

An open clinical trial to evaluate the efficacy of *Kanka Taila Pratimarsha nasya* in *Vyanga* with special reference to Melasma

Research Article

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Abstract

Brown to gray-brown patches on the face are a typical cause of melasma, a skin condition. It usually appears on the forehead, chin, nasal bridge, cheeks, and above the upper lip. Women are more likely than men to experience it. In India, 20–30% of women between the ages of 40 and 65 have facial melasma. 90% of women and 10% of men across all ethnic and racial groupings experience it, respectively. Melasma can be correlated to *Vyanga*. It is one of the *Kshudra Rogas* that causes obvious cosmetic impairment and excessive mental tension. *Niruja* (Painless), *Tanu* (Thin), and *Shyava Varnayukta Mandala* (Brownish patch) over *Mukha Pradesha* (Face) are characteristics of *Vyanga* (Melasma). While considering the pathogenesis of *Vyanga*, *Pitta dosha* is more predominant on the basis of *Ashraya-ashryi bahava Rakta* is also involved. *Nasya* is mainly indicated. By doing *Nasya* it removes vitiated *Pitta* and also helps in *Varna prasadana*. In this study *Pratimarsha Nasya* was administered for 30 days continuously. The assessment criteria noted before and after the treatment. Subjective parameters i.e. *Mukhamagatya Mandalam* (Patches), *Shyavavarna* (Pigmentation), *Kandu* (Itching), *Parusha Sparsha* (Dry skin) are the chief complaints of *Vyanga* and objective parameters such as MASI (Melasma area severity index). Assessments are done before and after the treatment. Symptoms of *Vyanga* decreased and it shows clinical progressiveness of the treatment given. In our study we found significant improvement.

Keywords: *Vyanga*, *Kshudra Roga*, Melasma, *Samprapti Vighatana*.

Introduction

Among all the organs in the body, the skin is acknowledged as the largest. It serves as the body's natural outerwear. Since it is the organ of touch, warmth, and pain perception, it shields the organs below. The skin acts as an immune system, biochemical barrier, and physical barrier between the body and the external environment. Skin plays an equally important psychosocial significance. It reflects changes within and reacts to changes outside. Even little lesions can have a big impact on someone's self-esteem because our skin is what the outside world perceives when it comes to our appearance. Illnesses that impact the primary organ of this body are a major source of grief, pain, isolation, inferiority complexes, and financial loss.

The terms *Kustha* and *Kshudra Rogas* are used in *Ayurveda* to describe skin conditions. *Vyanga* (Melasma) is one among the *Kshudra Roga* (1). The black staining of the skin across the face, despite the fact that *Vyanga* (Melasma) is a *Kshudra Roga*, causes the person a great deal of anguish. When the *Doshas Vata*, *Pitta* and on the basis of *Ashraya- Ashryi bhava*

Rakta get vitiated, it results in the pathological condition known as *Vyanga* (Melasma), which affects the facial skin and is characterized by the development of the *Niruja* (Painless), *Tanu* (Thin), and *Shyava Mandala* (Brownish patch) (2). The explanations of *Raktamokshana* (Bloodletting) (*Siravyadha*), *Vamana* (Emesis), *Virechana* (Purgation) and *Nasya* (Nasal drops), *Lepa* (External application), *Abhyanga* (Massage), and oral remedies in the framework of *Vyanga* (Melasma) include both *Shodhana* (Bio-purification) and *Shaman Chikitsa* (Oral medication).

A common skin condition known as melasma manifests as brown to grey-brown patches on the face. The majority of people develop it on their cheeks, chin, forehead, nasal bridge, and upper lip. Women are more likely than men to have it. Melasma is frequently brought on by pregnancy. It also has an impact on female users of oral contraceptives and hormones. The prevalence ranges from 1.5% to 33% (3).

In modern medicine, a cream containing hydroquinone and hydrocortisone is applied externally as part of the treatment. Topical medication use has a number of side effects, including contact dermatitis, irritation, and leukoderma. In a select few cases, this is proven to be sensitive. The frequent and prolonged usage of these therapeutic modalities places a financial and social strain on the patient (4).

