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Case Study

Ayurvedic management of life-threatening skin emergency erythroderma: A case study

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Abstract

Erythroderma or generalized exfoliative dermatitis is a skin disorder that requires attention equivalent to medical emergencies. It is more prevalent in male population. It accounts for 35 cases/100,000 cases in dermatologic outpatient departments. In erythroderma even with proper management there are certain metabolic burdens and complications which make it more critical. The primary aim, in this case, was to treat the patient with Ayurvedic management. A 18-year-old patient, suffering from erythroderma, was treated on the line of *Kapala Kushtha* and *Audumbera Kushtha*. The patient had primarily suffered from psoriasis for 8 years. Erythroderma was developed due to abrupt self-medication with an unknown amount of intramuscular methylprednisolone several times in last month. *Rasamanikya*-125 mg, *Arogyavardhini Vati*-1 g, *Kaishora Guggulu*-1 g, *Khadirarista*-20 ml, and *Panchatikta Ghrita*-20 ml, all drugs twice a day with 3-4 times local application of *Jatyadi Taila* were administered. A decoction of *Jwarhara Kashaya* was also administered in the dose of 40 ml twice a day. The patient had relief from the acute phase after 20 days of treatment and complete remission after 3 months of treatment. This case study demonstrates that Ayurvedic management may be useful in erythroderma like acute and life-threatening condition.

Key words: *Audumbera Kushtha*, erythroderma, *Jatyadi Taila*, *Kapala Kushtha*, *Panchatikta Ghrita*, *Rasamanikya*

Introduction

Erythroderma is an inflammatory skin disorder characterized by extensive erythema and scaling all over the body caused due to dysfunction of skin metabolism. The body surface involves in this condition accounts for more than 90%. Erythroderma even with proper management has metabolic burden and complications. It has multiple etiologies which makes its management more and more challenging. In the Indian subcontinent, the incidence is 35 cases/100,000 cases attended at dermatologic outpatient department. It is more prevalent in males with the male: female ratio ranging from 2:1 to 4:1, and the mean age between 40 and 60 years.[1] A pre existing dermatitis is the single most common cause of adult erythroderma. A number of dermatitis can progress to erythroderma, but the most common include psoriasis and eczema.[1-3] Uses of herbal medicines such as *Aloe vera* leaves and *Yoruba agbo* leaves are also demonstrated as a causative factor.[4]

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Some clinical features of erythroderma are common to all patients. A patchy erythema may rapidly spread within 12–48 h and accompanied by pyrexia, malaise, and shivering.[5] Scaling appears 2–6 days later. At this stage, the skin is hot, red, dry, thickened, and indurated due to edema and lichenification.[6] The patient experiences irritation and tightness of the skin and feels cold. There may be copious and continuous exfoliation of scales. If erythroderma has been present for some weeks, scalp, and body hair is lost. The nails become thickened and may be shed.[7] Pigmentary changes are also prominent. In

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some patients sparing of the nose and paranasal areas is also found (nose sign)[8] This is described in Ayurveda as *Nasabhanga* due to spreading of skin disease up to bone and bone marrow level and involvement of *Pitta Dosha*.[9,10] Cardiac failure and hypothermia are especially found in the elderly patients. Edema and cutaneous or respiratory infection are also found in some patients. The pulse rate is always increased. The most common causes of death in patients with erythroderma are heart failure, pneumonia, and septicemia.[11] Initial studies reported death rate in the range of 4.6-64%. Laboratory findings are usually nonspecific. Common abnormalities are leukocytosis with eosinophilia, erythrocyte sedimentation rate, mild anemia, decreased serum albumin, abnormal serum protein electrophoresis, increased uric acid, and elevated IgE levels. The initial management of erythroderma included replacement of nutritional, fluid, and electrolyte losses. Local skin-care measures as well as wet dressings followed by the application of bland emollients and low-potency corticosteroids. Secondary infections are treated with antibiotics.

This case report is of a patient of erythroderma which was successfully managed according to the line of management of *Kapala Kushtha* and *Audumbera Kushtha*.

