



A CLINICAL EVALUATION OF GANDHAKAADYA MALAHAR IN VICHARCHIKA - AS A PILOT STUDY.

Ayurveda

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ABSTRACT

Introduction- Ayurveda is successfully implemented in treating chronic disease conditions, especially the skin diseases. Vicharchika is one among 11 Kushdra Kushtas, which can be correlated with Eczema. Exposure to variant environmental pollution and decreased immune system, prevalence rate of hypersensitivity of the skin has been increased. It is one of the causative factors for manifestation skin diseases. The patients' demand easy mode of external applications which can provide immediate action and quick relief. Rasaushadi's play a vital role in treating the diseases by their nano size of particles and quick penetrating effect. Gandhakaadya Malahar Lepa is a potent applicant to treat Kushta. Loka purusa samyata i.e. According to seasonal variation, bodily components also vary. Similarly the method of preparation of medicine and its utilization also varies. **Aim and objectives:** 1. Concepts of medicine preparation of Gandhakaadya Malahar. 2. Pilot study: a randomized selection of 15 subjects of Vicharchika who have fulfilled inclusion criteria have been taken for study. Assessment of results has been done based on subjective, objective parameters and Statistical analysis of Paired t test and Friedman's tests. **Results:** Gandhakaadya Malahar Lepa showed significant effect in Vicharchika. **Discussion:** Observation done during preparations of medicine and collected data of patients and results obtained. **Conclusion:** Gandhakaadya Malahar has shown significant effect in Vicharchika.

KEYWORDS

Gandhakaadya Malahar, Vicharchika, Sikta taila.

INTRODUCTION

Eczema is the most common inflammatory skin condition. It has been reported that, Eczema is one of the strongest predictors of allergic diseases. Nearly 10% of Indian adults suffer from eczema. Increased environmental toxicity and the allergens, lead to increase the hypersensitivity of human being. Allergic rhinitis, asthma, decreased immune system causes the manifestation of skin diseases.^[1]

Kushta (skin diseases) are of two types *Maha Kushta* and *Kshudra Kushta*. *Kshudra Kushta* is of 11 types *Vicharchika* is one among it. Causative factors of *Kushta* and *Vicharchik* are similar. *Vicharchika* is a *Tridoshaja* (vitiation of *Vata*, *Pitta* & *Kapha*) and *Rakta Pradoshaja* (vitiated blood) *Vyadhi* (disease), associated with *Kandu* (Itching), *Srava* (secretion), *Rukshata* (dryness), *Raajika* (lichenification) and *Pidakas* (eruptions).^[2]

According to *Acharya Sushruta* the Lakshanas are *Rajyo*, *Atikandu*, *Ruja* (pain), and *Rukshata* due the dominance of *Pitta*.^[3]

Gandhakaadya Malahara is a Herbo-mineral preparation, consisting of *Gandhaka* (Sulphur), *Girisindura* (HgO - Mercuric Oxide), *Tankan* (Borax), *Karpura* (Camphor), with the base of *Sikta Taila* (Bee wax & Tila taila). The unique combination of these drugs, in the form of local application helps in relieving symptoms of *Vicharchika*, by pacifying the *sthanika Tridoshas* and *Rakta dushti* (rectifying and healing local lesions).^[4]

AIMS AND OBJECTIVES:

1. Preparation of *Gandhakaadya Malahar*
2. Clinical assessment of effect of *Gandhakaadya Malahar Lepa* in the *Vicharchika*.

METHODOLOGY:

1. *Gandhakaadya Malahar* is prepared in teaching pharmacy of *Rasasashtra evam Bhaishyajaya Kalpana* Department, SVM Ayurvedic Medical College Ilkal.^[4]

2. Pilot Study Design:

Sample Size: 15

Medicine: *Gandhakaadya Malahar*

Mode of Administration: *Lepa* (external application)

Duration of application: 1 month twice a day.

Follow up: every 15 days up to 60th day.

Inclusion Criteria:

Aged between 18-60yrs with features of *Vicharchika* irrespective of their sex, occupation and economic status.

