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RESEARCH ARTICLE

THERAPEUTIC EFFECT OF AYURVEDIC TREATMENT ON PLAQUE PSORIASIS (EKAKUSTHA)- A CASE STUDY

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ABSTRACT

Skin diseases not only affects physical body of a person but also affects his lifestyle and social confidence very badly. Psoriasis is a chronic inflammatory non-infectious disease of skin which is characterized by well-defined erythematous lesions having plaques with silvery scales. In Ayurveda *Ekakustha* can be studied as plaque psoriasis basing on its sign and symptoms. *Ekakustha* or plaque psoriasis is a *Vata Kaphaja Kustha Roga* which can be treated with both *Antahparimarjan* and *Bahirparimarjan Chikitsa*. Here is a case study on *Ekakustha* where *Samsodhana* and *Sanshaman* therapy were adopted to treat the disease. *Virechan* therapy in regular intervals along with *Takradhara* and Ayurveda medication was given to the patient treated for a period of 6 months. The severity of the psoriatic lesions was assessed by PASI score taken before and after treatment. Before starting the treatment his PASI score was 49.8. After 2 months it was 27, after 4 months it was 9.3 and after 6 months treatment his PASI score was 0. Then after 3 months follow up also there was no new complains and the patient was absolutely fine with no psoriatic features.

INTRODUCTION

Psoriasis is a chronic inflammatory non-infectious disease of skin which is characterized by well-defined erythematous lesions having plaques with silvery scales. It has a chronic fluctuating course found in different age groups specially having a bi-modal age of onset (16 to 22 and 57 to 60 years)¹ in both sexes equally². Psoriasis is a multisystem inflammatory disease with predominantly skin and joint involvement. In Ayurvedic literature *Kustha* is described as one of the most chronic diseases. Under the heading of *Kustha* Ayurveda has described a wide range of dermatological disorders like *Ekakustha*, *Kitibha* and *Sidhma kustha* including its classification, etiopathogenesis, clinical presentation, prevention and management³ which can be compared with different types of psoriasis basing on their clinical features. Types of Psoriasis include plaque psoriasis, guttate psoriasis, inverse psoriasis, pustular psoriasis, erythrodermic psoriasis, nail psoriasis and psoriatic arthritis. Pathogenesis is multifactorial, involving dysregulated inflammation and genetic associations⁴. Beyond the physical dimensions of disease, psoriasis has an extensive emotional and psychosocial effect on patients; it can result in stigmatization, poor self-esteem, and increased stress, affecting social functioning and interpersonal relationships.⁵

Kushtha is described in Ayurvedic treaties since *Vedic* period. *Ekakushtha* is described in *Garuda Purana*⁶ and almost all Ayurvedic classics including *Brihatrayi* and *Laghutrayi*. *Ekakushtha* is mentioned in all Ayurvedic classics under *Kshudrakushtha* with predominance of *Vata* and *Kapha dosha*⁷. The causative factor of *Ekakushtha* is same as *Kushtha*. The major aetiologies include dietary factors such as *Viruddha ahara*, excessive consumption of *Drava*, *Snigdha*, *Guru ahara*, *Navanna*, *Vega dharana* specially of vomiting. Indulgence in sinful act and ill *Manovritti* (negative mentality) are associated psychological factor for causing the disease⁸. Acharya Charaka has mentioned the symptoms of *Ekakushtha* as *Aswedanam*, *Mahavastu*, and *Matsyashakalopamam*⁹ and Acharya Sushruta described its symptoms as *Krishna- aruna varnata*¹⁰. The etiological factor leads to vitiation of *Tridosha* especially *Vata* and *Kapha* which travels through *Tiryak vahini siras* and proceed to *Bahya rogamarga* i.e. *Twacha*, *Rakta*, *Mamsa*, and *Lasika* and cause the symptoms of disease¹¹. Repeated *Samshodhana* along with *Samshamana* is main line of treatment¹². Both *Antah parimarjan* and *Bahirparimarjan* therapies have been indicated in *Kushtha roga*.

