International Journal of Trend in Scientific Research and Development (IJTSRD)
Volume 9 Issue 2, Mar-Apr 2025 Available Online: www.ijtsrd.com e-ISSN: 2456 – 6470

A Comparative Clinical Study to Evaluate the Combined Efficacy of Manjistadi Taila Nasya and Yastimadhu Taila Nasya Followed by the Arjunadi Lepa in the Management of Vyanga W. S. R to Melasma

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ABSTRACT

Vyanga or melasma is one of the skin disease of Hyperpigmentation. It's one among Kshudra Roga characterised by niruja, tanu, shyava varna mandala occurring on the face. While considering the pathogenesis of vyanga, Pitta and rakta effect each other due to ashraya ashrayi bhava along with vata causing pigmentation over face. Melasma is asymptomatic, Acquired chronic condition with hyperpigmented macular lesion that develops, slowly over the, Cheeks, nose, forehead, chin, above lip area. Hyperpigmentation is mainly due to increased melanocyte activity in the skin. In this study Nasya with Manjistadi taila in group A and Nasya with Yastimadhu taila in Group B followed by Arjunadi Lepa. Manjista is having property of varnya & rakataprasadaka. Where as Yastimadhu being varnya & vatapittashamaka hence it brings dosha to normal state. Arjunadi lepa contain arjun twak, Manjista & Vrusha which are predominant in Kashaya rasa & being pittashamaka and raktaprasadaka in action, with these inherent properties it helps in the management of vyanga.

KEYWORDS: *Vyanga, Melasma, Nasya, Lepa, Melanin*

How to cite this paper: Dr. Poojashree | Dr. Doddabasayya | Dr. Shilpashree. K "A Comparative Clinical Study to Evaluate the Combined Efficacy of Manjistadi Taila Nasya and Yastimadhu Taila Nasya Followed by the Arjunadi Lepa in the Management of Vyanga W. S. R to Melasma" Published in International Journal of Trend in Scientific Research and Development (ijtsrd), ISSN: 2456-6470, Volume-9 | Issue-2, April 2025, pp.289-295, URL: www.ijtsrd.com/papers/ijtsrd76323.pdf

IJTSRD76323

INTRODUCTION

Beauty is a subject of Socio-medical importance. From the ancient Indian and Egyptian to present, through all cultures and through the span of centuries, mankind has been pre-occupied with youth and physical appearance. Beauty has been admired since time immemorial. The importance of Beauty and Personality is increasing now a day as it is a competitive era.

Vyanga is described under Kshudra roga[1]. It is a condition where the aggravated Vata Pitta gets localized in the Mukhapradesha causing a sign of Neeruja, Tanu, Shyava, Varnayukta mandala in general[2]. This condition of Vyanga can be correlated with Melasma. Since Melasma is commonly acquired hypermelanosis characterized by irregular light brown to gray-brown Macules involving sun-exposed areas. There is a predilection over the cheeks, forehead, upper lips, nose, and chin area. [3]

Although epidemiological studies have revealed a higher prevalence among more pigmented phenotypes such as East Asians, Indians, Koreans, and Chinese[4], it is known that Melasma occurs in all ethnic groups. A tertiary care hospital in India observed an incidence of melasma of 20. 5% among male patients[5]. When compared to men, women have melasma more frequently.

In Ayurvedic texts there is a reference of Panchakarma therapy, Such as Shiravyadha, Vamana,

virechana, Nasya and Alepa. [6] As Lepa for the Local application is more useful in skin disorders, as it directly act on lesion Corrects the bhrajaka pitta [7] here, Arjunadilepa[8] used in the study. Nasya is the unique procedure that needs to be brought to limelight. Hence approach is done in treating Nasya with Manjistadi taila[9] & Yastimadhu taila. [10]

Arjunadi lepa contain arjun twak, Manjista and Vrusha mixed with Madhu which are being predominant in kashaya rasa and being pittashamaka and rakataparasaka in action. [11, 12] Nasal Administration with Manjistadi taila &Yastimadhu Taila as Manjista having property of varnya & raktashodhaka, [13] where as yastimadhu being varnya & vatapittashamaka [14] hence it bring dosha to normal state. Considering these factors present study is undertaken to minimize the hyperpigmentation which is the typical nature of the disease. Here an attempt is estimated to make the suffer free from clinical symptoms effectively.

