

Evaluation of the Effect of *Kusthaghnamahakashaya* in Psoriasis

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Abstract

Human suffering can arise from disability, discomfort or disfigurement. Skin disorders involve all these three. All the skin disease in Ayurveda has been described under the board heading of *kustha*. *Kitibha* can be compared with the disease Psoriasis of modern medical science. Psoriasis is an immune mediated genetically determined common dermatological problem which affects skin, nail, joints flexures and folders of the body. Psoriasis impacts on the psychological and social aspects of life mainly because of its visibility. The trial drugs i.e. *KusthaghnaMahakashaykwath* was given 40 ml twice daily orally and the result was taken after 60 days of treatment after three follow-ups.

Keywords

Kitibha, Psoriasis, *KusthaghnaMahakashay*, *Takradhara*



Greentree Group

Received 14/06/16 Accepted 26/06/16 Published 10/07/16



INTRODUCTION

The occurrence of dermatological problems in India has its history. The great classics of Ayurveda like *Charak Samhita*, *Sushruta Samhita* and *AstangaHridaya* described the dermatological problems under the heading of Kustha (CharakNidan 5th chapter, CharakCikitsa 7th chapter, SusrutaNidan 5th chapter, SusrutaCikitsa 10th chapter, AstangaHridayaNidan 14th chapter, AstangaHridayaCikitsa 29th chapter).

Psoriasis¹ is an immune mediated genetically determined common dermatological problem which affects skin, nail, joints flexures and folders of the body. It is a chronic, recurrent inflammatory disease of the skin of unknown origin, characterized by well circumscribed erythematous dry plaques of various sizes, covered with mica like scales i.e., silvery scales. The main abnormality in Psoriasis is increased epidermal proliferation due to excessive division of cells in the basal layers and a shortened cell cycle time.

Onset of psoriasis is most common in the second to fourth decades of life though it can appear just after birth or in old age. Indian studies have reported the highest incidence to be in the second decade or in

the reproductive age group. A North Indian study found that the mean age of onset was higher for males than females (37 vs. 29 years).

Most patients (89% in one study) experience worsening of their skin lesions during winter. High humidity is usually beneficial. Sunlight may worsen psoriasis in some but improves it in many.

Psoriasis is more 'sensitive' than many other skin diseases. Many stressful events of daily life may exacerbate psoriasis. The disease itself can cause a reactive 'depression' in the patient, which could further exacerbate the psoriasis.

Increased beta-endorphin in psoriatic skin might affect both substance P-mediated neurogenic inflammation and transmission of sensory stimuli by its local anti-nociceptive effects. Stress might induce alterations in the psoriatic lesion by increasing the neuropeptide content with a concomitant decrease in activity of neuropeptide degrading enzymes especially mast cell chymase.

CLASSIFICATION²

Psoriasis can be clinically classified as follows:

1. Guttate psoriasis.



2. Chronic plaque psoriasis.
3. Exfoliative psoriasis.
4. Pustular psoriasis.
5. Psoriasis unguis.
6. Arthropathic psoriasis.

DRUG REVIEW

As all the substances of this universe are having medicinal property, it is not possible to deal with all the drugs by a physician; hence *Charaka* summarized the drugs into 50 *mahakasaya* (groups) and mentioned them in 4th chapter of *Sustrasthan* of *Charak Samhita*, namely ‘*Sadvirechan.SatasrityamAdhyay*’. So that, at least knowing a number of drugs, a

physician can be competent enough to treat all sorts of diseases and also to maintain health of a healthy person. Fifty *Mahakasayas* has been mentioned and each group contains 10 *dravyas*.

The plants included under ‘*KusthaghnaMahakasaya*’ are-

- a) *Khadir*
- b) *Amlaka(Amlaki)*
- c) *Aruskara*
- d) *Nisha*
- e) *Abhaya*
- f) *Saptaparna*
- g) *Karavira*
- h) *Chaturangula*
- i) *Vidanga*
- j) *Jati*