Pathogenic factors of *Eka Kushta*

- *Dosha: Vata Kapha*
- *Dusya: Twak, Rasa, Rakta*
- *Agni: Samagni,*

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- *Ama*: Jataragni and Dhatwagnijanya Ama (Srotorodha, Mala Sanga)
- *Srotas*: Rasavaha, Raktavaha, Mamsavaha
- *Srotodushti*: Sanga
- *Rogamarga*: Bahya,
- *Rogaavastha*: Chirakari,
- *Adhistana*: Twak
- *Udbhavasthana*: Amapakvasaya
- *Vyaktasthana*: Pani, Paada, Twak
- *Sadhyaasadhyata*: Asadhya

Here in this study, we have a case of *Ekakustha* with symptoms of dry scaly lesion all over the body since 3 years, severe itching, swelling over face, fever since 6 days and cough with expectoration since 4 days.

MATERIAL AND METHODS

A single case study done in the OPD and IPD of Kayachikitsa and Panchakarma department in Shri Babu Singh Jay Singh Ayurvedic Medical college and hospital, Farrukhabad, UP.

- **Treatment duration**: 6 months
- **Aim of the study**: To evaluate the effect of *Samshaman* and *Sansodhan Chikitsa* in *Ekakustha* or Plaque psoriasis.
- **Objective parameter**: PASI score

CASE HISTORY: A male patient aged about 26 years registered to Kayachikitsa department of Shri Babu Singh Jay Singh Ayurvedic Medical college and hospital, Farrukhabad, UP with registration number: 279105

- **Chief complains**: Itchy scaly erythematous lesions all over the body, swollen face, fever and cough.
- **History of present illness**: Patient has psoriatic history of 3 years. The lesions started before 3 years on the hands, legs and back like small tear drops followed by deposition of white flakes on it which exfoliated like wax and white powder like structure. Gradually it spread all over the body.
- **History of past illness**: No relevant medical or surgical history found in the patient. And no history of diabetes or hypertension or any other systemic diseases was seen.
- **Treatment history**: He took allopathic anti psoriatic treatment along with steroid therapy which left him with steroid facies (swollen face) and abnormal weight gain.

Personal history

- **Bowel**: not clear, habit of alternate loose and constipated bowel 2-3 times a day.
- **Micturition**: Normal 4-5 times/day
- **Sleep**: Disturbed
- **Diet**: Mixed diet
- **Occupation**: Auto driver
- **Family history**: No related family history found.
- **Physical examination**:
- **Astasthan pariksha**: *Nadi*:72/min, *Gambheera*, *Kapha-Vata*
- **Mutra**:4-5times/days, once/night, *Prakruta*
- **Mala**: not clear, alternate loose and constipated bowel 2-3 times a day.
- **Jihwa**: *Ruksha*, (*Vata*)

- **Shabda**: *Ruksha*, (*Vata*)
- **Sparsha**: *Sheeta*, *Kapha*
- **Drik**: *Aruna*, *Vata*
- **Akruti**: *Madhyama*, *Vata kapha*
- **Systemic examination**: **CNS**: conscious, well oriented to time, place and person
- **CVS**: S1S2 heard, no abnormal sound, **BP**:120/80mmHg, **PR**- 72/min
- **RS**: chest B/L symmetrical, **NVBS** heard, No added sound, **RR**-18/min
- **GIT**: P/A soft, no tenderness, no organomegaly
- **Locomotory system**: Pain all over the joints, unable to make fist
- **Integumentary system Examination**: Lesions were scaly papules, present on chest, abdomen, back, both hands and legs. The lesions were well demarcated.
- **Auspitz sign**: present
- **Candle grease sign**: Present
- **Diagnosis**: On the basis of clinical history and examination the condition was diagnosed as Plaque Psoriasis.

Treatment schedule: (Table 1)

RESULTS

PASI Score¹³- The current gold standard for assessment of extensive Psoriasis has been the Psoriasis area severity index (PASI). PASI combines the assessment of the severity of lesions and the area affected into a single score in the range 0 (no disease) to 72 (maximal disease). The PASI is a measure of the average redness, induration and scaling of the lesions (each graded on a 0-4 scale), weighted by the area of involvement.

Steps in generating PASI score

- **Step 1**: Divide body into four areas: head, arms, trunk to groin and legs to top of buttocks.
- **Step 2**: Generate a percentage for skin covered with psoriatic plaques for each area and convert that to 0-6 scale as below to get the area score. (Table 2)
- **Step 3**: Generate an average score for the erythema, induration and scaling for each of the areas. (Table – 3)
- Sum the score of erythema, induration and scaling for each of the areas.
- Multiply area score and lesion score for each area and multiply that by 0.1, 0.2, 0.3 and 0.4 for head, arms, trunk and legs respectively.
- Add these scores to get the PASI score.

