of occurrence of Erythrodermic flares with satisfactory compliance and proving the efficacy of patient counseling is the current objective of the study. The case was documented with proper consent sighed from the patient and the institutional head.

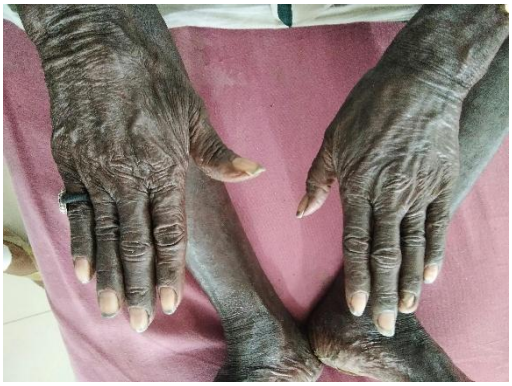
Case Report

A 70 year old male patient was admitted to the dermatology hospital of Thiruvallur Government hospital with skin lesions all over the body for past 6 months. His dermatological examination revealed generalized lichenification and exfoliation all over the lower extremities. Multiple plaques of varying size with silver white scales were observed throughout the body. Generalized scaling throughout the body with paronydrial appearance of all finger nails was present. On general examination the patient was conscious, febrile (slightly increased) and non-anemic with body weight of 42kg with normal BMI.

Table 1: Lab investigations of the patient

S no	Diagnostic parameters	Patient value	Normal values	Inference
1	Temperature	101°F	98.4°F	Increased
2	Pulse rate	84/min	70-74/min	Increased
3	Respiratory rate	30 breaths	12-20 breaths	Increased
4	Blood pressure	130/80 mmHg	120/80 mmHg	Increased
5	Hemoglobin	9.8 g/dl	12-14 g/dl	Decreased
6	PCV	28%	41-59%	Decreased
7	TC	5,900	4000-11000 cumm	Within limits
8	WBC	5900 cells/microlitre	4500 - 11000 cells/microlitre	Within limits
9	Neutrophils	82%	40-80%	Increased
10	Lymphocytes	31.6%	20-40%	Increased
11	Monocytes	1.9%	2-10%	Within Limits
12	MCV	86.5 fl	76-96 fl	Within limits
13	MCH	28.2 pg	27-32 pg	Within limits
14	MCHC	30.1 g/dl	31-35 g/dl	Decreased
15	Platelets	2.83 lakhs/cumm	1.5-4 lakhs/cumm	Within limits
16	RBC	3.26 mill/cc	3.8-4.8 mill/cc	Decreased
17	RBS	119 mg/dl	80-140 mg/dl	Within Limits
18	Blood urea nitrogen	22 mg/dl	7-18mg/dl	Increased
19	Creatinine	0.8 mg/dl	0.6-1.3 mg/dl	Within limits

He was a known case of Psoriasis and on treatment with Moisturizing creams and topical corticosteroids, which doesn't show any improvements on condition. There was no evidence of any family history. No history of any triggers, trauma, infections, drugs allergy was reportedby the patient. The condition flared up due to environmental and climatic changes.



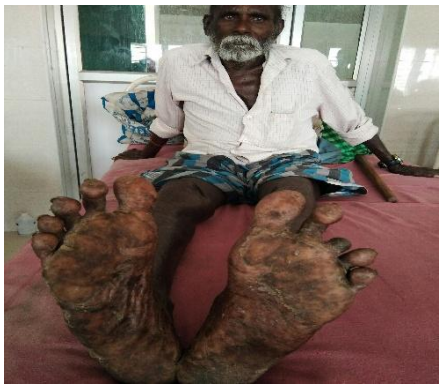
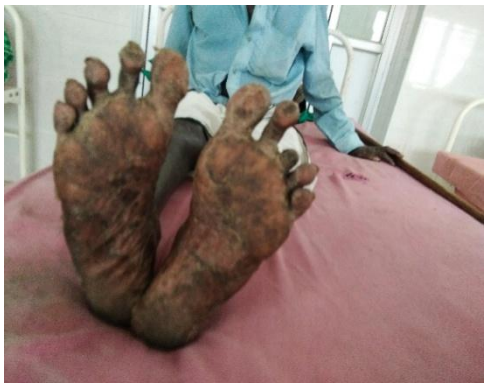


Figure 1: Condition of the patient at the time of admission (Before initiating treatment)

Initial management of the condition of the patient was with systemic agents Methotrexate, well-controlled food intake and fluid resuscitation. Topical therapy included Hydrocortisone (1% in petrolatum). The patient was educated on

normalizing intake of water-salt balance. Scaling which resulted in excessive protein loss was compensated with a proper balanced diet.

After monitoring for 4days no much improvement was noticed due to which Cyclosporine (3mg/kg/day) was added to therapy. After a period of 2 weeks Calcipotriol was made use of locally as an emollient. On alternate days 100mg per week. Simultaneously levels of phosphonate and calcium in the serum were measured in proper intervals to avoid complications. Antibiotics (Amoxycillin, Cephalosporins Erythromycin) were included in the treatment plan to enhance the efficacy and therapeutic outcome. The vitals were monitored in regular basis and topical agents were continued as advised.



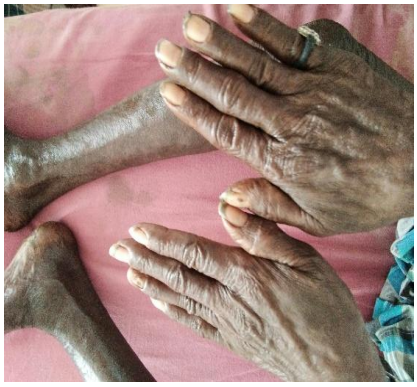


Figure 2: Condition of the patient after 2 weeks of therapy along with patient counseling illustrating marked improvement

Slowly with improvement Cyclosporine was replaced by Phototherapy with UVB and Calcipotriol due to increased creatinine levels with Cyclosporine which was extended to 1 month till patient was discharged. The patient was found to respond positively towards the therapy and no other side effects were found. Discharge patient counseling was done to prevent further episodes or recurrence of the condition.

Discussion

The Erythroderma psoriasis is a serious approach and requires combined therapy with systemic steroids or corticosteroids for recovery of the patient. In the above case the patient has been treated with combined therapy with weekly intervals for monitoring of benefits from therapy. Reduction of side effects with combinational therapy is possible when compared with monotherapy due to the lower dose used, thus benefitting from it. Literature suggests that immonosuppressants action of Cyclosporine with differentiation modulating effect of retinoids is a beneficial combination. Retinoids could also be used along with PUVA or UVB.

Use of topical agents with systemic agents in combinational therapy is also beneficial. Combination of Calcipotriol (vitamin D_3 analogues) and Cyclosporine in this patient was found to bring improving signs of his condition. Calcipotriol inhibits proliferation by inducing terminal differentiation in cultured human keratinocytes. Its immunomodulatory effect was by inhibition of T-cell proliferation of reduction in Interlukin-6. Phototherapy with UVB along with this combination was found to be beneficial. The immunosuppressive effect of Cyclosporine was increased by Calcipotriol through its synergistic effect. Similarly synergism was observed even with combination of UVB phototherapy and Calcipotriol. Depending upon contraindications and indications in patients, monotherapy or combined therapy may be applicable. Thus in the present case combination therapy with Cyclosporine plus Calcipotriol plus phototherapy with UVB was successfully worked out.

Discharge patient counseling was done by educating other non- pharmacological measures may include Daily early morning sun exposure, Sea salt bathing, application of topical moisturizers and stress relaxation and management therapy.

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