



## Research Article

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### MANAGEMENT OF VYANGA WITH HERBAL FORMULATION: A CLINICAL STUDY

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#### ABSTRACT

Vyanga (Melasma) is a condition of localized hypermelanosis which affects face, and continues to be a challenging problem as it causes immense mental stress and depression. Although various products are available in the market for the management of Vyanga, they have some adverse side effects, particularly towards pregnant and lactating mothers. Their prolong use in other normal persons also leaves side effects. Therefore there is a need to look for more efficacious agents with lesser side effects. In the Ayurvedic classics there was mention of Vyanga which was described under kshudra roga of twaka roga which can be compared with today's melasma. It was found that a huge number of herbal medicines as well as shastra karma were described in classics for treatment of Vyanga. Among the herbs, I selected Manjistha (*Rubia cordifolia*) and Arjuna (*Terminalia arjuna*) as my drug of choice. The clinical efficacy of the combination was evaluated in 100 patients of Vyanga. Improvement was assessed on the basis of classical sign and symptoms as per pre-defined scores, laboratory investigations and photographs. The improvements in various subjective sign and symptoms were evaluated in terms of percentage improvement. In the study 98% patients got complete improvement in subjective parameters by the use of Manjistha (*Rubia cordifolia*) along with Arjuna (*Terminalia arjuna*) in both ointment and tablet form.

**Keywords:** Twaka roga, Melasma, Manjistha, Arjuna.

#### INTRODUCTION

Beauty is that quality or combination of qualities which afford keen pleasure to the senses or which charms the intellectual or moral faculties. Any unhealthy state of the body is reflected by the skin as beauty manifests through the complexion of the skin. Importance of beauty and personality is at its bloom in this aesthetics era as it determines the social perceptions, value judgments and interpersonal relationships. Vyanga is one such personality detriming hyper pigmentation. It is a chronic, acquired cutaneous, relapsing hypermelanosis characterized by hyperpigmented patches on the face which are exposed to the sun.

As per Āyurvedic classics Vyāṅga is a condition where in vāta pitta doṣa as well as mānāsika nidānas such as krodha, śoka, āyasa are the main culprits <sup>1,2</sup>. The symptoms of Vyanga (dark spots on face) appear abruptly without prodromal sign and symptoms <sup>6</sup>. The cardinal symptoms of Vyanga (dark spots on face), Shyava Varna (darkening of the skin), Niruja (painless), Tanu (thin) and Mandal (patch) are described by Acharya Sushruta <sup>6,7,8</sup>. Melasma should not be dismissed as simply a cosmetic entity because it often evokes emotional distress. Vyanga (dark spots on face) is locally manifested over the skin of the face.

In Ayurveda, many local applications are advocated to have better results and to eliminate the characteristic features of the Vyanga (discoloration, roughness of the skin, burning sensations, itching etc.) The methods advised for the drug application are Pralepa or Lepa (paste application)<sup>1,2,3,4,9</sup>, Siravedha (bloodletting)<sup>1,2,3,4,6,9</sup>, Abhyanga (massage)<sup>2,3,4,9</sup>, Nasya (nasal drop)<sup>2</sup>, Virechana<sup>2</sup> etc.

#### MATERIALS AND METHODS

##### Study Design

Randomized controlled study

##### Selection of Patients

For the present study clinically diagnosed cases of Vyanga were randomly selected irrespective of age, sex, religion, occupation etc. from OPD of Govt. Ayurvedic College & Hospital, Guwahati.

- The study was conducted at Govt. Ayurvedic College & Hospital, Guwahati.
- The maximum duration of treatment of patients was 60 days.
- The study was performed among 100 selected patients of Vyanga (Melasma).
- The variables are in relation to age, sex, religion, socio-economic status etc.

##### Materials

- 1) Ointment of Manjistha along with Arjuna for local application.
- 2) Tablet of mixture of Manjistha along with Arjuna in equal proportions.

##### Packaging

Packaging of the ointment was done with 50 gm ointment in a container. Tablets were packed with 100 tablets in each packet.

##### Report of analytical study

##### Organolaptic properties of tablet

Colour : Reddish brown

Shape : Round

**Physico-chemical analysis of tablet**

**Tests & Results**

Moisture content/LOD - 12.8300 %  
 Tablet ash - 14. 2900 %  
 Acid insoluble Ash - 01.0380 %  
 Disintegration time - 23 minutes (at 37°C, 30 cycle per minutes)  
 Uniformity of weight - 0.514 mg  
 Water soluble extractives - 13.7440 %  
 Alcohol soluble extractives - 2.4727 %

**Organoleptic properties of ointment**

Colour : Yellow  
 Shape : Semisolid preparation

**Physico-chemical analysis of ointment**

**Tests & Results**

Moisture content/LOD - 06.534%  
 pH - 5.60  
 Specific Gravity - 0.9696  
 Spreadability - Well

**Informed consent**

An informed written consent was taken from all selected patients for the study.

**Ethical clearance**

Ethical clearance was obtained from the Institutional Ethical Committee, Govt. Ayurvedic College, Guwahati.

**Grouping of Patients**

All the 100 patients will be kept in the same group.

**Simple random sampling**

The selection of patients for the study was done in a randomized design.

**Criteria of assessment**

Improvement from the therapy was assessed on the basis of degree of remission of sign/symptoms and reduction on clinical scoring.  
 Photographs were also taken before and after the treatment.