Assessment criteria - The improvement of condition of the patient was assessed on the basis of PASI scale

DISCUSSION

Psoriasis is a chronic inflammatory disorder, characterised by the formation of well-defined raised erythematous plaques, with silvery white scales; that preferentially localize on the extensor surfaces. In Ayurveda it is described as *Ekakustha* and *Kitibha*. This is a case of Plaque Psoriasis or *Ekakustha* with symptoms of dry scaly lesion all over the body since 3 years, severe itching, swelling over face, fever since 6 days and cough with expectoration since 4 days. *Ekakustha* is a *Kshudra Kustha* and have *VataKapha* dominance and even involvement of *Tridosha* can be evident from its signs and symptoms.

Table 1. Showing treatment schedule of the patient

Date of visit	Complains and Therapy	Medicine	Time Period	
10/03/23	Fever since 6 days Cough with expectoration since 4 days Psoriasis since 3 yrs Itching and scaling Swelling over face (typical steroid facies)	1) Tab Azithromycin- (500mg) - 1 tab OD 2) Tab Zerodol SP- 1 tab BD after food 3) Sadanga Paneeya granule (Dabur)- 1tsf TID mixed with luke warm water 4) Giloy Ghanavati 2-tab TID 5) Syp Bronchorid- 2tsf TID	5 days	
18/03/23	Psoriasis since 3 yrs Itching and scaling Swelling over face	Deeapan Pachan (18/03/23 to 21/03/23)	1) Psorakot Tab - 2tab BD 2) Patola Katurohinyadi Kashaya (20ml) – diluted in a cup of water twice daily 3) Chitrakadi Vati- 4 tab thrice daily 4) Ayyapal Kera Taila for LA	13 days
		Snehapan (22/03/23 to 25/03/23)	5) Mahatiktaka ghrita- (60ml, 100ml,150ml, 180 ml)	
		Abhyanga, Sarvangasweda (26/03/23 to 27/03/23)	Ayyapal Kera Taila Dasamoola Kwath Sarvanga Sweda	
		Virechan (28/03/23)	Drug- Trivrit Avaleha (Kottakal)- 100 gm Anupan- Warm water Virechan Vega- 9, Chhardi- 1 Suddhi- Avara suddhi	
		Samsarjana (28/03/23 to 30/03/23)	5 Annakala	
24/03/23		Medicine	1) Vidangadi Lauha (2tab) – twice daily with honey 2) Psorakot Tab (1tab) twice daily after food with Kashaya 3) Patola Katurohinyadi Kashaya (20ml) – diluted in a cup of water twice daily 4) Manasamitra Vatak (125mg) (Kottakal) – 2 tab at bed time 5) Ayyapal Kera Taila for LA	1 month
03/05/23	Itching persists Sleep disturbances O/E- Red patches all over body Scaling reduced Psoriasis with secondary fungal infection	Medicine	1) Vidangadi Lauha (2tab) + Krimimudgar Ras (1tab) – twice daily with honey 2) Psorakot Tab (1tab) twice daily 3) Dushivishari Gutika (2tab) TID for 3days, Then 2tabs BD for 7 days 4) Patola Katurohinyadi Kashaya (20ml) – diluted in a cup of water twice daily 5) Ayyapal Kera Taila for LA 6) Terbinafine 500mg Tab 1 tab OD for 21 days	15days
18/05/23- 24/05/23		Abhyanga	Ayyapal Kera Taila	7 days
		Swedana	Dasamoola Sarvanga Sweda	
		Takradhara	Musta ksheerapaka.>>> Dadhi + Amalaki Yastimadhu Kashaya	
24/05/23		Medicine	1) Mahatiktaka Ghritam (1tsf) - with milk in morning empty stomach 2) Vidangadi Lauha (2tab) + Krimimudgar Ras (1tab) – twice daily with honey 3) Psorakot Tab (2tab) + Dushivishari Gutika (1 tab) – twice daily with Kashaya 4) Patola Katurohinyadi Kashaya (20ml) – diluted in a cup of water twice daily 4) Ayyapal Kera Taila for LA	15days
13/06/23		Snehapan (14/06/2023 to 16/06/2023)	Mahatiktaka ghritam (60ml, 90ml, 120ml)	11 days
		Abhyanga & Sarvanga sweda (17/06/23 to 28/06/23)	Ayyapal Kera Taila Dasamoola Kwath Sarvanga Sweda	
		Virechan- (19/06/23)	Drug- Ichhabhedhi ras (125 mg) (Baidyanath)- 2 tabs with honey Anupan- Normal water Vega- 13 Suddhi- Madhyam suddhi	
		Samsarjana (19/06/23 to 23/06/23)	9 Annakala	