Table 1

LIST OF 10 KUSTHAGHNA DRUGS ALONG WITH BOTANICAL NAME, FAMILY AND GANA

Name of plants	Botanical name	Family	Gana ^{6,7,8}
1. <i>Khadir</i>	<i>Acacia catechu</i> Willd. Syn.- <i>Mimosa catechu</i> L.f.	Mimosaceae	<i>Charak- kusthaghna,</i> <i>udaraprasamana,</i> <i>kasayaskandha.</i> <i>Susruta- salasardi.</i> <i>Vagbhatta- asanadi.</i>
2. <i>Amlaki</i>	<i>Phyllanthusemblica</i> Linn . Syn.- <i>Emblica officinalis</i> Gaertn.	Euphorbiaceae	<i>Charak - Jwarghana,</i> <i>kasaghna,virechanopaga,</i> <i>kusthaghna, vayasthavana</i> <i>Sushruta- amlakyadi,</i> <i>parusakadi, triphala</i> <i>Vagbhatta- parusakadi</i>
3. <i>Aruskara</i>	<i>Semecarpusanacardium</i> Linn.f.	Anacardiaceae	<i>Charak - Dipaniya,</i> <i>bhedaniya, kusthagna,</i> <i>mutrasangrahana.</i> <i>Susruta - Nyagrodhadi,</i> <i>Mustadi</i> <i>Vagbhatta- Nyagrodhadi,</i> <i>Mustadi</i>

4. <i>Nisha</i>	<i>Curcuma longa</i> Linn.	Zingiberaceae	<i>Charaka - Lekhaniya, kusthaghna, Kandughna, Krimighna, Sirovirechana. Susruta- Haridradi, mustadi, sleshmasamsamana Vagbhatta- Haridradi, mustadi</i>
5. <i>Abhaya</i>	<i>Terminalia chebula</i> Retz.	Combretaceae	<i>Charak - Jwaraghna, Arsoghna, Kasaghna, Kusthagana, Prajasthapana Susruta- Amalakyadi, Parusakadi, Triphala Vagbhatta- Parusakadi</i>
6. <i>Saptaparna</i>	<i>Alstoniascholaris</i> R. Br.	Apocynaceae	<i>Charak - Kusthagana, Udardaprashamana, Kasayaskandha, Tiktaskandha Susruta- Aragvadhadi, Laksadi Vagbhatta- Aragvadhadi</i>
7. <i>Karavira</i>	<i>Nerium indicum</i> Mill. Syn. <i>Nerium odorum soland</i>	Apocynaceae	<i>Charak - Kusthaghna, Tiktaskandha Susruta- Laksadi, sirovirechana Vagbhatta- Lakasadi</i>
8. <i>Chaturangula</i>	<i>Cassia fistula</i> Linn.	Caesalpiniaceae	<i>Charak - Kusthaghna, kandughna, tiktaskandha, Sirovirechana Susruta - Aragvadhadi, syamadi, sleshmasamsamana, adho bhagahara Vagbhatta- Aragbadhadi, Syamadi</i>
9. <i>Vidanga</i>	<i>Embeliaribes</i> Burm.f.	Myrsinaceae	<i>Charak - Krimighna, Kusthaghna, Triptighna Susruta- Surasadi, Pippalyadi Vagbhatta- Surasadi, Pippalyadi</i>
10. <i>Jati</i>	<i>Jasminum officinale</i> Linn. forma. <i>grandiflorum</i> (Linn.) Kobuski Syn.- <i>Jasminum grandiflorum</i> Linn.	Oleaceae	<i>Charak- Kusthaghna</i>