Exclusion Criteria:

Patients suffering with systemic diseases. Other dermatological diseases like Photo Dermatitis.

Laboratory Investigation: RBS, Hb%, AEC.

Assessment Criteria:

The grading has been given for Subjective and Objective parameters from 0-3 and EASI score. Data collected before treatment and during follow up are analyzed BT, AT and AF parameters.

Statistical Analysis:

Collected data has been analyzed statistically by Paired 't' & Friedman's tests.

Concepts Of Medicine Preparation:

Sikta Taila is used as a base for the preparation of *Malahar Kalpana* and it is with two different proportions - 1:6 and 1:5.

1. *Shodhana of Gandhaka:* done with *Bhudhara Vidhi*.

Ingredients: *Gandhaka churna* (sulphur powder) - 1 Part

- *Go-Dugdha* (cow's milk) - QS
- *Go-Ghruta* (cow's ghee) - Equal part

Procedure: Half of the Mud pot was filled with Milk and Ghee and a thin cotton cloth was tied on it. Powdered *Gandhaka* was uniformly spread over the cotton cloth. Equal sized *Sharava* (mud plate) was kept inverted over the mud pot. *Sandhi bandhana* (sealing process) is done with 3-5 layers *Mrutakapata* (Cotton Cloth smeared with the paste of *Gopichandana mrutika* i.e multani mitti).

After complete drying of *Sandhi bandhana*, this mud pot is kept in a pit. *Agni (fire)* is provided over the *Sharava* by arranging the cow dung cakes (range of temp 115 -130°C). Allowed for *svanga sheeta* (self cooling). *Manibhakruti* (like pearls) *Gandhaka* is carefully collected from the milk. Washed with hot water for several times to remove *Snehamsa* (adhered fat molecules). *Shodhita Gandhaka* is preserved after complete drying.^[4]

2. Sikta Taila Preparation:^[4]

- Ingredients: *Sikta* (Bee Wax): 1 part
- *Tila Taila*: 5 parts / 6 parts

Tila taila is heated over mild fire until the bubbling stops & prescribed quantity of bee wax is added to it. Stir the mixture until the wax completely melts and homogeneously mixed in to the oil. Immediately it is filtered to another clean vessel & allowed to cool. This viscous oil is called as *Sikta taila*.

3. Preparation of Gandhakaadya Malahar:^[4]

Ingredients:

1. *Siktha taila* - 6 tola (72g)
2. *Shodhita Gandhaka* (purified sulphur) - ½ tola (6g)
3. *Girisindura* (purified HgO) - ½ tola (6g)
4. *Shodhita Tankana* (purified Borax) - 2 masha (2g)
5. *Karpura* (Camphor) - 2 masha (2g)

Procedure: Sikta Taila is taken in an Iron Pan and heated on *Mandagni* (mild flame), until it get liquefied. Immediately after liquefaction, fine powders of all the ingredients are added and stirred continuously to get the homogeneous mixing of all the ingredients. After cooling, when it attains semisolid consistency, it is transferred to wild mouthed glass jar.

Table no-1 showing the details of Gandhakaadya Malahara ingredients & their guna karma^[4,5,13]

Sl no	Drug	Rasa	Guna	Veerya	Vipaka	Dosha-ghnata	Karma	Rogagnata
1	Gandhaka	Kashaya Madhura (sweet), Katu (pungent) Tikta (bitter)	Sara (unstable) Snigdha (unctuous)	Ushna (hot)	Madhura	Kapha Vatahara Pittakara	Deepana Pachana Amahara Vishahara	Kandu, Kushta, Visarpa (erysepales), Dadru (taeniasis), Krimighna Garavisha (accumulated poison),
2	Giri-sinduar	Katu, Tikta	Guru Snigdha Mrudu	Ushna	Katu	Tridosha hara	Lekhana Krimighna Kandughna Twakdosahara Ropana	Kandu,Pama, Vicharchika, Sidhma,Visarpa, Vishahara
3	Tankana	Katu	Ruksha Teekshna Sara	Ushna	Katu	Kapha Vata-hara Pittakara	Hrudya, Deepana	Vatavikara Nashaka, Vividha Vruna Nashaka
4	Karpورا	Tikta Katu Madhura	Laghu	Ushna		Kapha-hara	Pachana, Hrudya Deepana	Sadyovruna
5	Sikta	Katu, Tikta Kashaya	Ruksha	Ushna		Vata-raktahara		Vrunashodhana, ropana, Spota, Vipadikahara Twakprasadan
6	Tila Taila		Vyavayi Teekshna Sookshma	Ushna		Kaphakrut		Samskarth Sarvarogahara