23/06/23 to 30/07/23		Medicine	1) Mahatiktaka Ghritam (1tsf) - with milk in morning empty stomach 2) Vidangadi Lauha (2tab) + Krimimudgar Ras (1tab) – twice daily with honey 3) Psorakot Tab (2tab) + Dushivishari Gutika (1 tab) – twice daily with Kashaya 4) Patola Katurohinyadi Kashaya (20ml) – diluted in a cup of water twice daily 4) Ayyapal Kera Taila for LA	40 days
7/08/23	Psoriatic features absent; few hypopigmented patches; No itching Fever & Running nose since 2 days	Medicine	<ul style="list-style-type: none"> • Laxmivilas Ras (250mg) + Godanti Bhasma (500 mg) with Adrak swaras, • Tulsi swaras and honey • Amrittothara Kashaya choorma for paneeya Kalpana 	5 days
12/08/23	Psoriatic features absent; few hypopigmented patches; No itching No Fever	Medicine	1) Mahatiktaka Ghritam Cap (1cap) + Dushivishari Gutika (1 tab) – twice daily with Kashaya 2) Patola Katurohinyadi Kashaya (20ml) – diluted in a cup of water twice daily 3) Ayyapal Kera Taila for LA	1 month
17/09/23 to 27/09/23	Psoriatic features absent; few hypopigmented patches;	Snehapan (17/09/23 to 20/09/23)	Mahatiktaka ghrita-) (60ml, 90ml, 120ml, 150ml)	11 days
		Abhyanga Sarvanga sweda (21/09/23 to 22/09/23)	Ayyapal Kera Taila Dasamoola Kwath Sarvanga Sweda	
		Virechan (23/09/23)	Drug- Ichhavdi ras (125 mg) (Baidyanath)- 2 tabs with honey Anupan- Normal water Vega- 21 Suddhi- Madhyam suddhi	
		Samsarjana (23/09/23 to 27/09/23)	9 Annakala	
28/09/23	Psoriatic features absent; few hypopigmented patches;	Medicine	1) Mahatiktaka Ghritam Cap (1cap) + Dushivishari Gutika (1 tab) – twice daily with Kashaya 2) Patola Katurohinyadi Kashaya (20ml) – diluted in a cup of water twice daily 3) Ayyapal Kera Taila for LA	1 month
Follow up after 3 months - 08/01/24	Psoriatic features absent. No swelling on face. Hypopigmented patches reduced		Patient remaining in pathya ahara and vihara	

Table no 2. Showing Area score

Percentage	Rating scale
00	00
00 - < 10 %	01
10 - < 30 %	02
30 - < 50%	03
50 - <70%	04
70 - <90%	05
90 – 100%	06

Table 3. Showing Lesion Score

Erythema(E) Induration (I) Scaling(S)	No symptoms	Mild	Moderate	Marked	Very marked
Score	0	1	2	3	4

Table 4. Showing PASI score before treatment (BT)

Lesion Score	Head (H)	Upper limb (UL)	Trunk (T)	Lower limb (LL) including buttocks
Erythema(E)	1	4	4	4
Induration(I)	1	4	4	4
Scaling(S)	1	3	3	3
SUM: E+I+S	3	11	11	11
Percentage of affected area (Area score)	1	5	5	5
SUBTOTAL: Sum×Area score	3	55	55	55
Body area: subtotal ×amount indicated	3×0.1=0.3	55×0.2=11	55×0.3=16.5	55×0.4=22
Total PASI Score	H+ UL + T +LL			49.8

Table no 5. Showing PASI score after 2 months (AT1)

Lesion Score	Head (H)	Upper limb (UL)	Trunk (T)	Lower limb (LL) including buttocks
Erythema(E)	0	2	2	2
Induration(I)	0	3	3	3
Scaling(S)	0	1	1	1
SUM: E+I+S	0	6	6	6
Percentage of affected area (Area score)	1	5	5	5
SUBTOTAL: Sum×Area score	0	30	30	30
Body area: subtotal ×amount indicated	0×0.1=0	30×0.2=6	30×0.3=9	30×0.4=12
TOTAL	0	6	9	12
Total PASI Score	H+T+UL+LL			27