People today are more focused on aesthetic issues than ever before. Since Vyanga is one of these cosmetic disorders that impair a person's appearance and physical approach as well as their self-confidence and mental health, it is a problem. In light of the fact that modern aesthetic treatments are expensive and incomplete. Ayurvedic treatment becomes important for improved intervention.

AIMS & OBJECTIVES

To evaluate the combined efficacy of Manjistadi Taila Nasya and Yastimadhu Taila Nasya followed by Arjunadi Lepa in the management of Vyanga w. s. r Melasma.

METHODOLOGY

Minimum of 40 patients with clinical features of vyanga (Melasma) coming under inclusion criteria will be selected irrespective of gender, religion, socio economic ststus from OPD of Taranath Government Ayurvedic Medical College and Hospital, Ballari.

Intervention and study duration; Group A & Group B

	GROUP A		GROUP B	
PROCEDURE	**TREATMENT**	**DURATION**	**TREATMENT**	**DURATION**
PURVA KARMA	Deepana Pachana Nagarmotha churna 1-3 gm TID before food	3-5 Days	Deepana Pachana Nagarmotha churna 1-3 gm TID before food	3-5 days
	Kostashodhana with Manibhadra Guda. Dose-According to the koshta. Anupana-Ushnajala.	1 Day	Kostashodhana with Manibhadra Guda. Dose-According to the koshta. Anupana- Ushnajala.	1 Day
	Sthanika Abhyanga yastimadhutaila Followed by Sthanika bhaspa sweda.		SthanikaAbhyanga yastimadhutaila Followed by Sthanika bhaspa sweda.	
PRADHANA KARMA	8 Drops of Manjistadi taila is instilled in each nostril in morning.	7 days	6 Drops of Yastimadhu aila is instilled in each nostril in morning.	7 days
PASCHAT KARMA	Dhumapana with Haridra kanda		Dhumapana with Haridra kanda	
INTERVAL OF 7 DAYS				
PURVA KARMA	SthanikaAbhyangawith yastimadhu taila followed by Bashpa sweda.		Sthanika Abhyanga yastimadhutaila followed by Bashpa sweda.	
PRADHANA KARMA	8 Drops of Manjistadi taila is instilled in each nostril in morning.	7days	8 Drops of Yastimadhu taila is instilled in each nostril in morning	7days
PASCHAT KARMA	Dhumapana with Haridra kanda		Dhumapana with Haridra kanda	
LEPA KARMA	Arjunadi Lepa with madhu	**30** days	Arjunadi Lepa with madhu	**30** days

Lepa will be done along with Nasya karma for 30 days.

DIGNOSTIC CRITERIA:

- Subjects will be selected as per the Lakshanas of vyanga like Nirruja, tanu shyava, mukhagata mandala.

Subject presenting with symptoms of melasma i.e hyperpigmentation

INCLUSION CRITERIA:

- Subjects from age group of 20-60
- Subjects presenting with signs and symptoms of vyanga.
- Subjects who are willing to participate in the study
- Subject fit for Nasya Karma & Lepa karma.

EXCLUSION CRITERIA:

- Subject having hyperpigmentation since birth like Neavus of ota.
- Hyperpigmentation caused by tumor like malignant melanoma, addisons disease, cushing syndrome.
- Subjects with drug induced melasma.
- Vyanga along with mukhadushika.
- Subjects having any systematic disorders which interfere the course of the study.
- Subject having hypersensitive skin.

WITHDRAWL SYMPTOMS :

Patient can get withdraw from the trial anytime with the following reasons:

- If any type of side effects were observed during study.
- Personal reasons
- Unable to follow up

S. No	VARNA	SCORING
1	Normal skin colour	0
2	Light brown	1
3	Dark brown	2
4	Black	3

S. No	NUMBER OF LESION	SCORING
1	0-1	0
2	2-3	1
3	4-5	2
4	5-6	3
5	More then 6	4

OBJECTIVE CRITERIA

mMasi-Modified melasma area severity index [20]

1. Forehead (F) - 30%
2. Right malar region (MR) - 30%
3. Left malar region (ML) - 30%
4. Chin (C) - 10%

Scoring of Area (A) involved	
SCORE 0	No improvement
SCORE 1	<10%
SCORE 2	10%-29%
SCORE 3	30%-49%
SCORE 4	50%-69%
SCORE 5	70%-89%
SCORE 6	90%-100%

Scoring of Darkness (D) of Pigmentation	
SCORE 0	Absent
SCORE 1	Slight
SCORE 2	Mild
SCORE 3	Marked
SCORE 4	Severe

mMasi-forehead (0.3) (A) (D) + Left malar (0.3) (A) (D) + Right malar (0.3) (A) (D) + Chin (0.1) (A) (D)

Range:- 0-24

OBSERVATION

Distribution on the basis of Age:

In this study, In Group A maximum number of patients is 6 (30%) each are belongs to age group of 26-35 years & 36-45 years of age, 4patients (20%) each belongs to age group of 15-25 years & 46-55 years, 1patient (5%) are belong to age group of 56-65 years.