Table no 2 showing the subjective parameters and grading criteria.^[6,7]

Sl. no	Criteria	Parameters	Grading
1	Kandu	No itching	0
		Occasional itching	1
		Continuous itching which not disturbs routine activities & sleep	2
		Continuous itching which disturbs routine activities but not sleep	3
		Itching which disturbs routine activities & sleep	4
2	Srava	No Discharge	0
		Occasional watery discharge after rubbing/scratching	1
		Continuous watery discharge	2
		Purulent discharge with pus or blood	3
		Purulent discharge with pus and blood	4
3	Vaivarnya	Normally skin colour	0
		Brownish red discoloration	1
		Blackish red discoloration	2
		Blackish discoloration	3
4	Pidika	No eruptions	0
		Scanty eruptions in few regions	1
		Scanty eruptions in at least half of lesions	2
		All the lesions full of eruptions	3
5	Rookshata	No line after scrubbing with nail dryness	0
		Faint line on scrubbing with nails	1
		Lining and words can be written by nails	2
		Excessive Rookshata leading to kandu	3
		Rookshata leading to crack formation	4
6	Rajyo	No thickening of skin	0
		Thickening of skin but no criss-cross markings	1
		Thickening of skin with criss-cross markings	2
		Severe lichenification	3

OBSERVATION:

Gandhaka Shodhana with 'Bhudhara Vidhi':

1. Some physical impurities & carbon particles found over the cotton cloth.
2. After removing the *Sharava* & Cotton cloth, yellow colored droplets of *Ghruta* found over the surface of *Go-Dugdha*.
3. After pouring out the *Go-Dugdha*, *Manibhakruti Gandhaka* in solid form is observed.
4. After washing with hot water, bright yellow colored *Gandhaka* with *Bhanguruta* (brittleness) & *Laghuta* (and light) is obtained.

Sikta Taila preparation:

Physical Impurities are found on the sieve, when Sikta taila is filtered.

Preparation of Gandhakaadya Malahar:

Pleasant odor of *Karpورا* (Camphor) is observed, as the homogeneous mixing of all the ingredients takes place, in the hot state of *Sikta Taila*. Orange colored semisolid consistency of *Gandhakaadya Malahar* is obtained.

7	Shotha	No oedema	0
		Present in <25% of the area	1
		Present in 25%–50% of the area	2
		Present in 50%–75% of the area	3
8	Vedana	Present in >75% of the area.	4
		No pain	0
		Occasional pain not disturbs routine activities & sleep	1
		Moderate pain disturbs routine activities but not sleep	2
		Severe pain disturbs both routine activities and sleep	3
9	Daha	No burning sensation	0
		Mild burning sensation	1
		Moderate burning sensation	2
		Burning sensation continuously not disturb sleep	3
		Burning sensation continuously and even disturb sleep	4
10	Number of patches	Objective parameters	
		No patch	0
		1-2 patches	1
		3-4 patches	2
11	Area of patches	More than 5 patches	3
		In between 0-10 square cm.	1
		In between 10-20 square cm	2
		More than 20 square cm	3

EASI score (Eczema Area Severity Index)^[8,9]

An EASI score is a tool used to measure the extent (area) and severity of atopic eczema

Ethical Clearance:

The study was approved by the institutional ethical committee SVM AM College Ilkal.