Table no 6. Showing PASI score after 4 months (AT2)

Lesion Score	Head (H)	Upper limb (UL)	Trunk (T)	Lower limb (LL) including buttocks
Erythema(E)	0	1	1	1
Induration(I)	0	1	1	1
Scaling(S)	0	0	1	0
SUM: E+I+S	0	2	3	2
Percentage of affected area (Area score)	0	4	5	4
SUBTOTAL: Sum×Area score	0	8	15	8
Body area: subtotal ×amount indicated	0×0.1=0	8×0.2=1.6	15×0.3=4.5	8×0.4=3.2
TOTAL	0	1.6	4.5	3.2
Total PASI Score	H+T+UL+LL			9.3

Table no 7. Showing PASI score after 6 months (AT3)

Lesion Score	Head (H)	Trunk (T)	Upper limb (UL)	Lower limb (LL) including buttocks
Erythema(E)	0	0	0	0
Induration(I)	0	0	0	0
Scaling(S)	0	0	0	0
SUM: E+I+S	0	0	0	0
Percentage of affected area (Area score)	0	0	0	0
SUBTOTAL: Sum×Area score	0	0	0	0
Body area: subtotal ×amount indicated	0×0.1=0	0×0.3=0	0×0.2=0	0×0.4=0
TOTAL	0	0	0	0
Total PASI Score	H+T+UL+LL			0

Table no 8. Showing PASI score before and after treatment

BT	AT1 (after 2 months)	AT2 (after 4 months)	AT3 (after 6 months)
49.8	27	9.3	0

The vitiated *Doshas* running throughout the body does *Sthana samshraya* in the *Shithila dushya* like *Twaka* etc. and results into the disease *Ekakushtha*. In this disease onset of *Matsyashakalopamam* (silvery scales) in *Mahavastu* (large surface area) along with *Aswedana* (loss of perspiration) is seen.

The line of treatment mentioned in Ayurvedic classics for *Kushtha roga* are *Nidana Parivarjana*, *Shodhana*, *Snehana*, *Swedana*, *Raktamokshana*, *Prakriti Vighatana*, *Shamana*, *Lepana* etc. As *Ekakushtha* is mostly chronic and *Bahudoshajanya*, both *Shodhana* and *Shamana* therapies has to be followed to provide long lasting results and a better life to patients.



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Figures showing effect of treatment before and after treatment

As it is a disease of *Bahya rogamarga*, so both *Antahparimarjana* and *Bahirparimarjana* treatments should be used. Initially treatment was given for fever and cough which were acute in origin and after subsiding of the sign and symptoms treatment was planned for psoriasis. Treatment was done for 6 months in which medicinal treatment was continued as *Samshaman* therapy and *Virechan* therapy was planned every 2 months as *Samsodhan* therapy. So overall 3 times *Virechan* was given within this time period. In addition to this *Takradhara* was also given as *Bahirparimarjan chikitsa* which gave tremendous result. *Agni Deepana* and *Amapachana* was done by the *Deepana Pachana* drugs initially. Then by *Snehana Swedana* there was *Utkleshana* and liquification of *Leena Dosha*.

Due to the *Vyavayi*, *Vikasi Guna* and *Adhobhagahara* property of *Virechana Dravyas* the vitiated *doshas* got expelled from the body leading to *shrotoshodhana*. This amplified the absorption capacity of the intestine and the *Shaman Aushadhis* given after *shodhana* was absorbed properly. For the basis of improvement of lesions, PASI scale was considered. Before starting the treatment his PASI score was 49.8. After 2 months it was 27, after 4 months it was 9.3. After 6 months of treatment his PASI score was 0 (Table 8). The patient remained in follow up and after 3 months also no psoriatic features were found. The patient followed *Pathya Ahara Vihara* during this period.

CONCLUSION

Ekakustha or plaque psoriasis is a *Vata Kaphaja Kustha Roga* which can be treated with both *Antahparimarjan* and *Bahirparimarjan Chikitsa*. *Samsodhana* and *Sanshaman* therapy are adopted to treat the disease and *Virechan* therapy in regular intervals along with *Takradhara* and Ayurveda medication is highly effective in reducing the sign and symptoms of *Ekakustha* or plaque psoriasis completely which can be assessed by the PASI score. No complications or adverse effects were found in the patient during the treatment.

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