Case Report

Management of Psoriatic Erythroderma (PsE) with Ayurvedic herbomineral preparations: A case report

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A B S T R A C T

Psoriatic Erythroderma (PsE) is a presentation of Erythroderma due to a history of psoriasis showing inflammation and exfoliation of epidermal skin characterized by erythema and scaling. There is no definite treatment in contemporary medical science but the principle-based Ayurvedic approach has been proved to be effective. We present a case of PsE treated for 3 months with Ayurvedic herbomineral preparations and dietary restrictions for non-vegetarian and dairy items. As per the Ayurvedic diagnostic view, the presented case is correlated with Audumbara Kushtha and Ekakushtha due to their intricate features. Thus, Ayurvedic approaches were directed to eliminate vitiated doshas responsible for acute exacerbation of Kushtha (~dermatitis) and to maintain equilibrium among them. The patient was initially considered as a case of Saam stage of Kushtha with Pitta-Rakta-Vata predominance. Thus, management was planned into different domains-treatment of Saam stage of Kushtha, Vyadhiprayanika chikitsa (~disease antagonistic treatment), Rasayana intervention (~Immunomodulation therapy) and Ayurvedic drugs were given accordingly. The assessment was done based on subjective parameters and PASI score. The patient was followed for about one and half year without any complication and relapse. This case study shows PsE can be managed with an Ayurvedic approach and proper diet planning.

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1. Introduction

Erythroderma is an uncommon exfoliative dermatitis caused by a variety of diseases characterized by generalized erythema and variable degree of scaling [1]. Psoriatic Erythroderma (PsE) is the most common cause responsible for ~25% of all Erythroderma cases [2]. Erythroderma due to psoriasis is a very difficult condition to manage [3]. The clinical features are erythematous pruritic lesions, generalized burning sensation, pain, swelling and gross micaceous scaling from which the patient was mainly suffering were resembling two different types of Kushtha i.e., Audumbara kushtha and Ekakushtha [4]. Ayurveda deals PsE as Kushtha ( ~dermatitis) with vitiated Pitta- Rakta- Vata doshas predominantly with co-exited heterogeneous features of aforesaid types of Kushtha. The patient had a dietary history of additional salt eating with foodstuffs, spicy items and meat (approximately 4~5 times a week) supported Pittapradhan etiology. In this paper, a case of PsE is treated successfully with Ayurvedic herbomineral preparations.

2. Patient information

45 years old male patient visited the Out-Patient Department of Sir Sunderlal Hospital, Institute of Medical Sciences, Banaras Hindu University, Varanasi presenting with fever, erythematous scaly lesions on both lower limbs associated with painful swelling, itching and burning sensation for 10 days. Also, he had exfoliation of epidermal skin with generalized erythema and itching for 15 days. He was suffering from a course of remission and relapses of discoid epidermal scaly lesions on lower limbs for 8 years. He was diagnosed with Psoriasis in 2011. He had a thin and weaker left lower limb affected by Poliomyelitis since childhood. He was non-diabetic and non-hypertensive. He used...
to take a non-vegetarian diet twice a week. He was asked to consult an Ayurveda physician due to unmet expected response and recurring relapses on leaving medication. He was treated for 3 months with complete relief.

3. Clinical findings

3.1. General examination

On examination, his physique, general condition and nourishment were moderate with vitals stable. His appetite was average and his sleep was disturbed due to anxiety. He was febrile (38 °C) with blood pressure - 110/74 mmHg, pulse rate - 104/min, respiratory rate - 26/min and weight - 62 kg.

3.2. Dermatological examination (description, distribution and size of the lesions)

Lower limbs: Generalized pruritic, erythematous lesions overlapped with some indurated and hyper-pigmented discoid scaly lesions (2–3.5 cm diameter) also somewhere different sized irregular marginated scaly eruptions (1.5 cm × 4.5 cm) on both lower limbs (Fig. 1).