**Laboratory investigations**

For proper diagnosis of the causes of the disease, its assessment of severity and clinical improvement, certain routine and specific investigations were performed in some selected and suspected patients.

- Haematological: TLC, DLC, ESR, Hb%, blood group.
- Liver function test (mainly SGOT, SGPT).
- Hormone essay: T<sub>3</sub>, T<sub>4</sub>, TSH, Oestrogen, Progesterone, Prolactin.
- Serum ferritin.

**Dose**

The ointment was given to massage on the areas of pigmentation twice daily, after properly washing the face.  
 The dosage of the tablet was one tablet twice daily.

**Follow up**

A total of three follow ups were done during the 3 months course with an interval of 30 days between each follow up.

**Statistical Analysis**

All the information based on various parameters was gathered and statistical calculation was carried out in terms of mean, standard deviation and finally the results were incorporated in terms of probability. The data collected from the clinical study was analyzed by applying paired 't'-Test.

**RESULTS**

Assessment was done on the basis of specific research proforma. The data collected in the clinical study is presented in tabular form in Table 1. The observations and results obtained were analyzed statistically to evaluate the efficacy of the drug in Vyanga.

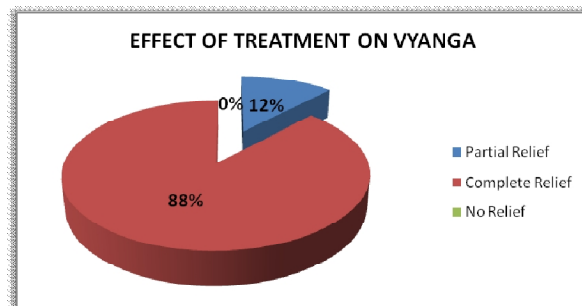
**Table 1: Observation table**

Observations (Findings)	Percentage
Age group, majority of 31-40 years	40%
Sex – female	100%
Religion – Hindu	60%
Socio-economic status – APL	70%
Occupation – service & study	59%
Family history – positive	20%
Aetiology – pregnancy	46%
Mental Status – tense	56%
Addiction – tea & betel nut	62%
Menstrual History – regular	73%
Use of OCP – use OCP	58%
Previous disease history - malaria	12%
Skin type –brown	35%

**Table 2: Effect of treatment on 100 patients of vyanga**

Result	Number of Patients	Percentage of relief
Partial Relief	12	12 %
Complete Relief	88	88 %
No Relief	0	0 %

The response of the treatment after the target period of 60 days is observed. 88% of the cases obtained complete relief due to the treatment and 12% of the total cases showed partial relief as shown in Figure 1.



**Figure 1: Effect of treatment**

**Effect of Therapy**

All study information based on various parameters was gathered and statistical calculation was carried out in terms of mean, standard deviation and t – Test as tabulated in Table 3, 4 and 5.

**Table 3: Paired sample statistics**

	Mean	N	Std. Deviation	Std. Error Mean
BT	2.26	100	.630	.063
AT	.13	100	.367	.037

BT: Before Treatment, AT: After Treatment

**Table 4: Paired samples correlation**

	N	Correlation	Sig.
<b>BT &amp; AT</b>	100	.290	.003

BT: Before Treatment, AT: After Treatment

**Table 5: Paired samples test**

	Paired Differences				T	Df	Sig. (2- tailed)	
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower				Upper
<b>BT-AT</b>	2.130	.630	.063	2.005	2.255	33.802	99	.000

BT: Before Treatment, AT: After Treatment

## DISCUSSION

The mode of action of the drug under trial can be understood on the basis of inherent properties of the drug. Arjunatwak is having Pitta Shamaka and Rakta Prasadaka properties. Kashaya Rasa of Arjunatwak encounter Pitta and Rakta Dosha removes the twak Vaivarnyata and helps to attain the normal skin color. Sheeta Veerya of Arjunatwak encounters the Pitta Dosha. Sheeta Veerya with its Prasadana property purifies the accumulated Doshas in Vyanga. The Rakta Prasadaka and Twak Prasadaka actions of Arjuna (*Terminalia arjuna*) help in pacifying the Sanchita Doshas locally.

Kasaya and Madhura rasa of Manjistha (*Rubia cordifolia*) subdues the Pitta which is the main cause of the disease. Ruksha guna of Manjistha (*Rubia cordifolia*) alleviates the Snigdha guna of Pitta. Guru guna of Manjistha subdues the Laghu guna of Vata. So, both guna break the samprapti of Vyanga. Again Manjistha is having Rakta sodhak, Kusthaghna and Varnya property by which possibly significant efficacy is observed.

Finally, it can be concluded that Manjistha (*Rubia cordifolia*) along with Arjuna (*Terminalia arjuna*) is significant in management of Vyanga (Melasma).

## CONCLUSION

100 patients were studied in the trial and maximum of the patients were found to be in between the age groups of 16-35 years. Majority of these patients were from the Hindu community and females of APL (above poverty line) who used to stay more time exposed to the sun either for service or study purpose.

Almost all cases manifested the classical signs and symptoms of Vyanga (Melasma).

Both the drugs Manjistha (*Rubia cordifolia*) along with Arjuna (*Terminalia arjuna*) has been found to be significant in the management of Vyanga through Manjistha's Rakta sodhak, Kusthaghna and Varnya property and Arjuna's Rakta Prasadaka and Twak Prasadaka property.

Finally it can be concluded that Manjistha (*Rubia cordifolia*) along with Arjuna (*Terminalia arjuna*) is very much effective in management of Vyanga.

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