In Group B maximum no of patients is 6 (30%) belongs to age group of 26-35 years, 4 patients (20%) each are belongs to age group of 15- 25 years, & 36-45 years, 2 patients (10%) are belong to 46- 55 years, 1 patient (5%) of age 56-65years.

Distribution on the basis of Gender

In the study female patients are more in no in both the groups compared to male patients in Group A female 16 patients (80%), male 4 patients (20%), in Group B female patients 18 (90%), male patients are 2 (10%) .

Distribution on the basis of Pradhana Vedana

In this study both the groups A&B all the patients are having all symptoms 20 patients (100%) are having, tanu, niruja, shyava varnaja Mukhagata mandala.

ASSESSMENT OF TOTAL EFFECT OF INTERVENTION

EFFECT OF THERAPY ON PARAMETERS

A. Effect on Varna of the skin

GROUP -A: The mean scores of "Varna" **BT, DT & AT** values are, 2.65±0.11, 1.70±0.13 and 0.70 ±0.11 respectively.

This indicates a 36% reduction in **a p-value** (<0. 0001**),** indicating a Highly significant - **"HS"** result DT. There is 74% reduction in p-value (<0. 0001) AT

indicating Highly significant. It has been observed that there is major improvement in the varna of the skin AT.

GROUP -B: The mean scores of "Varna " **BT, DT & AT** values are, 2.30±0.13and 1.50 ±0.11 & 0.80±0.09 respectively. This indicates a **35%** reduction, a **p-value (<0. 0001),** indicating a Highly significant (**"HS"**) reduction. DT. There is 65% reduction as p value (<0. 0001), indicating Highly significant AT. It has been observed that major improvement in the varna of the skin AT compared to DT.

INTERPRETATION: Groups A and B showed statistically Highly significant results as p value (<0.0001) in the treatment of the "Varna of the skin.

IN BETWEEN GROUPS :

GROUP A - The mean scores of varna for Group A DT & AT values are 1.70±0.13& 0.70±0.11. The mean scores of Varna for group B DT & AT values are 1.50±0.11& 0.80±0.09.

This indicates 12% i.e there is no difference in p-value (=0. 2513) indicating Non significant NS DT. AT there is -14% reduction indicating p value (=0. 4780) indicating Non significant NS. between the groups.

INTERPRETATION: Varna of the skin is between the Groups A &B indicating was Non-significant.

B. Effect of therapy on "mMASI Score":

GROUP -A: The mean scores of **"mMASI Score" BT, DT & AT** values are, 15.09±0.76, 8. 48±0.61 & 2.19±0.40 respectively, This indicates a **44%** reduction in a **p-value (<0.0001)** indicating a Highly significant reduction **("HS") DT. AT** This results in a substantial **85%** reduction a **p-value (<0.001),** once again indicating a Highly significant (**"HS"**) reduction.

GROUP -B: The mean scores of "MASI Score" BT, DT & AT values are12.06±0.64, 7.47±0.49, 2.61±0.35 respectively. This indicates a **38%** reduction. In **p-value (<0.0001)** indicating a Highly significant (**"HS"**) reduction. Again **AF**, resulting in a **notable 78%** reduction. a **p-value**

INTERPRETATION : Groups A and B showed statistically Highly significant results as p value (<0.0001) in reduction of mMASI Score Value AT.

IN BETWEEN GROUPS GROUP A & B -

The mean scores of mMASI score for Group A DT & AT values are 8. 48±0.61, & 2.19±0.40. The mean scores of mMASI Score for Group B DT & AT values are 7.47±0.49, 2.61±0.35. This indicates 12% there is no difference in p- value (=0.2134) indicating Non significant NS DT, AT there is -19% indicating p value (=0.4378) indicating Nothing significant NS. between the groups once again indicating a Non significant **("NS")** reduction.