OBSERVATIONS

Table showing no-3 general demographic parameters observed during study

Sl. no	Criteria	Sub criteria	No of patients	Remarks
1	Ahara	Vegetarian	7	Incompatible food, Indigestion may be the factors
		Mixed	8	Non-veg are impairs the metabolism.
		Fermented food	9	Excess of consumption gut bacteria increase the growth of microbimome.
		Curd	14	Sticky nature of tissues, variant in gut bacteria improper cleansing metabolic wastes
		Spicy food	15	Causes dryness of skin
	A,L,KT, KS	6	Causes vitiation of bodily humors	
2	Vihara	Artificial ornaments wearing	3	Specific places eczematous lesions are formed.
		Bathing Irregularly	4	Unhygienic conditions worsen the diseases.
3	Manasika dosha	Chinta, Krodha, Shoka	14	Pitta and Kapha vitiation
3	Occupation	Granite workers, labors	3	exposure to Pollutants itching & inflammatory changes
4	Agni	Manda	11	Storage of improperly metabolized waste products.
5	Koshta	Krura	7	Vitiates Vata and causes toxication of stored molecules
7	Nidra	Alpa	3	Itching disturbs the sleep
8	Vyasana	Tobacco, alcohol, smoking	6	Toxins of these limit the normal healing of Cells.
9	Prakruti	VK	4	-
		VP	5	-
		KP	6	-
10	Vikruti	Avara	6	-
		pravara	4	-
		Madhyama	5	-
11	Satwa	Madhyama	9	Instability of mind
12	Vicharchika Dosh predominance	VK	8	Itching and dryness are prime complaints
		VP	6	Burning sensation before and after scratching.
		PK	1	Redness with eruptions.
13	Sex	Male	8	Occupational exposure
		Female	7	Ornaments,chemicals, pesticides exposure

RESULTS:

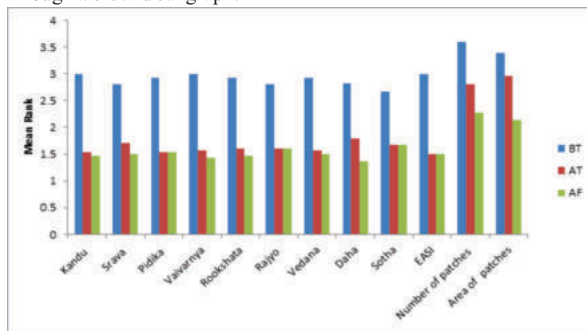
Investigation results:

Investigation done before treatment (1st day) and after treatment (60th day) had not shown much difference. RBS done to rule out the subjects with diabetes. Hb% to general health condition. AEC reports varied may be because of pathya palana.

Sl no	Parameter	Mean Rank			Friedman's test	Df	P-Value	Remarks
		BT	AT	AF				
1	Kandu	3.00	1.53	1.47	29.391	2	0.000	S
2	Srava	2.80	1.70	1.50	22.615	2	0.001	S
3	Pidika	2.93	1.53	1.53	28	2	0.000	S
4	Vaivarnya	3.00	1.57	1.43	28.894	2	0.000	S
5	Rookshata	2.93	1.60	1.47	26.909	2	0.000	S
6	Rajyo	2.80	1.60	1.60	24	2	0.000	S
7	Vedana	2.93	1.57	1.50	27.395	2	0.000	S
8	Daha	2.83	1.80	1.37	23.227	2	0.000	S
9	Sotha	2.67	1.67	1.67	20	2	0.000	S
10	EASI	3.00	1.50	1.50	30	2	0.000	S
11	Number of patches	3.60	2.80	2.27	33.327	2	0.000	S

12	Area of patches	3.40	2.97	2.13	29.786	2	0.000	S
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Results that are obtained during study of all parameters are presented through table and bar graph.



Overall Result:

- Marked improvement: 46.7%
- Moderate improvement: 46.7%
- Poor improvement: 6.7%

DISCUSSION:

According to the *Rasa Tarangini* the quantity of *Tila taila* (sesame oil) to be added is not specified. It is left to the yukti (intellectual power) of preparing person (*Yuktamana vimishritam*). But with 5, 6 or up to 8 parts of *Tila taila* with 1 part of sikta, it is possible to get *Sikta Taila* of good consistency.