Table 2 RASA, GUNA, VIRYA, VIPAKA OF THE INDIVIDUAL PLANTS ^{3,4 & 5}

Name of the plant	Rasa	Guna	Virya	Vipak
<i>Khadir</i>	<i>Tikta, Kasaya</i>	<i>Laghu, Ruksha</i>	<i>Sita</i>	<i>Katu</i>
<i>Amlaki</i>	<i>Pancarasa (alavana)</i> <i>Amla</i> <i>(pradhanarasa)</i>	<i>Laghu, Ruksha, sita,</i> <i>Laghu</i>	<i>Sita</i>	<i>Madhur</i>
<i>Aruskara</i> <i>(Bhallataka)</i>	<i>Madhura, kasaya</i>	<i>Ruksha, Laghu</i>	<i>Snigdha, tikshna</i>	<i>Madhur</i>
<i>Nisha (Haridra)</i>	<i>Tikta, katu</i>	<i>Ruksha, Laghu</i>	<i>Usna</i>	<i>Katu</i>
<i>Abhaya (Haritaki)</i>	<i>Pancharasa except</i> <i>Lavana, kasaya</i> <i>Pradhan</i>	<i>Ruksha, Laghu</i>	<i>Usna</i>	<i>Madhur</i>
<i>Saptaparna</i>	<i>Tikta, kasaya</i>	<i>Laghu, snigdha</i>	<i>Usna</i>	<i>Katu</i>
<i>Karavira</i>	<i>Katu, tikta</i>	<i>Laghu, Ruksha,</i> <i>tikshna</i>	<i>Usna</i>	<i>Katu</i>
<i>Chaturangula</i> <i>(Aragbadh)</i>	<i>Madhura, tikta</i>	<i>Guru, mrdu, snigdha</i>	<i>Sita</i>	<i>Madhura</i>
<i>Vidanga</i>	<i>Katu, kasaya</i>	<i>Laghu, Ruksha,</i> <i>tikshna</i>	<i>Usna</i>	<i>Katu</i>
<i>Jati</i>	<i>Tikta, kasaya</i>	<i>Laghu, snigdha,</i> <i>mridu</i>	<i>Usna</i>	<i>Katu</i>

Table 3 KARMA AND ROGAGHNATWA OF INDIVIDUAL PLANTS

Plant	Karma	Rogagnata
<i>Khadira</i>	<i>Kapha-pittahara, Medoghna, Dipana,</i> <i>Dantya etc.</i>	<i>Kustha, kasa, Aruchi, Krimi, Prameha,</i> <i>Jwara, Svitra, sotha, Pandu, Vrana,</i> <i>Dantaroga, Arsa, etc.</i>
<i>Amlaki</i>	<i>Tridosahara, Vayasthapana, rasayana,</i> <i>caksusya, vrisya</i>	<i>Prahema, Rakta- pitta, Netra roga,</i> <i>Kustha, Arsa, soma roga, pradara,</i> <i>Mutrakricchra, sula etc.</i>
<i>Aruksara (Bhallataka)</i>	<i>Kapha- vatahara, Medhya, Vrisya,</i> <i>Dipana, Bhedana etc.</i>	<i>Kaphavikara, Arsa, kustha, Krimi,</i> <i>Gulma, grahani, Vatavyadhi, kustha</i> <i>etc.</i>

<i>Nisha (Haridra)</i>	<i>Kapha- vatahara, Lekhana, Visaghna, Varnya etc.</i>	<i>Prameha, kustha, krimi, kandu, vrana, pandu, kamala etc.</i>
<i>Saptaparna</i>	<i>Tridoshahara, Dipana, Hridya etc.</i>	<i>Krimi, kustha, vrana, amavata, swasa, gulma, sula etc.</i>
<i>Karavira</i>	<i>Kapha- vatahara, kusthaghna, vranahara, caksusya etc.</i>	<i>Indralupta, Palitya, Dustavrana, Upadamsa, Kustha, Krimi, kandu, netraroga ,etc.</i>
<i>Chaturangula (Aragbadh)</i>	<i>Kapha- pittahara, Sramsana etc.</i>	<i>Kustha, prameha, hridroga, Amavata, Gandamala, Kamala, Udara, Udavarta ,etc.</i>
<i>Abhaya (Haritaki)</i>	<i>Tridoshahara, Anulomana, Rasayaana, Prajasthapana, Caksusya, Hridya, Lekhana etc.</i>	<i>Sotha, prameha, kustha, vrana, chardi, vatarakta, Mutrakrcchra, Netra roga, Krimi, Hridroga, Asmari, Klaibya, Kasa, swasa etc.</i>
<i>Vidanga</i>	<i>Visaghna, krimighna, Dipana,etc.</i>	<i>Krimi, udara, adhmana, sula, kustha</i>
<i>Jati</i>	<i>Tridoshahara, Vranaropana, and VranaSodhana</i>	<i>Vrana, Netra roga, Siro roga, Karna puya, Mukhapaka.</i>