Case Report

A 18-year-old boy came to OPD of National Institute of Ayurveda, Jaipur, India on July 27, 2013, for a severe skin problem. The patient was suffering from pyrexia, malaise, shivering, edema, cracking of skin, erythema, shedding of skin from all over the body, severe itching, oozing, restlessness, and breathlessness [Figure 1]. This condition had appeared suddenly from last 5-6 days following intramuscular injection of methylprednisolone taken to relieve itching of the skin. First patient felt hot, red, dry, and thickened skin with irritation and tightness of the skin associated with severe shivering. The patient was suffering from psoriasis. The patient had taken medicine irregularly from many allopathic skin specialists. From last 6 months was on self-medication of intramuscular methylprednisolone about 4 times in a month but from last month frequency of self-medication with intramuscular prednisolone was increased. Family history was negative for similar conditions or skin disorders. Physical examination showed extensive non-uniform erythematous scaly patches involving the scalp, face, trunk, arms, legs, palms, and soles. There was severe sloughing of the epidermis from all over the body. The nails were thickened, had ridges, and shedding were also there in some nails. Other laboratory investigations and vital signs were also abnormal [Table 1]. This patient was treated in I.P.D. of National Institute of Ayurveda, Jaipur. The patient was treated on the line of management of *Kapala Kushtha* and *Audumbera Kushtha*. *Rasmanikya*-125 mg,[12] *Arogyavardhini Vati*-1 g,[13] *Kaishora Guggulu*-1 g,[14] *Khadirarista*-20 ml,[15] and *Panchatikta Ghrita*-20 ml,[16] twice a day with 3-4 times local application of *Jatyadi Taila*[17] was administered for treatment. A decoction of *Jwarhara Kashaya* [Table 2] was also administered in the dose of 40 ml twice a day for total 3 months. The patient had relief from the acute phase after 20 days and complete remission after 3 months of total treatment [Figure 2].

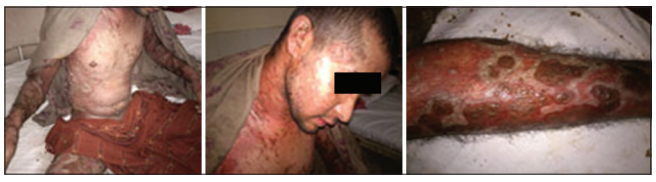

Figure 1: Before treatment

Discussion

Erythroderma is a secondary disorder for several primary skin diseases. In the first stage of erythroderma patchy erythema, pyrexia, malaise, shivering, hot, red, dry indurated, thickened skin, and lichenification are found. These have the resemblance

Table 1: Laboratory investigations and vital signs of patient before and after treatment

Laboratory investigations and vital signs	Before treatment	After 20 days of treatment
Vital signs		
Temperature	102°F	98.4°F
Blood pressure	95/68 mmHg	110/76 mmHg
Heart rate	115	74
Respiratory rate	16	17
Hematology		
Hb%	12.6	12.4
TLC	23,900	10,700
ESR	61	15
Neutrophils%	85	64
Lymphocytes%	10	30
Monocytes	03	03
Eosinophils	02	03
Basophils	00	00
Bio-chemistry		
CRP	Positive	Negative
Liver function test	Within normal limit	Within normal limit
Renal function test	Within normal limit	Within normal limit
Routine and microscopic urine analysis	Within normal limit	Within normal limit

ESR: Erythrocyte sedimentation rate, TLC: Total leukocyte count, CRP: C-reactive protein