INTERPRETATION: Groups A and B showed statistically Non Significant results DT AT of the **"mMASI Score".**

C. Effect of therapy on "Number of lesions":

GROUP -A: The mean scores of **"Number of lesions" BT, DT & AT** values are, 2.60 ±0.21, 1.80±0.11 & 1.05±0.05 respectively. This indicates a **31%** reduction of **p-value (<0.0001)** indicating a Highly significant (**"HS"**) reduction DT. Again results in a substantial **60%** reduction. a **p-value (<0.001) of 0.00**, once again indicating a Highly significant (**"HS"**) reduction AT.

GROUP -B: The mean scores of **"Number of lesions" BT, DT& AT** values are, 2.95±0.21, 2.05±0.17, & 1.05±0.11 respectively. This indicates a **31%** reduction in a **p-value (<0.0001)** indicating a Highly significant (**"HS"**) reduction DT. **AT**, resulting in a **notable 64%** reduction in a **p-value (<0.0001) of 0. 00,** once again indicating a Highly significant (**"HS"**) reduction.

INTERPRETATION: Groups A and B showed statistically Highly Significant results DT, AT of the reduction of **"Number of lesions ".**

IN BETWEEN GROUPS A & B

The mean scores of Number of lesions for Group A DT & AT values are 1.80±0.11 & 1.05±0.05. The mean scores of No of lesions for Group B DT & AT values are 2.05±0.17 & 1.05±0.11. This indicates -14% there is no difference in p- value (=0. 3070) indicating Non significant NS DT, AT there is 00% reduction indicating p value (=1. 0000) indicating Non significant NS. between the groups

INTERPRETATION: Groups A and B showed statistically **Non Significant** ("NS") **DT & AT.** Proves both measures are Non significant in between groups.

DISCUSSION

In this study **Nagarmotha Churna** is used for Deepana Pachana. It is having tikta, kashaya, katu rasa laghu, ruksha guna, acts as grahi, deepana pachana, kaphapittahara, rakaprasadaka, it is indicated in twak vikara.

Manibhadra Guda – as it contains vidanga, amalaki, haritaki, trivruth, and guda it is having katu, tikta rasa does deepana pachana acts as kustaghna, anulomaka and virechaka. Vidanga has Deepana pachana kustaghna properties, amalaki & haritaki acts as deepana, anulomana, trivrut & Guda acts as virechana & anulomaka.

Nasya is preffered mainly for the Urdhwajatrugata Vikara, vyanga is one of the disease occurring on face.

Group A Nasya is done with Manjistadi Taila, Group B Nasya is done with Yastimadhu Taila.

Manjistadi Taila –which contain Manjista, Madhuka, Laksha, Matulunga, Tila taila, are having kashaya, tikta, madhura rasa being pittashamaka & varnya, raktaprasadaka, rasa do the upashamana of vatapitta dosha & having Guru, snigha, laghu, ruksha gunas, Guru guna is responsible for vatashmana, snigdha guna is responsible for mardhavata and varna prasadhana where as laghu, ruksha are the properties of agneya dravya which in turn responsible for varna, prabha, prakasha.

Yastimadhu Taila – Murchana was done for taila to impart colour and aroma to the oil. Yastimadhu, Dhatriphala, Tilataila, Ksheera. Ingradients posses Snigdha, Guru slakshana, laghu, drugs are vatapittashamaka, varnya, twachya, & sthanika abhyanga and nasya karma is done by same taila

The adjacent nerves called terminal nerves which run along the olfactory are connected with limbic system of the brain including hypothalamus. This limbic system is also concerned with behavioral aspect of human beings, besides control over endocrine secretions. Thus, certain drugs administered through nose may have an impact on immediate psychological functions by acting on limbic system through olfactory nerves.

Melanocyte Stimulating Hormone produced by the Pituitary gland, (Hypothalamus) the Nasya (Lipids) through the Trans-cellular transfer as Lipophilic Dravya. In Melanocytes melanin regulates the Pigmentation Colour thus helping to remission of Hyperpigmentation (Vyanga) .

Vyanga is considered one of the Dviteeya Tvagaashrita (Lohita) Kshudraroga.

Lepakalpana is major mode of drug application on skin disease,

Arjunadi Lepa- Ingradients are Arjuna Twak, Manjista, Vasa mixed with Madhu. Arjuna mainy has Kashaya, laghu, ruksha guna & raktaprasadaka and pittashamaka property, pitta and rakta dosha are encountered by kashaya rasa as it remove twak vaivarnya so it attain normal skin colour, sheeta veerya encounter pitta dosha so twak prasadhana property of arjuna helps in doshashamana.

Drugs enter the body from romakupa further get absorbed through swedavaha srotas & siramukha leading to quicker absorption of the medicament and gives desired effects.