Table 4 MODERN PHARMACOLOGICAL ACTIONS OF INDIVIDUAL PLANTS

PLANTS	MODERN PHARMACOLOGICAL ACTIONS
<i>Khadir</i>	Anti viral, spasmolytic, antifungal and hypoglycaemic
<i>Amlaki</i>	Spasmolytic, mild CNS depressant, hypolipidaemic, anti- antherosclerotic, anti- mutagenic, anti- microbial, anti- oxidant, immunomodulatory, anti- fungal, anti- tumour, hypoglycaemic, anti- inflammatory, anti- bacterial, anti- ulcer, adrenergic potentiating, HIV- 1 reverse transcriptase inhibitory action.
<i>Aruskara (Bhallataka)</i>	Anti- bacterial, cholagogue, insecticidal, anti- fungal, anti- inflammatory, analgesic, anti- arthritic, hypotensive, antispasmodic, antiallergic, nematocidal, immunosuppressive, anti- neoplastic, cytotoxic, cytoprotective, hypocholesterolemic, anti-bacterial, moderate analgesic, immunomodulatory, cardiac depressant
<i>Nisha (Haridra)</i>	Anti- bacterial, cholagogue, insecticidal, anti- protozoal, CNS depressant, anti- fertility, anti- arthritic, hypocholesteremic, anti- hepatotoxic, anti- histaminic
<i>Abhaya (Haritaki)</i>	Anti- microbial, anti- fungal, anti- bacterial, anti- stress, anti- spasmotic, hypotensive, indurance, promoting activity, anti- hepatitis, B virus activity, hypolipidaemic, inhibitory activity, against HIV-1 protease, anthelmintic, purgative.
<i>Saptaparna</i>	Hypotensive, anti- cancer, anti- microbial, antimalarial, CNS depressant (picrinine); strictamine showed monoamine oxidase inhibitory as well as anti- depressant activity.
<i>Karavira</i>	Cardiokinetic, diuretic, cardiotonic, anti- stress, anti- biotic, anti- fungal, insecticidal, hypotensive, spasmotic, antipyretic, anti- inflammatory, adaptogenic, anti- cancer and analgesic.
<i>Chaturangula (Aragbadh)</i>	Hypoglycaemic, anti- cancer, abortifacient, anti- colic, anti- fertility, estrogenic, laxative, anti- bacterial, anti- pyretic, anti- inflammatory, smooth

	muscle, stimulant, anti-arthritic, anti-tussive, purgative, analgesic, anti-fungal, Anti-viral, hepatoprotective, anti-implantation
<i>Vidanga</i>	Nematicidal, estrogenic, hypoglycaemic, anthelmintic, anti-biotic, anti-tubercular, anti-implantation, anti-ovulatory, anti-fertility, anti-inflammatory, hypotensive, anti-pyretic, diuretic, hepatoprotective, anti-leishmanial, resorptive, anti-spermatogenic, anti-androgenic, anti-cancer, immunostimulant
<i>Jati</i>	Anti-cancer, hypotensive, diuretic, anti-bacterial, anti-inflammatory

Table 5 DOSHA- KARMA OF INDIVIDUAL PLANTS ^{9,10 & 11}

Name of the plant	Dosha- Karma
<i>Khadira</i>	<i>Kapha – pitta samaka</i>
<i>Amlaki</i>	<i>Tridoshahara, pittasamaka</i>
<i>Bhallataka</i>	<i>Kaphavatasamaka, pittarecaka- samaka</i>
<i>Haridra</i>	<i>Kaphavatasamaka, pittarecaka- samaka</i>
<i>Haritaki</i>	<i>Tridoshara, vatasamaka</i>
<i>Saptaparna</i>	<i>Kapha-pittasamaka (tridoshaghna)</i>
<i>Karavira</i>	<i>Kaphavatasamaka</i>
<i>Chaturangula</i>	<i>Pittakaphasamsodhana (Dosatrayahari)</i>
<i>Vidanga</i>	<i>Kaphavatasamaka</i>
<i>Jati</i>	<i>Tridoshahara</i>

AIMS AND OBJECTIVES

To study the efficacy of *KusthaghnaMahakashay* in the management of Psoriasis

MATERIALS AND METHODS

Ethical clearance no. No.MC/190/2007/Pt-1/66 dated 22-02-2011, Gauhati Medical College, Guwahati 32, Assam

Method of Collection Data:

Study was carried out on the patients diagnosed as suffering from Psoriasis in the age group 20-70 irrespective of sex, religion

economic status and occupation. The total no of patients taken for study was 30, excluding dropouts. Duration of the treatment was 60 days.