Upper limbs: Generalized mild pruritic erythema associated with mild linear scaling and multiple tiny papules of variable size (0.5–1 mm diameter) on both upper limbs.

Back: Generalized mild erythema associated with pruritus, linear thin greyish scaly eruptions and mild epidermal exfoliation from lateral back and loin regions.

Front: Presentation of the affected abdominal and thoracic area was quite similar to that of the back region. Mild exfoliation was associated with the lower lateral thoracic region.

Grattage test was positive at lower limbs. Overall presentations were suggesting features of Psoriasis and Erythroderma.

3.3. Other relevant data

Systemic examination didn’t reveal any significant findings. Hematological investigations (Table 1) revealed hemoglobin - 12.1 gm/dL, platelets- 4.57 lakhs/ul, total leukocyte count- 16,020/ul, suggesting superadded possible infection. Hepatitis B and C profiles were negative. The renal profile was normal. Hepatic enzymes were slightly raised with no sign of jaundice. We repeated the blood investigations at each visit considering the safety of the patient till the last visit (Table 1). Hepatic enzymes were raised since 1st visit and remained a little high during the course of management. The patient told that he had done liver function tests many times when taking modern medicines found increased hepatic enzymes with little fluctuations. ALT, AST and ALP found declined on the 6th visit since hepatoprotective medicines were started. He was also been advised for ultrasonography for evaluation of any changes in liver architectures. During follow-ups, the patient had no signs and symptoms of hepatitis, jaundice or related clinical feature. So, it was not given much importance considering it as a secondary association to chronic dermatitis.

4. Diagnostic focus and challenges

The patient was diagnosed case of Psoriasis in 2011 by a dermatologist but no records are available. We advised him to reinvestigate autoimmune profile (Anti-Nuclear Antibody, Serum immunoglobulin E, C reactive protein, etc.) and skin biopsy but he refused due to financial problem claiming that he had already done ANA for diagnosis of psoriasis and requested to prescribe medicines. So, he was provisionally diagnosed as Psoriasis with Erythroderma based on clinical features. The further diagnosis was confirmed as PsE after discussion with the dermatology department of Banaras Hindu University (Table 2).

5. Therapeutic intervention

The pharmacological intervention was planned in the form of Ayurvedic herbomineral preparations orally and topically along
with strict diet planning. Treatment was planned after assessing the stages of vitiated doshas. Initially, during the first visit, the patient was suffering from fever, erythema, swelling, itching and burning sensation mainly over lower limbs suggesting vitiation of Pitta and burning sensation due to association of Ama. Thus, the principle adopted was Tikta Amapachana accordingly based on Cassia (Kushtha). The initial stage of the disease was considered as Saam (toxic state due to association of Ama) due to the association of presenting cardinal features with some other symptoms like poor appetite, drowsiness, heaviness, weakness and anxiety. The presence of fever and inflammation might be due to infective etiology as per the contemporary medical context. But the infective condition can also be considered under the Saam stage due to its broader aspect and various ailments can be managed accordingly based on Ayurvedic principles. So, the condition was assessed as Kushtha with Pitta-Rakta-Vata predominance of Saam stage. Thus, the principle adopted was Tikta Anupachana

Table 1
Timeline of the case.

| Years | Clinical events and interventions |
|-------|----------------------------------|
| 2010  | The onset of variable degree of discoid erythematous scaly lesions on both lower limbs |
| 2011  | Underwent allopathic medications for 2 years (topical corticosteroids oral Prednisolone) with initial improvement but relapse with exacerbation on leaving medications |
| 2013  | The patient was suggested Ayurvedic consultation |
| 2018  | The onset of mild scaly erythematous eruptions on trunk, abdomen, back and upper limbs along with epidermal exfoliation |
| 2014  | Stopped medication and was not under any medical supervision |
| 2015–2017 | Took self-medication intermittently from medical store |