Ayurveda has shown to be effective in treating skin conditions. In *Vyanga*, *Vata*, *Pitta*, and *Rakta* get vitiated in *Mukhapradesha* (Face), according to

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Acharyas who also cited Siravyadha (Bloodletting), Lepa (External application), and Nasya (Nasal drops) among other remedial treatments. But, Here an attempt is made to assess the role of Kanaka Taila pratimarsha Nasya (Nasal drops) (5) in Vyanga. By administering Kanaka taila pratimarsha nasya there would be beneficial in removing the vitiated Pitta and helps in varna prasadan. Hence present study proved scientifically the role of pratimarsha nasya with Kanaka Taila in the management of Vyanga with satisfactory result.

Materials and methods

Clinical source

The diagnosed patients of Vyanga (Melasma) attending OPD and IPD department of Kayachikitsa and also camps will be conducted for the study in BVVS Ayurved Medical College and Hospital, Bagalkot.

Drug source

Raw drugs of Kanaka Taila (6) were collected and authenticated by Dravyaguna (Pharmacology) department.

Table 1: Showing the drugs and their useful parts

Sanskrit name	Botanical name	Family name	Quantity	Parts used
Madhuka (7)	Madhuka Glycyrrhiza glabra Linn	Fabaceae	768gm	Root
Priyangu (8)	Callicarpa macrophylla Vahl	Verbenaceae	6.4gm	Flower
Manjista (9)	Rubia cordifolia Linn	Rubiaceae	6.4gm	Root
Rakta chandana (10)	Pterocarpus santalinus Linn	Leguminaceae	6.4gm	Heartwood
Kamala pushpa (11)	Nelumbo nucifera Grertn	Nelumbonaceae	6.4gm	Seeds
Nagakesaras (12)	Mesua ferra Linn	Guttiferae	6.4gm	Stem
Tilataila	Sesamum indicum L.	-	192gm	-
Kwath	3.072 liter reduced to 768 ml			

Selection criteria

Diagnostic criteria

Diagnosis will be made based on sign and symptoms of Vyanga (Melasma) are Mukhamaagatya mandalam i.e., circumscribed patches over face, Shyavam i.e., Dark brown pigmentation of the facial skin, Kandu i.e., Itching and Parushasparsha i.e., Dry skin

Inclusion criteria

Diagnosed case of Vyanga and Melasma and Patients with the age group between 18- 65years of either sex.

Exclusion criteria

Vyanga (Melasma) along with Kushta Roga to be excluded. Hyperpigmentation caused by tumour like

malignant melanoma. Women using oral contraceptives and Pregnant women

Method of collection of data

Study design: An open clinical study.

Sample size: 30

Chikitsa: Kanaka taila Pratimarsha Nasya (Nasal drops) for 30 days 2⁰ drops each nostril once in a day (Evening). **Treatment duration** – 30 day, **Follow up** – 40th day

Total duration of the study: 40 days

Assessment criteria

The result of the treatment will be assessed before & after the treatment, based upon Subjective and Objective Parameters like MASI Score and are assessed based on standard scoring.

Table 2: Gradings for assessment of subjective parameters

Sl. No.	Symptom	0	1	2	3
1	Mukhamagatya Mandalam (Patches)	No patches	1 to 2 patches	3 to 4 patches	5 to 6 patches
2	Shyavavarna (Pigmentation)	No Shyava Varna (Brownish)	Mild	Moderate	Severe
3	Kandu (Itching)	No Kandu (Itching)	Very mild itching	Mild itching	Moderate itching
4	Parusha Sparsha (Dryskin)	No dry Skin	Mild dry skin	Moderate dry Skin	Severe dry skin

Table 3: Gradings for assessment of Objective parameters

MASI SCORE = 0.3 (Df + Hf) Af+0.3 (Dmr+Hmr) Amr + 0.3 (Dml+Hml) Aml + 0.1 (Dc+Hc)Ac.