Bharajaka pitta is said to metabolise the drugs applied over skin, i.e it does the pachana of lepana Dravya.

Dhamani vyakarana adhyaya sushruta explains dhamanis which are urdhamukha, adhogata and tiryaggata, out of these four, each divides gradually hundred and thousands times and thus become innumerable, by these body is covered like network, their opening are attached to hair follicle through which they convey sweda & rasa supplying to the body inside & outside. These dhamanis helps in absorption of the drug to the twak.

Srotomaya purusha indicating that whole human body is porous, when medication is applied as lepa the minute particle penetrate and get absorbed in the twak, the drugs acts pertaining to its virya (active principle) and prabhava.

EFFECT ON CHEMICAL COMPOUND

Nagarmotha Churna has Myristic acid involved in post translational protein changes & control the metabolic process in human body, it also contain polyphenols, flavonol, glycoside, saponin acts as appetizer,

Chemically Manjista contain manjisthin a pupurine, along with resins, which directly acts on melanin pigment. Methanolic extract has inhibition activity on skin pigmentation. Manjista contain Anthraquinone that inhibit melanin production in skin by acting natural inhibitors of tyrosinase

Yashtimadhu Contains Glyzaglabrin, Glycyrrhizine, Licoagrone possess depigmentation properties thereby inhibiting Melanocyte Stimulating Harmones. Glyzaglabrin helps in UV protection & also helps in depigmenting capabilities. Tyrosinase is essential for skin pigmentation due to its role in melanin biosynthesis. Use of tyrosinase inhibitors is important reducing pigmentation of the skin.

Arjunadi Lepa

Polyphenols, flavonoids are the chemical constituents, These prevent the DNA damage avoiding the apoptosis activation caused by UV radiation. Preventing the formation of melanin in melanocytes, probably acting as skin lightening agents. Medium madhu has property of varnya prasadana, lekhana, sukshmamarganusarini, & being yogavahi.

Phenolic compounds like epigallotechin has role in hyperpigmentation, it target gets the new dermal cosmetics that possess the ability to maintain the skin homogeneity and has effective skin cell renewal,

elastin and collagen stimulation of excessive melanin synthesis.

RESULTS:

The data of both the groups collected w. r. t the subjective & objective parameters and analysed using appropriate statistical tests. Here the study has shown statistically highly significant results in subjective & objective parameters of both the groups, Hence overall results of Nasya with Manjistadi Taila followed by Arjunadi lepa in group A showing highly significant results with p value <0.0001, comparatively Nasya with Yastimadhu Taila followed by Arjunadi lepa showing statistically significant results in group B with p value = 0. 044.

Conclusion

Nasya & Lepa karma are selected as the treatment procedure in the study for both the groups. i.e Manjistadi Taila Nasya followed by Arjunadi Lepa in Group A & Yastimadhu taila Nasya followed by Arjunadi Lepa in Group B.

Sthanika abhyanga with yastimadhu taila, followed by nadisweda is done as poorvakarma prior to nasya, it will increases rakta prasadana and help in drug absorption and dhatu poshana it will relieve the prakupita vata and nadisweda helps in vasodilation.

Manjistadi taila being Tvachya, Raktashodhaka, Vatapittashamaka, Varnya, Kaantikaaraka, etc., It pacifies Pitta Vata and Rakta. Yastimadhu taila nasya yoga does the vatapittashamana, being tvachya, varnya.

Manjistadi taila & yastimadhu taila when administered through Naasa Reaches Shrungataka Marma (Middle Cephalic fossa of the skull consisting of meningeal vessels, paranasal sinuses, and nerves) & spreads over Murdha Pradesha, Acts on Pittaadi Dosha Sanghata and Subsides Prakupita Pitta & Vata. Arjunadi lepa kaphapitta shamaka and vranya, helps in improving skin complexion.

Assessment of overall results was highly significant in the group A (p- Value<0.0001) compared to the Statically Significant results of Group B (p- Value=0. 044) .

It is concluded that in both the groups Significant improvement in measures of outcome in the disease, in reducing the subjective and objective parameters symptoms Both Manjistadi Taila Nasya followed by Arjunadi Lepa (Group-A) and Yastimadhu Taila Nasya Followed by Arjunadi Lepa (Group-B) can be used effectively in the management of Vyanga, thus helps in doshashama increasing the cosmetic value. Assessment of overall results was highly significant in the group A compared to the results of Group B i.e Statically Significant.

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