May 2019 First visit
- Visited OPD of Koychakkirika Department, SSH, IMS, BHU, Varanasi, c/o: Fever (+), Erythematous lesions on lower limbs (+ + +), Swelling on lower limbs (+ + +), Generalized itching (+ + +), Burning sensation (+ +) and Pain at lower limbs (+ + +).
- PASI: 9.27
- Hematological investigations: CBC: Hb-11.7 gm/dl, platelets-4.77 lakhs/ul, TLC-9335/ul and DLC: N-63.1%, L-21%, M-8.7%, E-7%, B 0.2%
- ALT- 96.2 U/L, AST- 70.6 U/L, ALP- 122 U/L
- ALP- 239 U/L

25/3/2019 The patient was admitted to MKC Ward, SSH, IMS, BHU for initial management with a detailed history, clinical examination and confirmation of diagnosis

26/3/2019 Confirmation of clinical diagnosis as Psoriatic Erythroderma (PsE) by Dermatology Department of SSH, IMS, BHU, Varanasi (CBC: Hb-11.7 gm/dl, platelets-4.77 lakhs/ul, TLC-9335/ul and DLC: N-63.1%, L-21%, M-8.7%, E-7%, B 0.2%)

5/4/2019 Second visit
- Previous complaints reduced with little effect on erythema, scaling and induration c/o: Erythematous lesions on lower limbs (+ + +), Scaling on lower limbs (+ + +), Induration of lesions (+ + +), Generalized epidermal exfoliation (+), Generalized itching (+ + +), Burning sensation (+ + +) and Pain at lower limbs (+ + +).
- PASI: 22.2, ALT- 96.2 U/L, AST- 70.6 U/L, ALP- 122 U/L

20/4/2019 Third visit
- Significant improvement in all clinical features, mild itchy maculopapular small circular lesions at the upper limbs, trunk and lower limbs with raised hepatic enzymes without any sign of jaundice, c/o: Erythematous lesions on lower limbs (+ + +), Scaling on lower limbs (+ + +), Induration of lesions (+ + +), itching (+). Burning sensation (+ +).
- PASI: 11.6, ALT- 100.7 U/L, AST- 58.7 U/L, ALP- 239 U/L

4/5/2019 Fourth visit
- Very tiny and minimal macular lesions on upper limbs, trunk and lower limbs, raised hepatic enzymes, c/o: Erythematous lesions on lower limbs (+ + +), Induration of lesions (+ + +), itching (+ + +), Burning sensation (+ + +).
- PASI: 0, ALT- 71.9 U/L, AST- 55 U/L, ALP- 118 U/L

25/1/2020 Seventh visit
- No any complaints. Patient on dietary restrictions (Telephonic conversation)

27/8/2021 Eighth visit
- Last follow up with no any complaints. Patient on dietary restrictions (Telephonic conversation)

Table 2
Confirmation of Psoriatic Erythroderma (PsE) to rule out possible differential diagnosis.

| Differential Diagnosis | Supportive features and tools to accept the diagnosis |
|------------------------|------------------------------------------------------|
| Discoid Eczema          | The patient had no crusted and exudative plaques so ruled out |
| Erythema Multiforme (EM)| Absence of bulls eye lesions like a pinkish ring with a dark red crusty center with high-grade fever so ruled out |
| Lichen Planus (LP)      | No presence of polygonal, purple, plane lesions so ruled out |
| Pityriasis Rosea        | Absence of limited annular lesions in 6–10 weeks with negative Grattage and Auspitz tests in a patient; so, ruled out |
| Lower Limb Cellulitis  | The patient had an intermittent fever for 10 days but an absence of rapidly spreading glossy linear inflamed skin, instead he had scaly lesions with chronic history so ruled out |
| Toxic Epidermal Necrolysis (TEN) | No clinical presentation of a life-threatening bulboous detachment of epidermis and mucous membrane with widespread erythema and necrosis hence ruled out |
| Psoriatic Erythroderma (PsE) | - H/O previously diagnosed as 'Psoriasis' and treated with topical corticosteroids and oral prednisolone with a positive response at an initial course of disease for 2 years and aggravation of symptoms on withdrawal of prednisolone |
|                         | - H/O remission and relapses of discoid, scaly, indurated plaques for 8 years with possibly positive ANA suggests past H/O- Chronic Psoriasis |
|                         | - Generalized epidermal exfoliation, generalized erythema and scaling for 10 days associated with past Psoriatic lesions suggest secondary Erythroderma |
|                         | - Clinically positive Grattage test at lower limbs confirms the diagnosis of 'Psoriatic Erythroderma' |
|                         | H/O- history of: ANA-Anti Nuclear Antibody |
(-Metabolism of toxic Ama with bitter medicines) with Vatanulomana (-reducing morbid Vata dosha) primarily until fever with other symptoms subsides. The whole treatment strategy was planned into three domains which are elicited below along with diet planning throughout the course of treatment. In diet planning, he was advised strictly to avoid milk products, a non-vegetarian diet and spicy food.