D-Darkness; H-Homogeneity; A-Area; f-Forehead; mr- Right malar; ml-Left malar; c-Chin

SCORE	Percentage of Area involved (A)	Darkness (D)	Homogeneity (H)
0	No involvement	Absent	Minimal
1	Less than 10%	Slight	Slight
2	10-29%	Mild	Mild
3	30-49%	Marked	Marked
4	50-69%	Severe	Severe
5	70-89%		
6	90-100%		

Statistical analysis

The collected data and observations were analysed critically by Wilcoxon signed rank test.

Overall clinical assessment of the trial

- **Good response** –76-100% and more improvement in overall clinical parameters.
- **Moderate response** –51-75% improvement in overall clinical parameters.
- **Mild response** –26-50% improvement in overall clinical parameters.
- **No response** - less than 25%.

Observations and Results

In the present study, majority of the patients were belonged to the age group of 28-37 years (46.6%), Majority of the patients were females (63.3%), (93.3%)

of patients were literate, (66.6%) of patients were from middle economic status, (46.6%) of patients were housewives, (60%) of patients were vegetarians, (99%) of patients were having habit of tea, (73.3%) of patients were having *Samagni* (Normal appetite), (76.6%) of patients were having *Madhyama Kostha* (Bowel habit), (76.6%) of patients were having *Vatapittaja Prakruti* (Constitution), (43.3%) of patients were having 0-1year duration of illness, (23.3%) of patients were taken Allopathy treatment, (30%) of patients were having *Ayasa* (Tiredness).

In the present study, (80%) of patients were having 2 lesions, (70%) of patients were having brownish lesions, all the patients were having symmetrical lesions, (60%) of patients were having moist lesions.

Table 4: Statistical analysis of subjective parameters by Wilcoxon signed rank test

Parameter BT-AT	Negative ranks			Positive ranks			Ties	Total	Z-Value	P-Value	Remarks
	N	MR	SR	N	MR	SR					
Mukhamagatya <i>Mandalam</i> (Facial patches)	10	5.50	55.00	0	0.00	0.00	20	30	-3.162	0.002	Significant
<i>Shyava Varna</i> (Brownish Colour)	30	15.50	465.00	0	0.00	0.00	0	30	-5.260	0.000	Significant
<i>Kandu</i> (Itching)	5	3.00	15.00	0	0.00	0.00	25	30	-2.260	0.025	Significant
<i>Parusha Sparsha</i> (Rough touch)	27	14.00	378.00	0	0.00	0.00	3	30	-5.112	0.000	Significant

Table 5 : Statistical analysis of objective parameters by Paired 't'test

Parameter	Mean		Mean difference	SD (±)	SE (±)	T-Value	P-Value	Remarks
	BT	AT						
Masi score	9.0900	4.3400	29	1.38059	0.25206	18.845	0.000	Significant

Overall response to the treatment:

Table 6: Distribution of overall response to the treatment

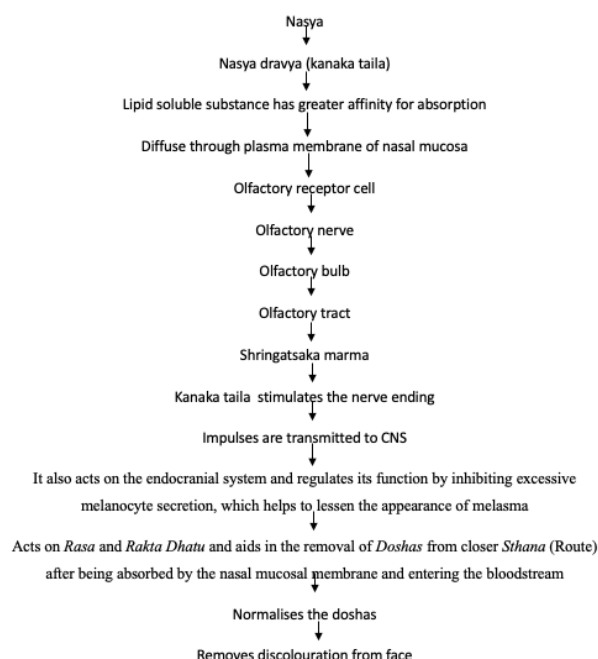
Sl. No.	Response	Number of patients	Relieved (%)
1	Good response	0	0
2	Moderate response	20	66.67
3	Mild response	8	26.6
4	No response	2	6.6

