

## A CLINICAL STUDY ON THE ROLE OF MADHU – MANJISTHA LEPA AND ORAL USE OF KATUKI – SARIBA YOGA IN THE MANAGEMENT OF VYANGA (MELASMA)

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### ABSTRACT

**Objectives:** In *Ayurveda*, *Vyanga* is considered as *Kshudraroga* which bears the characteristic features of Melasma of modern medicine which is an acquired pigmentary problem found especially over the face. The Brownish/Blackish patches take place in a different area of the face. The satisfactory management of such problems is not so much available in modern medicine. So, to find out the solution through *Ayurveda* a randomised single-blind clinical trial has been done in this study. **Method:** only 53 patients of *Vyanga* were selected for this trial and randomly categorized into three groups – Group “A”, Group “B”, Group “C”. Group “A” patients were treated with *Madhu – Manjistha lepa* externally (½ an hour contact) and Group “B” patient were treated with orally *Katuki Sariba yoga* (3 gm) twice daily and both external and internal therapies have been given over Group “C” patients. Trial was continued for 1½ month (6 weeks). During this study, a scale has been introduced here namely MASI (Melasma Area Severity Index) to measure the efficacy. That score has been reduced from 23.52% to 47.05%, 16.67% to 50% and 11.11% to 72.22% in Group – “A”, Group – “B” and Group – “C” respectively. Where all groups were found statistically highly significant (p <0.001).

**Keywords:** *Vyanga*, *Melasma*, *Madhu*, *Manjistha*, *Katuki*, *Sariba*

## INTRODUCTION

Ayurveda an ancient system of medicine plays a great role in the prevention and cure of diseases. There are so many herbs mentioned in ancient literature, which are useful in the promotion of the colour complexion of skin as well as healing of skin diseases. There are so many *Kshudraroga* that have been mentioned by Ayurvedic Classics among them *Vyanga*, *Nilika*, *Tilakalaka*, *Nacchya* etc. are the common problems. The features of *Vyanga* are more or less similar to the features of Melasma which is an acquired pigmentary problem found especially over face. The brownish/blackish patches take places like the forehead, left and right molar region, chin and sometimes over the nose. For the treatment of Melasma in India, lots of cosmetic products are available in the market which is costly but having not so much satisfactory curative effect as a result frustration going on to the affected person. In the present research work entitled "A clinical study on the role of *Madhu-Manjistha lepa* and oral use of *Katuki – Sariba yoga* in the management of *Vyanga*". A vivid survey of Ayurvedic literature related to *Vyanga* and modern literature related to Melasma has been done and it has been revealed that as the herbal agents *Madhu – Manjistha*, *Katuki – Sariba* etc. are *Vrana Sodhak*, *Vrana Ropak*, *Visaghna*, *Rakta Sodhak* and *Varnya* (enhances colour complexion). So, this clinical trial has been conducted to assess the efficacy of those drugs in the established case of *Vyanga* or Melasma. It has been revealed that aggravated *pitta* gets dried up in combination with *rakta* this event is liable for causing the skin diseases like *Tilakalaka*, *Piplu*, *Vyanga* and *Nilika*. Maharshi *Susruta* (500 BC) has clearly stated that *vata* getting aggravated by anger and exertion, combination with *pitta*, reaching the face quickly gives rise to a patch on the skin, which is painless, thin and blue. On Ayurvedic Anatomophysiological consideration of *twak* it has been found that *Vyanga* takes place at the Second Layer of *twak* that is "*Lohita*" it has also been mentioned *Tilakalaka* and *Nacchya* may also take place in the said layer. It is known Melanin pigmentation (yellow to

dark pigment) is formed from tyrosine through the intermediary stage of di-oxy-phenylalanine (DOPA) Melanocytes contain an enzyme that converts tyrosine to Melanin. The Golgi body of the cell arises vacuole like premelanosome which incorporates zinc and becomes melanosome. The latter becomes heavy and losses tyrosine's activity to be transforming into melanin granule. The quantity of melanin in the skin varies from individual to individual and race and also from time to time. When people living in temperature and cold climates tend to have fairer skin than those living in sunny and warmer places blondes have fairer skin than brunettes.

### Aim and Objectives:

- To find out a safe, effective, easily available, curative regimen against *Vyanga* or Melasma.
- To evaluate & correlate *Vyanga* with Melasma by using subjective and objective parameters.
- To compare the effectiveness of the only local application of *Madhu–Manjistha lepa*, only oral use of *Katuki–Sariba yoga* and both local application of *Madhu–Manjistha lepa* and oral use of *Katuki–Sariba yoga* in the management of *Vyanga* (Melasma).

### Materials and Methods:

1. **Study Area:** 53 patients of *Vyanga* (Melasma) have been selected from OPD of IPGAE&R at S.V.S.P. Hospital, Kolkata – 9 based on careful history taking the clinical examination and judicious use of laboratory.
2. **Study Population:** Patient who have attended OPD of IPGAE&R at S.V.S.P. Hospital, Kolkata – 9 from different corners of our country.
3. **Study Period:** 1 and ½ years Trial Period – 6 weeks for each patient.
4. **Sample Size:** 53 patients
5. **Sample Design:** The sample has been divided into 3 groups.