5.1. Treatment of Samam stage of Kushtha

In this domain, Panchapaniya decoction with Panchanimba churna (Tiktam Amapachana (-Metabolism of toxic Ama with bitter medicines)) for Pitta- Rakta shaman (-alleviation of Pitta-Rakta doshas) and Triphala churna (for Vatanulomana (-reducing morbid Vata dosha)) were the main drugs of choice with some supportive drugs for initial management (Table 3). Panchanimba Churna is ushna vira (hot in potency) drug and is used for Amapachana (-Metabolism of toxins i.e. Ama) and all the types of Kushtha [7]. But while dealing with Pitta and Rakta-Pradhan disease, one has to be cautious about Pitta vridh (elevation of Pitta) due to Ushna guna (hotness in characteristic). Thus, Chandanadi vati was used to counter aggravation of Ushna guna of P. churna. Also, it is a Tiktam rasa pradhan (-predominantly bitter in taste) formulation and helps for Amapachana and improves Agnimandya (-Anorexia) which was practically observed in the patient. It was also given as a supportive medicine to inhibit acute inflammatory conditions of painful lower limbs and burning sensation.

Punarnava Mandoora [7] is a very effective haematonic and anti-inflammatory drug indicated in Pandu, Udarak, Jwara, Shotha, Krimi, Kushtha, etc [8]. It helps in Ras and Rakta dhatu shuddhi (-cleansing of Ras and Rakta dhatu) and improves their proper circulation. That helps in strengthening cardiac functioning which indirectly helps in relieving weakness and anxiety as the heart is also a seat of the mind. It reduces the edema by expelling accumulated extracellular fluid and ameliorates appetite by improving hepatic activity. Thus, considering the multitarget benefits, the use of these drugs simultaneously may help symbiotically rather than encountering desired effects in the presented case.

5.2. Vaydbhritrayanika Chikitisa (disease antagonistic treatment)

Fever and swelling reduced in one week so Panchapaniya decoction and Punarnava Mandoora were discontinued at the second visit. After Amapachana, Shodhana (-bio-detoxification) would be a choice of further management due to the extensive features of PsE. But the patient was not willing for Shodhana therapy even after counseling. Thus, looking at his Alpa Satva, it was not adopted in the management. In this domain, P. churna continued as a Vaydbhritrayanika (-disease antagonistic) drug against PsE along with supportive Gandhaka rasayana. Also, considering elevated levels of hepatic enzymes Arogyavardhini vati was added because of its Sarvarogahara (-multi target) property. Siddharthaka lepa and Lippu oil were also given as Vaydbhritrayanika drugs for external application separately once a day (Table 3). Semisolid S. lepa was prepared by mixing its dry powder with hot water to apply on the affected body area allowing it for a half-hour before bath. Lippu oil was advised to apply on the same dry affected area after bath.