Discussion

Probable mode of action of *Kanaka Taila Pratimarsha Nasya*

All of the drugs in *Kanaka Taila* ingredient list have the *Varnya* (Complexion) property, *Tridosha Shamak*, *Raktaprasadhana* (Blood offering), *Rasayana* (Rejuvenating), which feeds all the *Dhatus* (Tissues), four drugs are having *Sheeta Veerya* (Cold potency) and *Katu Vipaka*, and three drugs are having *Ushna Veerya* (Hot potency) and *Madhura Vipaka*. These substances cause the vitiated *Doshas* to be liquefied and expelled (*Draveekaranam* and *Chedanam*, respectively). These *Kashaya* (Astringent) *Rasa* medications have an astringent effect, while *Madhura Rasa* (Sweet taste) medications have a nourishing and cooling impact. In order to care for, protect, prevent, and enhance the appearance of the skin.

Figure 1: Showing the samprapti



Conclusion

Melasma and *Vyanga's* clinical signs are connected. In subjective measures like *Mukhamgatya mandala*, *Shyavarna*, *Parusha sparsha*, and *Kandu*, as

Table 7: Rasa Panchaka of Kanaka Taila

Sanskrit name	Botanical name	Family name	Rasa	Guna	Veerya	Vipaka	Doshghnata	Karma
Madhuka (7)	<i>Madhuka Glycyrrhiza glabra Linn</i>	Fabaceae	Madhura	Guru, Snigdha	Sheeta	Madhura	Pitta vatahara	Varnya. Rasayana, Kandughna
Priyangu (8)	<i>Callicarp a macrophylla Vahl</i>	Verbenaceae	Tiktka, Kashaya, Madhura	Guru	Sheeta	Madhura	Vata Pittahara	Mukhakantikara Raktashodhaka Dahaprashamana
Manjista (9)	<i>Rubia cordifolia Linn</i>	Rubiaceae	Tiktka, Kashaya, Madhura	Guru	Ushna	Katu	Kapha pittahara	Varnya
Rakta chandana (10)	<i>Pterocarpus santalinus Linn</i>	Leguminaceae	Tiktka, Madhura	Guru	Sheeta	Katu	Kapha pittahara	Mukhakantikara Raktashodhaka Dahaprashamana
Kamala pushpa (11)	<i>Nelumbo nucifera Grertn</i>	Nelumbonaceae	Madhura, Tiktka, Kashaya	Snigdha, Pichhila	Sheeta	Madhura	Kapha pittahara	Varnya, Dahaprashamana
Nagakesaras (12)	<i>Mesuaeferra Linn</i>	Guttiferae	Kashaya, Tiktka	Laghu	Ushna	Katu	Kaphapittah ara	Kushtaghna, Kandughna
Tilataila	<i>Sesamum indicum</i>	-	Madhura, Kashaya	Laghu, Ruksha	Ushna	Madhura	Vatakaphah ara	Varnyakaraka

well as objective parameters like MASI score, the study has demonstrated statistically significant $P < 0.05$. Twenty (66.67) of the thirty patients in this study had a moderate reaction, eight (26.6) had a light response, and two (6.6) had no response at all. In terms of managing Vyanga W.S.R. to Melasma, the entire study has been determined to be quite beneficial.

Limitations of the study: The sample size was small, the period of study was limited

Scope for further study: Same study can be prepared by taking larger samples. Repeated Shodhana and shaman treatment is essential

Conflict of interest: Conflict of interest declared none.

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