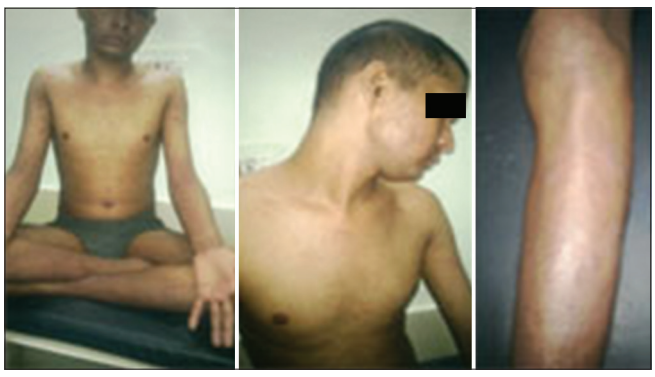

Figure 2: After treatment

Table 2: Content of *Jwarhara Kashaya*

Sanskrit name	Botanical source
Mustaka	*Cyperus rotundus* L.
Rakta Chandana	*Pterocarpus santalinus* L.F.
Tulasi	*Ocimum sanctum* L.
Kutaja	*Holarrhena antidysentrica* (Roth.) A.DC.
Nimba	*Azadirachta indica* A.Juss.
Haridra	*Curcuma longa* L.
Kiratatikta	*Swertia chirayita* (Roxb.ex.Flem.) Kar.
Madhuyasti	*Glycyrrhiza glabra* L.
Kutaki	*Picrorhiza kurroa* Royle ex Benth.
Amrita	*Tinospora cordifolia* Willd
Amalaki	*Emblica officinalis* Gaertn.
Haritaki	*Terminalia chebula* Retz. and Willd.
Vibhitaka	*Terminalia bellirica* Roxb.

All the drugs in equal quantity

with the manifestation of *Kapala kushtha* that are erythematic and blackish discoloration of skin, dryness of skin, hardness of skin, thinning of epidermis and pricking such as itching sensation of skin and irregular spreading.[18,19] In second stage of erythroderma oozing, shedding of skin from whole body, edema, cardiac failure, cutaneous or respiratory infection, pneumonia, septicemia, pigmentary changes in hair and sparing of nose, and paranasal areas, etc., complication are found. These have the resemblance with the manifestation of *Audumbera Kushtha* that are burning sensation, severe itching, pain, erythema of whole skin, discoloration of hair, edema and oozing from skin and rapidly cracking of skin and infection.[20,21] *Kapala Kushtha* is a *Vata Dosha* dominant skin disease, and *Audumbera Kushtha* is a *Pitta* dominant skin disease. The line of Ayurvedic management of *Kapala Kushtha* and *Audumbera Kushtha* is the application of medicated *Ghrita* and *Virechana* (purgation).[22] Treatment was planned according to these principles. In this case study, patient reported in complication phase. In Ayurvedic point of view, this phase was the *Audumbera Kushtha*. So at this phase mild purgation was given with *Arogyavardhini Vati* and *Jwarhara Kashaya*. Due to shedding of epidermal skin barrier was lost and the body was prone for infection. So *Jatyadi Taila* was applied 3-4 times a day on the whole body surface. For oozing of skin (which is considered as *Kleda* in Ayurveda), *Khadirarista* was administered as *Khadira* has *Kledashoshaka* (controlling the oozing from skin) property due to its *Khara Guna* (roughness property). *Jwarhara Kashaya* was given which alleviate the shivering, pyrexia, and itching due to its *Pittahara* properties (suppression and elimination of deranged *Pitta Dosha*). Due to which after 8–9 days of treatment patient had relief. But erythema, itching, and feeling of tightness of skin were present. Some new sterile pinhead-sized pustules were also appeared. *Panchatikta Ghrita* was added to the treatment as it is the line of treatment of *Kapala Kushtha*. Within next 10 days, the patient got relief from acute stage of this disorder. There was some improvement in ridging of nails and shedding of nails. Administration of *Panchatikta Ghrita* was continued up to 3 months. After 3 months of total treatment nails had got luster back and there were no pitting and ridges on nails. Involvement of nails in skin disease in Ayurveda is considered under *Asthigata Kushtha* and for which treatment with *Panchatikta Ghrita* is necessary. *Panchatikta Ghrita* is a combination of drugs having *Tikta Rasa* (bitter taste) dominance. *Tikta Rasa* is used as a vehicle to deliver medicine up to bone *Dhatu* level. In Ayurveda, nails are considered as a byproduct of *Asthi Dhatu* (bone) metabolism. *Rasamanikya*, *Kaishora Guggulu*, *Arogyavardhini Vati*, and *Jatyadi Taila* are effective in *Galita Kushtha* (skin diseases with suppuration) *Sphuthit Kushtha*, *Vatarakta*, *Vishphota*, and *Mandala Kushtha*, etc.,(various skin disorders). Combined effects of these drugs are helpful in breaking of immunological reaction, removal of a toxic substance from the body, relieving from pain, inflammation, infection, and to improve general body condition. The combination of these drugs has the capabilities to address all the manifestations of erythroderma. In erythroderma mainly steroid is administered systematically and locally but in this case erythroderma was developed after more and abrupt uses of steroid. This case was successfully treated with Ayurvedic medicine on the line of management of *Kapala* and *Audumbera Kushtha*.