During the third visit, C. vati was stopped as the patient had no burning sensation. This time, A. vati, G. rasayana were replaced by Tamalakyadi syrup, Bhiringaraja ghana vati, tablet Livomy due to unsatisfactory results on raised hepatic enzymes and Chochhini churna for supportive Rakta rasayadana karma (-blood purification). Tamalaki, Bhiringaraja and Livomy are proved to be hepatoprotective and hence administered to enhance therapeutic action [9].

On the fourth visit, improvement in all the clinical features was observed and a miniscule decline in hepatic enzymes levels was observed in addition but minimal improvement was observed in tiny pruritic lesions. This was an indication of starting external Lekhana karma (-scraping property). Thus, Tankan bhasma (Borax) being Kshara was added in very little quantity for a mild form of external scraping along with Mahamarichyadi oil. Also, D-psora lotion containing ingredients of S. lepa was prescribed for external application. Required quantity of Mahamarichyadi oil was advised to apply mixing with Tankan Bhasma (with ratio 5 ml oil: 1 pinch of T. bhasma) at morning whereas D-psora lotion at night separately. Quantity of lepa, oil and lotion were advised as per the requirement of the affected area.

5.3. Rasayana (Immunomodulation therapy)

On the fifth visit, the patient had no clinical features of PsE so he was advised to continue only two medications P. churna and Guduchi for a month along with the advised diet.

6. Follow up and outcomes

The patient had improvement at each follow-up. The fever subsided within 2 days of medication. Total leukocyte count came to the normal range after 3 days of blood investigation. Pain, swelling and burning sensation of lower limb reduced significantly within one week. Erythematicous scaly pruritic lesions showed delayed response but completely subsided within 2 months. The assessment was done based on the overall Psoriasis Area Severity Index (PASI) [10] and photographic images (Figs. 2 and 3). Graphical representation is shown to compare treatment effect in overall lesion score, a total area involved score and PASI (Fig. 4). CBC and RFT were normal at each follow-up with slightly raised hepatic enzymes without any complaints or any sign of jaundice. Hepatic enzymes were slightly elevated since the first visit and didn’t respond well to medication till the third visit. But after little modification in the treatment during the third visit, the elevated hepatic enzyme levels started declining accompanied by a feeling of wellbeing as per patient’s reporting (Table 1). He was advised to continue medications for one month even after relief in all symptoms. He discontinued medications at the end of June 2019 and visited OPD in October 2019 without any complaints (sixth visit). Furthermore, the last virtual follow up (telephonic conversation) was noted on 27/8/2021. The patient had no complaint of PsE at the time of the last virtual follow-up. He was advised to follow dietary instructions and not to consume milk products and a non-vegetarian foods for one year.

7. Discussion

7.1. Strength of the case

PsE is difficult to manage due to relapsing events and modern medicines don’t assure complete remedy (Singh GK et al.) but was successfully treated in 3 months with Ayurvedic approach that showed significant improvement without any complication and relapse (15 months). Psoriasis, PsE and other autoimmune dermatosis get worsen with immunosuppressive therapies with the time practiced in the contemporary medical science due to increased risk of comorbidities and immunosenescence in elderly patients [11]. Adalimumab and Infliximab are the TNF-α blockers which are used in the management of autoimmune diseases including psoriasis. But in some studies, they have been demonstrated to increase the risk of tuberculosis [12], granulomatous diseases [13] and malignancies [14]. Similarly ustekinumab have been implicated to increase
Table 3
Ayurvedic drugs given at each visit.