Gandhaka Shodhana with Bhudhara Vidhi:¹⁰⁰

As per the classics, *Gandhaka Shodhana* has not been mentioned for preparations of external applications. But, just to remove the physical impurities & also optimize the *ati-teekshana* (penetrating power) and *ati-ushna* (too hot) properties of *Gandhaka*, it is better to subject the *Gandhaka*, for Shodana with milk and ghee. As *milk* and *Ghee*, act as antidotes to nullify the toxicity of *Gandhaka*.

Fat soluble toxicity of *Gandhaka*, which has been mixed with *ghee*, is floating over the surface of milk. That's what yellow colored droplets of ghee appear floating over the surface of milk. Milk & Ghee, having Madhura (sweet), Snigdha (sticky) & Sheeta (cool) gunas will help to reduce the *ati teekshana* & *ati Ushna* properties of *Gandhaka*.¹¹¹

Preparation of Sikta Taila:¹⁰⁰

1. *Sikta* 1 part, *Tila Taila* 6parts in *Sheeta Kala* (winter) because of the *Kala Prabhava* (influence of climate) dryness of the skin will be more and 6 parts of *Tila Taila* will effectively minimize the dryness.
2. *Sikta* 1 part *Tila Taila* 5parts in *Ushna Kala* (Summer) as *Kledata* (Moister) of skin will be more because of more perspiration and there is no need of more *Snigdha* (Oiliness).

Preparation of Gandhakadya Malahara:

It is better to mix the fine powders of all the ingredients homogeneously, prior to be added with the *Sikta Taila*. So that one can expect the better efficacy.

Mode of action: The active principles of *Malahara* (Ointment) reach to the deeper tissues through *Sira mukha* (capillaries at the lesions) and *Swedavaha Srotas* (Sweat glands) with its *Sara* and *Teekshna* properties. Due to *Ushna*, *Teekshna*, *Sara* properties, it removes the obstruction in *Swedavahi Srotas* and cures the disease.

Gandhaka it's an antifungal medicine. Sulfur is keratolytic agent which works by softening and loosening dry, scaly, thickened skin, provide moisture to the skin, which may improve the healing and appearance of eczema. External use: kills bacteria and fungus due to the formation of hydrogen sulphide and pentanoic acid.¹¹²

Vipareetarthakari Chikitsa: vitiated doshas are toxic as they manifest skin diseases in the same to treat such condition formulation containing *Visha dravyas* (*Gandhaka*, *girisindhura*) had proven usefull.

Pilot study discussion: *Vicharchika* is *kapha* predominant *vikara* *Gandhaka* is *vata Kaphahara* and anti fungal properties in nature showed significant effect. All the ingredients in the formulation had

vrina ropana (wound healing), because of their *kashya tikta rasa. kandu* is because of *vata* and *kapha* vitiation because of their *ushna veerya* and *katu vipaka* and *kandughna* (anti itch) property the itching had reduced. Since itching is the main factor to aggravate the skin conditions by local application of medicine had reduced discoloration, itching and inflammation. *Snigdha guna* of *Sikta taila* dryness of skin lesions. *Daha* reduced due to sheeta guna of *Sikta taila*.

CONCLUSION:

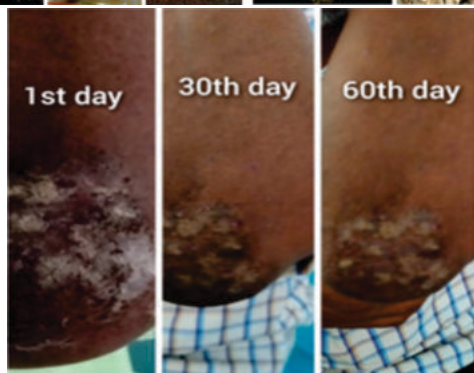
Sikta Taila is prepared with mean value of both proportions (1:5 & 1:6), so that it can be used commonly in both the Seasons Conveniently.

Fineness and *Uniformity* in the *Size of the Particles*, attained during classical method of preparation, has enhanced the efficacy and better absorption of the *Gandhakadya Malahar*.

Gandhakaadya Malahar had significant effect in reducing the itching, dryness and discoloration of eczematous lesions.

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