Conclusion

Various stages of clinical manifestation of erythroderma have close resemblance with *Kapala Kushtha* and *Audumbera Kushtha*. This case of erythroderma was successfully managed in the lines of management of *Kapala Kushtha* and *Audumbera Kushtha*. This case study demonstrates that Ayurvedic management may be useful in acute and life-threatening conditions such as erythroderma.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Nil.

Conflicts of interest

There are no conflicts of interest.

References

1. Sehgal VN, Srivastava G. Exfoliative dermatitis. A prospective study of 80 patients. Dermatologica 1986;173:278-84.
2. Rym BM, Mourad M, Bechir Z Dalenda E, Faika C, Iadh AM, *et al.* Erythroderma in adults: A report of 80 cases. Int J Dermatol. 2005; 44:731–5.
3. Pal S, Haroon TS. Erythroderma: A clinico-etiologic study of 90 cases. Int J Dermatol. 1998; 37:104–7.
4. Okoduwa C, Lambert WC, Schwartz RA, Kubeyinje E, Eitokpah A, Sinha S, *et al.* Erythroderma: Review of a potentially life-threatening dermatosis. Indian J Dermatol 2009;54:1-6.
5. Sehgal VN, Srivastava G, Sardana K. Erythroderma/exfoliative dermatitis: A synopsis. Int J Dermatol 2004;43:39-47.
6. Rubins AY, Hartmane IV, Lielbriedis YM, Schwartz RA. Therapeutic options for erythroderma. Cutis 1992;49:424-6.
7. Jaffer AN, Brodell RT. Exfoliative dermatitis. Erythroderma can be a sign of a significant underlying disorder. Postgrad Med 2005;117:49-51.

8. Agarwal S, Khullar R, Kalla G, Malhotra YK. Nose sign of exfoliative dermatitis: A possible mechanism. Arch Dermatol 1992;128:704.
9. Shastri AD, editor. Susruta Samhita of Susruta, Nidana Sthana, Kushthanidanam Adhayaya, Chapter 5, Verse 25. 14th ed., Vol. 1. Varanasi: Chaukhambha Sanskrit Sansthan; 2003. p. 250.
10. Shastri AD, editor. Susruta Samhita of Susruta, Nidana Sthana, Kushthanidanam Adhayaya, Chapter 5, Verse 18. 14th ed., Vol. 1. Varanasi: Chaukhambha Sanskrit Sansthan; 2003. p. 249.
11. Rothe MJ, Bernstein ML, Grant-Kels JM. Life-threatening erythroderma: Diagnosing and treating the "red man". Clin Dermatol 2005;23:206-17.
12. Mishra S, editor. Bhaisajyaratnavali by Govind Das Sen, Sidhiprada Hindi Commentary, Kustharogadhikara, Chapter 54, Verse 120-125. 1st ed. Varanasi: Chaukhamba Surbharati Prakashan; 2007. p. 872.
13. Mishra S, editor. Bhaisajyaratnavali by Govind Das Sen, Sidhiprada Hindi Commentary, Kustharogadhikara Chapter 54, Verse 111-117. 1st ed. Varanasi: Chaukhamba Surbharati Prakashan; 2007. p. 871.
14. Mishra S, editor. Bhaisajyaratnavali by Govind Das Sen, Sidhiprada Hindi Commentary, Vataraktadhikara Chapter 27, Verse 104-113. 1st ed. Varanasi: Chaukhamba Surbharati Prakashan; 2007. p. 582.
15. Mishra S, editor. Bhaisajyaratnavali by Govind Das Sen, Sidhiprada Hindi Commentary, Kustharogadhikara, Chapter 54, Verse 353-358. 1st ed. Varanasi: Chaukhamba Surbharati Prakashan; 2007. p. 895.
16. Mishra S, editor. Bhaisajyaratnavali by Govind Das Sen, Sidhiprada Hindi Commentary, Kustharogadhikara, Chapter 54, Verse 251-254. 1st ed. Varanasi: Chaukhamba Surbharati Prakashan; 2007. p. 884.
17. Mishra S, editor. Bhaisajyaratnavali by Govind Das Sen, Sidhiprada Hindi Commentary., Vranasothadhikara, Chapter 47, Verse 62-66. 1st ed. Varanasi: Chaukhamba Surbharati Prakashan; 2007. p. 825-826.
18. Pandey G, editor. Charaka Samhita of Agnivesa, Chikitsa Sthana, Vol. 2., Ch. 7, Ver. 14. 1st ed. Varanasi: Chaukumba Sanskrit Sansthan; 2006. p. 251.
19. Pandey G, editor. Charaka Samhita of Agnivesha, Nidana Sthana, Vol. 1., Ch. 5, Ver. 7. 1st ed. Varanasi: Chaukumba Sanskrit Sansthan; 2006. p. 644-5.
20. Pandey G, editor. Charaka Samhita of Agnivesha, Nidana Sthana, Vol. 1., Ch. 5, Ver. 7. 1st ed. Varanasi: Chaukumba Sanskrit Sansthan; 2006. p. 645.
21. Pandey G, editor. Charaka Samhita of Agnivesha, Chikitsa Sthana, Vol. 2., Ch. 7, Ver. 15. 1st ed. Varanasi: Chaukumba Sanskrit Sansthan; 2006. p. 251.
22. Pandey G, editor. Charaka Samhita of Agnivesha, Chikitsa Sthana, Vol. 2., Ch. 7, Ver. 39. 1st ed. Varanasi: Chaukumba Sanskrit Sansthan; 2006. p. 255.