| Drugs | Main Ingredients | Dose | MoA | Advice |
|-------|------------------|------|-----|--------|
| 1st visit: Day 1 to 13; Main drugs | Cyperus rotundus, Fumaria indica, Vetiveria zizaniodes, Santalum album, Pavonia odorata | 40 ml BD | PO | BF |
| Panchanima churna | Panchanima (roots, leaves, fruits, flowers, barks) of Azadirachta indica, processed ash of Fe, Emblica officinalis, Terminalia bellerrica, Terminalia chebula | 3 gm BD | PO | AF | LWW |
| Triphala churna | (fine powder) | 5 gm HS | PO | AF | LWW |
| Supportive drugs | | | | | |
| Chandanadi vati | Santalum album | 500 mg BD | PO | AF | LWW |
| Panunamava Mandora (tablet) | incinerated red oxide of Fe, cow urine, Boerhavia diffusa | 500 mg TDS | PO | AF | LWW |
| Giloy Water for drinking | Tinospora cordifolia | 5 cm long stem: 1 L water | PO | AF | LWW |
| 2nd visit: Day 14 to 28; Main drugs | Purified & Processed Hg, S, Fe, Mica, Cu | 3 gm BD | PO | AF | LWW |
| Panchanima churna | (fine powder) | 5 gm BD | PO | AF | LWW |
| Supportive drugs | | | | | |
| Chandanadi vati | (tablet) | 500 mg BD | PO | AF | LWW |
| Cap. Amrita DS | Tinospora cordifolia | 800 mg BD | PO | AF | LWW |
| Gandhaka Rasayana | Purified & Processed S | 500 mg TDS | PO | AF | LWW |
| Siddharthaka lepa | Cyperus rotundus, Randia dumetorum, Triphala, Pongamia pinnata, etc. | LA BB | HW |
| Lippu oil | Pongamia pinnata, Cocos nucifera oil | LA | AB |
| 3rd visit: Day 29 to 42; Main drugs | Smilax china | 3 gm BD | PO | AF | LWW |
| Chopchini churna | (fine powder) | 3 gm BD | PO | AF | LWW |
| Panchanima churna | (fine powder) | | | | |
| Supportive drugs | | | | | |
| Syg. Tamalikyadi | Phyllanthus niruri | 20 ml BD | PO | AF | LWW |
| Bhringaraja ghana vati | Eclipta alba | 500 mg BD | PO | AF | LWW |
| Tab. Livomyn | Phyllanthus niruri, Triphala, Tecomella undulata, Boerhavia diffusa | 500 mg BD | PO | AF | LWW |
| Lippu oil | | | | | |
| 4th visit: Day 43 to 62; Main drugs | Piper nigrum, Operculina terpethum, As_2S_3, As_2S_2, Cow dung juice, Cow urine, Aconitum ferox, Mustard oil, etc. | 5 ml: 1 pinch ratio | LA at daytime |
| Panchanima churna | | | | | |
| Cap. Amrita DS | | | | | |
| Mahamariyadi oil with Tankan bhasma (fine powder) | | | | | |
| Supportive drugs | | | | | |
| Tab. Livomyn | | | | | |
| Triphala churna | (fine powder) | 500 mg BD | PO | AF | LWW |
| D- Psora lotion | | | | | |
| 5th visit: Day 63 to 90; Main drugs | Purified S, Holarrhena antidysenterica, Cassia fistula, Siddharthaka Lepa, etc. | 5 gm HS | LA at night |
| Panchanima churna | (fine powder) | | | | |
| Cap. Amrita DS | | | | | |
| BD- Twice a day | As_2S_3, As_2S_2, Arsenic disulfide Hg, Mercury; S-Sulphur; Fe-Iron; Cu-Copper | 3 gm BD | PO | AF | LWW |
| TDS-Thrice a day | | | | | |
| HS At bedtime | | | | | |
| Supportive drugs | PO-Per Oral | HW- Hot Water |
| LA-AB-Local Application Before Bath | BF-Before Food |
| AF-After Food | LA-AB-Local Application Before Bath |

dangerous cardiovascular events [15]. Many times, patients remain unaware of the complications after the use of such systemic immunosuppressive agents for many years and their rebound effects after withdrawal. Though such treatment modalities are advocated in moderate to severe autoimmune dermatoses and are quite effective to mitigate clinical symptoms in a short period, the risk of complications is always there. 7.2. Limitations with this case

During the course of treatment, multiple Ayurvedic formulations were prescribed for external as well as internal administration. Hence, it’s difficult to assess the qualitative and quantitative effectiveness of each formulation separately. Also, it’s quite difficult to correlate each principle of Ayurveda with contemporary medical science for scientific validation.