**Group – A:** *Madhu–Manjistha lepa* externally has been given to 17 patients for 6 weeks. **Group – B:** *Katuki–Sariba yoga* has been given orally to 18 patients for 6 weeks, **Group – C:** *Madhu–*

*Manjistha lepa* externally, *Katuki–Sariba yoga* internally has been given simultaneously to each patient for 6 weeks to 18 patients.

**6. Inclusion Criteria:**

- Age group (10–50) years irrespective of income group, education status, gender and religion.
- The patient has patches of pigmental disorder over the face or hyperpigmentation, especially on the cheeks, nose, forehead and chin.
- Patients are not under other medicine for melasma.

**7. Exclusion Criteria:**

- Below 10 years and above 60 years.
- The patient has hyperpigmentative like nevs of ota, malignant melanoma, renal failure, hepatic

disorder, endocrine system disorder, pregnant women, lactating women, women using an oral contraceptive, *vyanga* along with *Kushta*.

**8. Diagnosis of the Patients:**

- Based on some subjective and objective criteria.
- Clinical symptoms like *Twak Rukshatvam* (Roughness), *Twak Snigdatwam* (Excessive oiliness), Colour of patches, Size of the patches, Presence/Absence of *Kandu*, Presence/Absence of *Daha*.
- The effectiveness of the therapy was assessed before and after treatment and analyzed by using appropriate statistical methods and conclusions drawn.

**Medicines used:**

**Table – 1:**

1.	<i>Madhu</i>
2.	<i>Manjistha</i>
3.	<i>Katuki</i>
4.	<i>Sariba</i>

The medicines were prepared as per classical method and collected from the Apothecary Department of this Institute. The scoring method as per PARGOTRA et. al, 2011 has been followed. An assessment method has been introduced by the name of MASI (Melasma Area Severity Index) where *Kandu*, *Daha*, Gross size etc. have been scored in the following manner.

**Table – 2:**

Symptom	Findings	Scoring
1. <i>Kandu</i>	None	0
	Mild	1
	Moderate	2
	Severe	3
2. <i>Daha</i>	None	0
	Mild	1
	Moderate	2
	Severe	3
3. Gross Size	0 – 1 cm	1
	1 – 3 cm	2
	3 – 6 cm	3
	> 6 cm	4
4. The percentage is involved (A)	None	0
	< 10%	1
	10 – 29%	2
	30 – 49%	3
	50 – 69%	4

	70 – 89%	5
	90 – 100%	6
5. The darkness of the Melasma (D)	Normal skin colour without evidence of hyperpigmentation	0
	Barely visible hyperpigmentation	1
	Mild hyperpigmentation	2
	Moderate hyperpigmentation	3
	Severe hyperpigmentation	4

Symptom	Findings	Scoring
6. Homogeneity of the hyperpigmentation (H)	Normal skin colour without evidence of hyperpigmentation	0
	Specks of involvement	1
	Small patchy areas of involvement < 1.5 cm diameter	2
	Patches of involvement > 2 cm diameter	3
	Uniform skin involvement without any clear areas	4

**Assessment Process:** A keen observation of the subjective and objective parameters among three trial groups was evaluated and a comparison was done through the scoring before and after treatment. Statistical analysis was done to establish the better efficacy of the therapies.

The effect of therapies is tabulated in tables.

**Table 3:** Effect of Therapy in Group – A patient (n = 17).

	BT	AT	SD	SE	% Of relief	't'	P
1. Brownish/ Blackish Patches	3.058	1.764	1.494	0.362	42.315	3.574	<0.01
2. Kandu	0.764	0.411	0.685	0.166	46.204	2.126	<0.02
3. Daha	0.764	0.470	0.542	0.1314	38.481	2.237	<0.05
4. MASI	10.75	4.13	6.69	1.623	61.65	4.07	<.001

**Table 4:** Effect of Therapy in Group – B patient (n = 18).

	BT	AT	SD	SE	% Of relief	't'	P
1. Brownish/ Blackish Patches	3.333	1.444	2.081	0.490	56.675	3.855	<0.01
2. Kandu	0.83	0.167	0.969	0.22	79.87	3	<0.01
3. Daha	0.611	0.2777	0.666	0.157	54.66	2.122	<0.05
4. MASI	12.26	3.19	9.176	2.163	73.94	4.19	<.001

**Table 5:** Effect of Therapy in Group – C patient (n = 18).

	BT	AT	SD	SE	% Of relief	't'	P
1. Brownish/ Blackish Patches	3	0.666	2.403	0.566	77.8	4.123	<0.001
2. Kandu	0.777	0.222	1	0.2357	71.428	2.361	<0.05
3. Daha	0.9444	0.1666	1.333	0.3142	82.274	2.475	<0.05
4. MASI	12.48	2	10.598	2.498	83.974	4.195	<0.001