हिन्दी सारांश

त्वचा की आत्ययिक अवस्था–एराइथ्रोडर्मा में आयुर्वेदिक चिकित्सा

सर्वेशकुमार सिंह, क्षिप्रा राजोरिया

एराइथ्रोडर्मा या सार्वदैहिक एक्सफोलिएटिव डरमेटाइटिस त्वचा रोगो में एक आत्ययिक अवस्था है। प्रत्येक एक लाख रोगियों में से ३५ रोगियों में एवं मुख्यतः पुरुष रोगियों में यह मुख्यतः प्राप्त होती हैं। एराइथ्रोडर्मा अवस्था चिकित्सा व्यवस्था होने पर भी घातक हो सकती है। यह घातकता मुख्यतः उपचयात्मक उपद्रवों के कारण होती है। इस अध्ययन का मुख्य उद्देश्य रोगी को आयुर्वेदिक चिकित्सा से ठीक करना था। एक १८ वर्ष के पुरुष रोगी जो कि एराइथ्रोडर्मा से पीड़ित था, का उपचार कपाल कुष्ठ एवं औडुम्बर कुष्ठ के उपचार के समान किया गया। यह रोगी पिछले ८ वर्ष से सोरियोसिस से पीड़ित था। यह व्याधि रोगी के द्वारा अन्तरपेशीय विधि से मिथाइलप्रेडनिसोलोन को अत्यधिक मात्रा में स्वतः लेने के कारण हुई। इस रोगी में रसमाणिक्य–१२५ मिलीग्राम, आरोग्यवर्धिनी वटी–२ ग्राम, कैशोर गुगलु–१ ग्राम, खदिरादिष्ट २० मिलीलीटर एवं पंचतिक्त घृत–२० मिलीलीटर की मात्रा में दिन में दो बार दिया गया। जात्यादि तैल को दिन में कई बार शरीर पर लगाया गया। ज्वरहर क्वाथ–४० मिलीलीटर की मात्रा दिन में दो बार दिया गया। रोगी इस व्याधि की तीव्र अवस्था से २० दिन में एवं सम्पूर्ण व्याधि से ३ महीने के उपचार से पूर्णतः मुक्त हो गया। अतः यह निष्कर्ष होता है कि आयुर्वेदिक चिकित्सा एराइथ्रोडर्मा जैसी घातक व्याधि में सहायक सिद्ध हो सकती है।