7.3. Rationality of the treatment

The present case of PsE associated with fever and swelling can be correlated with the Saam stage of Pitta-Rakta-Vata predominant Kushtha [5,6]. It was managed up to 3 months by dividing complete treatment into three different domains depending on the Avastha (stage) and the response of the Vyadhi to the medication, viz-a-viz:

- Treatment of Saam stage of Kushtha b) Vyadhipratyanika chikitsa and c) Rasayana intervention.

7.3.1. Stage 1

As mentioned before that Panchanapa deocotion and P. churna were given as Tikta Anamapacha with Doshapratyanika chikitsa (Dosh antagonistic treatment). In both, the formulations, Tikta (~bitter) is the dominant rasa, which exhibits various Ayurvedic pharmacodynamic activities such as Pitta shama (~inhibition of...
elevated Pitta), Raktaprasadana (~blood purifying) and Amapachana (~metabolization of toxins i.e. Ama) leading to Jwarnashana (~antipyretic) and Kushthanashana (~Anti dermatitis) effect [4,16]. Thus, regarding initiation of treatment strategy, Panchapaniya decoction (~Shadangpaniya devoid of Shunthi) and P. churna were the choices at the first visit. Little modified Shadangpaniya which is indicated in febrile illness (named as Panchapaniya decoction-Table 3) was administered due to dominance of Pitta-Rakta in this case along with P. churna, which is advocated in all types of Kushtha [17]. As the patient was suffering from the scaling and exfoliation of the epidermal skin, which is suggesting the involvement of vitiated V. dosha. Thus, T. churna (Table 3) being Anulomaka was given for Vatanulomana (~reducing morbid V. dosha) [18].

7.3.2. Stage 2

During the second visit, A. vati and G. rasayana were prescribed as a part of V. chikitsa. It can also be considered under Antah-parimarjana (internal cleansing therapy) and external application of S. lepa and Lippu oil under Babirparimarjana chikitasa (external cleansing therapy) for balancing the doshas [16]. PsE was associated with elevated hepatic enzymes (Table 1) since the first visit but there were no features of jaundice or hepatitis on clinical evaluation. Though we didn’t find clinically, continuously elevated hepatic enzymes led it to be considered as an associated Yakrit vikara (hepatic disorder). Arogyavardhini is a proven hepatoprotective drug used in Kushtha which slowly expels Malas (~toxins) stuck at the alimentary canal and cellular level deeply in the body thus prescribed [7,19]. G. rasayana works mainly on R. dhatu and skin irrespective of their vitiation causes [7]. In the case of various chronic skin diseases, it detoxifies the Rasa-Raktadi saptadhatus by separating deeply seated doshas stuck with dhatus and transforming them into purified form. On external application, S. lepa helps in the restoration of the normal functioning of epidermal skin by inducing exfoliation of dead skin from an affected area. Therefore, ultimately it helps in the upregulation of Rasavaha srotasa (~dermatological channels) [7]. On the other hand, Lippu oil inhibits the growth of various bacterial colonies (such as Staphylococcal aureus, Staphylococcus epidermidis, Staphylococcus pyogenes, Escherichia coli, etc.) generally remain high in an eczematous and infected skin wound. Karanja (Pongamia pinnata) is
the content of Lippu oil, which possesses proven antimicrobial activity [20]. Lippu oil does not cause any irritation instead it is soothing to the skin when used topically perhaps due to Madhura rasa-Sheeta virya of coconut oil along with it possess Vranaropaka (wound healing) property [21]. The patient confirmed the experience of exfoliation after S. lepa and softening of the skin after Lippu oil he further added.