## DISCUSSION

The treatment of Vyanga in the present research work through *Madhu–Manjistha lepa* for local application and *Katuki–Sariba yoga* for internal use have been taken into consideration to evaluate their actions through a clinical trial. *Madhu* has the *rasa Madhur* and *Kasaya* carrying the properties like *Laghu Sukshma* and *Visada* and *Sita Virya* and having the action like *Vrana Sodhan*, *Vrana Ropan*, Astringent etc. Another ingredient of *lepa* is *Manjistha* which has the *rasa Madhur*, *Katu* and *Kasaya* and has the property *Guru*, *Virya*, *Usna* and effective as *Visaghna*, *Sothahara* and *Kaphahara* and performs the activity like *Varnaprasadan*. In the component of oral preparation *Katuki–Sariba yoga*. *Katuki* carries the *rasa Katu* and *Tikta* contains the *guna Laghu*, *Ruksma* & *Tiksna* and having the *Virya Sita*. It performs the activities like *Pittarechana*, *Anuloman*, *Dipan* and *Dahahara*. The second oral composition of *yoga* i.e., *Sariba* carries the *rasa Madhur*, contains the *guna Snigdha*, *Guru* and having the *Virya Sita*. It performs the activities like *Rakta Sodhan*, *Deepan*, *Visanasak*, *Vrano Sodhan*. So, the properties of *lepana* preparation are favouring the objective for caring and healing of the *Vyanga*. Simultaneously the preparation for internal use is a potent blood purifier, metabolic correctives, *sroto Sodhak* and ulcer healing agent.

Those 53 numbers established cases of *Vyanga* (Melasma) have been randomly categorized into three groups as per their treatment schedule where 17 Group – “A” patients were treated with only *Madhu–Manjistha lepa* twice daily morning and evening for 6 weeks. 18 numbers of Group – “B” patients were treated with *Katuki–Sariba yoga* orally 2: 1 ratio 3 gm twice daily before breakfast and evening tiffin for 6 weeks. Rest 18 number of Group – “C” patients were treated for 6 weeks with *Madhu–Manjistha lepa* twice daily and *Katuki–Sariba yoga* 3 gm twice daily as given.

The symptoms *Kandu*, *Daha*, Gross size of patches scored before treatment and after treatment according to Pargotra et. al, 2011. The MASI as per Kimbrough – Green et. al has been followed and calculated before treatment and after treatment to assess the efficacy of

the therapy over different groups. The results of therapy over Group – “A” patient have been found that *Kandu* like symptom has been relief 46%, *Daha* relief about 38% and the Gross Size of the patches (Brownish/Blackish) reduced about 42% and statistically significance found  $p < 0.02$ ,  $p < 0.05$ ,  $p < 0.01$  in *Kandu*, *Daha* and Size respectively. The MASI score has been relief 61.6% where  $p < 0.001$  means severity index reduction is highly significant in the said therapy. The effect of therapy over Group – “B” patient where only *Katuki–Sariba yoga* given orally there *Kandu* relief 79%, *Daha* relief about 54% and Gross Size of the Patches (Brownish/Blackish) about reduce 56% and those statistically significant found at  $p < 0.01$ ,  $p < 0.05$  and  $p < 0.01$  in *Kandu*, *Daha* and Size respectively. The MASI score had been reduced 73% where  $p < 0.001$  means severity index is reduced highly significant in the said therapy. The effect of therapy over Group – “C” patient where *Madhu–Manjistha* locally applied and *Katuki–Sariba yoga* given orally there *Kandu* relief 71%, *Daha* relief about 82% and Gross size of the patches (Brownish/Blackish) about 77% and which found statistically significant where  $p < 0.05$ ,  $p < 0.05$  and  $p < 0.001$  in *Kandu*, *Daha* and Size respectively. The MASI score has been reduced 83% where  $p < 0.001$  means severity index reduced significantly in the said therapy.

## CONCLUSION

The features of *Vyanga* of Ayurvedic medicine are similar to the features of Melasma. So, Melasma may be a modern correlation of *Vyanga*. *Madhu–Manjistha lepa* over face twice daily may show the curative effect over *Vyanga* (Melasma). The Melasma Area Severity Index (MASI) may reduce to 61.6% where  $p$  is highly significant ( $p < .001$ ). *Katuki–Sariba yoga* orally twice daily may show the curative effect over *Vyanga* (Melasma). The Melasma Area Severity Index (MASI) may reduce to 73.9% where  $p$  is highly significant ( $p < .001$ ). *Madhu–Manjistha lepa* local application twice daily and *Katuki–Sariba yoga* orally twice daily may show the curative effect over *Vyanga* (Melasma). The Melasma Area Severity Index (MASI) may reduce to 83.9% where  $p$  is highly significant ( $p < .001$ ). So, only

*Madhu–Manjistha lepa in local application is good, only orally Katuki–Sariba yoga is better and Madhu–Manjistha lepa and Katuki–Sariba yoga in combination is the best regimen for the management of Vyanga (Melasma).*

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