Preparation of the drug:

All the ingredients of *KusthaghnaMahakashay* collected from market and its physico chemical properties were evaluated in Drug Testing Lab, Guwahati. Thereafter made *Yavakutchurna* (*cutted into pieces*) taking equal part of each herbs. 40 gram *Yavakutchurna* was mixed with 320 ml of water and thereafter allowed



that to boil. When 1/4th part reduced after evaporation i.e. 80 ml then that amount was given to the patient after filtering in two divided doses for 60 consecutive days. The follow up was done after 20 days with 3 follow ups.

The following disease symptoms were graded and used as criteria for the purpose of assessment of clinical results.

1. Itching –

- Severe (3+) – if itching disturbs the day today activities including sleep
- Moderate (2+) – if itching disturbs only sleep.
- Mild (1+) – if no disturbances in activities and sleep but only complains of itching.

d) Normal (1+) – No itching

2. Scaling –

- Severe (3+) – If scaling covers maximum areas in the body
- Moderate (2+) – If scaling appear in the limb
- Mild (1+) – If scaling seen over minor parts
- Normal (0) – No Scaling

3. Erythema

- Severe (3+) – More reddish in colour
- Moderate (2+) – pinkish red
- Mild (1+) – White mixed red

d) Normal (0) – No erythema

DATA ANALYSIS

The data obtained from the above treatment were then organized and summarized using the method of frequency distribution. The data were then analyzed using appropriate statistical tools such as arithmetic mean, percentages, standard deviation and t-test of significance.

RESULTS

Table 18 Mean, Standard Error (SE) and “t” of difference of Itching before and after treatment

N	\bar{x}_{BT}	\bar{x}_{AT}	$\frac{\bar{x}_{BT} - \bar{x}_{AT}}{SE}$	SE	t	P
30	1.85	1.39	.46	0.22	2.07	P<0.02

The statistical analysis shown in table suggests that the mean of difference of before treatment and after treatment was significant statistically

Table-19: Showing the mean (\bar{x}), standard error (SE) and “t” value of differences scaling before and after treatment

N	\bar{x}_{BT}	\bar{x}_{AT}	$\frac{\bar{x}_{BT} - \bar{x}_{AT}}{SE}$	SE	t	P
30	1.57	0.73	.84	0.26	3.23	P<0.01

The statistical analysis shown in table suggests that the mean of difference of before treatment and after the treatment was significant statistically.

Table: 20: Showing the mean, standard error (SE) and “t” value of differences erythema before and after treatment

\bar{x}_{BT}	\bar{x}_{AT}	$\bar{x}_{BT} - \bar{x}_{AT}$	SE	t	P
1.99	0.63	1.33	0.21	6.33	<0.001

The statistical analysis shown in table suggests that the mean of difference of before treatment and after treatment was significant statistically.

DISCUSSION

After the complete study which includes total 60 days, it was observed that patient obtained relief after treatment with Trial drug. Improvement of the patient based on mainly three factors i.e. itching, scaling and Erythema and it was found that *Kusthaghnamahakashay* was able to improve the clinical symptoms of the patient to a greater extent and mainly the scaling symptom. The reason might be due to the antimicrobial, anti-inflammatory, anti-proliferative and Keratolytic action of the trial drug.

Further, no adverse and side effect was observed in any of the Patients and overall therapeutic response was highly encouraging.

CONCLUSION

The word *Kusthaghna* it self-sufficient to describe the effect in skin disease. All the ingredients of *KusthaghnaMahakashaya* can *Trodosh*. From modern pharmacological point also it has been observed that they have antimicrobial, anti-inflammatory, anti-proliferative and Keratolytic action. Psoriasis is chronic inflammatory keratine disorder. That’s why the trial drug acted on Psoriasis with statistically significant. Thus it can be concluded that the trial drug *KusthaghnaMahakashay* is safe, simple, easily available cost effective therapy to relieve the agonizing patients of Psoriasis. If *BhallatakandKarabir* was added in my trial drug then it would have been very effective but due to its toxicity it could not be included in the trial. After proper purification that could have been given but due to constrain of time and some ethical matter the idea was dropped from the present study.

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