At the third visit, it was observed that the patient responded well but pruritic lesions didn’t show desired response with previous medication. Also, hepatic enzymes were tending to elevate (Table 1) made us rethink the use of A. vati. Thereafter, Bhringaraja ghan vati, Tamalakyadi syrup and Livomyn were added for better hepatoprotective effect [9] along with Smilex china (Chopchini) for R. karma, the expected positive responses were noted during the fourth visit. Rakta dushti is one of the main culprits responsible for the hepatic disorders being Moolsthana (~route of origin) of Raktabhagaya srotasa as well as various dermatological disorders. Smilex china (Chopchini) is accounted to work effectively on the aforesaid principle of the Raktabhagaya and thus beneficial in both conditions [21]. Sometimes, when Raktabhagaya does not show the desired effect on chronic pruritic and indurated dermatological lesions, the requisite for external Lekhana karma may be helpful. In this case, a little quantity of T. bhasma was added in Mahamarghyadi oil for better external L. karma that further showed better results.

7.3.3. Stage 3

Long-term administration of immunomodulatory drugs (Rasayana category) plays a vital role in preventing the relapse of PsE and similar ailments. Hence, Guduchi was prescribed as a Rasayana drug, which is a proven immunomodulator with hepatoprotective potential. Initially, during the first visit, it was prescribed in very low potency in Guduchi water form and later in the form of capsule Amrita DS. It aids in improving immunomodulation and augments liver function.

7.3.4. Dietary modifications

While considering the cause of PsE, no importance is usually given to faulty dietary habits in modern medicine. It is one of the major factors associated with autoimmune dermatological problems mentioned in Ayurvedic classics. Diet has a very important role in aggravating skin disorders [22,23]. It seems that recurrence of
PsE remains frequent without dietary planning despite the Ayurvedic management. An observational study over 1206 psoriasis patients by Ladan Afifi et al. found that 50% cases after removal of junk food, 47.7% with the removal of dairy products and 30.4% cases after removal of meat showed improvement in psoriasis [24]. Kushtha is categorized under Santarpanajanya vyadhi in Ayurveda [16]. Junk food items, meat, dairy products, etc. posses certain gunas (properties) such as Snigdha (unctuousness), Guru (heavy to digest), Picchila (sliminess) [16]. Thus, they are santarpaka (~body nourishing) in nature that might be contributing factors to aggravation of the PsE. Thus, while treating chronic dermatological ailments, it would be beneficial if they are restricted during the course of management.

The presented case showed no relapse in 15 months after discontinuing medications and no side effects noted during this period.

8. Conclusion

Presented case is proficiently treated departing maximum possible causative factors would be a clue for the alternative option. Principle-based customized Ayurvedic management is indubitably potential and may provide futuristic directions for managing PsE and some other likewise disorders decisively. Autoimmune dermatosis like PsE, psoriasis, etc. can be managed better with a customized Ayurvedic approach along with appropriate dietary planning. Requisition for related clinical studies is warranted for composite use of Ayurvedic formulations in such types of dermatological conditions. The combined effect of Ayurvedic preparations along with dietary protocol seems more effective in the management of PsE. Further studies are needed to evaluate the role of diet and given Ayurvedic formulations in the management for a better understanding of PsE.

Patient perspective

The patient reported that he never witnessed such promising results before compared to current treatment. His erythematous lesions vanished completely without any relapse or any side effect. He was feeling quite confident and much relaxed as well after treatment with Ayurvedic medication.

Patient consent

Written consent was obtained from the patient for publication of this case.

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None.

Conflict of interest

None.

Author Contributions

K.S. Girhepunje: Conceptualization, Methodology, Writing-Original draft preparation; Varsha Gupta: Writing- Initial draft preparation, Visualization; V.K. Srivastava: Investigation; A.K. Pandey: Editing; Rajendra Prasad: Writing- Reviewing; O.P. Singh: Supervision.

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