WORLD WIDE JOURNAL OF
MULTIDISCIPLINARY RESEARCH AND
DEVELOPMENT

Deepa
PG Scholar, Department of Kriya Sharir, Institute for Ayurved Studies and Research, (Formerly known as Shri Krishna Govt. Ayurvedic College & Hospital), Kurukshetra, Haryana, India.

Manisha Khatri
Associate Professor, Department of Kriya Sharir, Institute for Ayurved Studies and Research, (Formerly known as Shri Krishna Govt. Ayurvedic College & Hospital), Kurukshetra, Haryana, India.

P.C. Mangal
Professor and Chairperson,
Department of Kriya Sharir, Institute for Ayurved Studies and Research, (Formerly known as Shri Krishna Govt. Ayurvedic College & Hospital), Kurukshetra, Haryana, India.

Correspondence:
Deepa
PG Scholar, Department of Kriya Sharir, Institute for Ayurved Studies and Research, (Formerly known as Shri Krishna Govt. Ayurvedic College & Hospital), Kurukshetra, Haryana, India.

"A Case Series: To Evaluate the *Varnya* (Skin Tone Lightening) Efficacy of *Raktchandanadi Lepa* on *Vyanga*"

Deepa, Manisha Khatri, P.C. Mangal

Abstract
Facial melanosis is a common condition affecting the texture and complexion of the skin, which is the largest organ in the human body. In a competitive society, appearance and charisma are increasingly important, and everyone aspires to stand out from the crowd. Ayurvedic dravyas have been developed to address the causation and therapy of this condition, rather than treating it symptomatically. The primary sign of Vyanga, a skin disease, is a change in facial color (Vaivarnyata), with the presence of Shyava varna, Nirujam, and Tanu Mandala on the face. Contemporary science suggests that Vyanga symptoms resemble facial melanosis. A study of 5 patients with skin problems, including Vyanga, found that patients treated with Raktchandanadi lepa and Pathyapathya were more effective in treating the condition.

Keywords: Vyanga, Facial melanosis, Skin, Raktchandanadi lepa.

Introduction
The skin is place of Sparshanendriya[1]. According to Acharya Sushruta, when shukra combines with shonita and is charged with atma, then seven layers form as creamy Layers form on milk[2]. The skin is a vital organ that represents a person's health status and purity of blood[3]. Like when we boil cream of milk it indicates the purity of milk. According to Acharya charak, it is matraja avyava[4]. Acharya Sushruta described seven layers of having specific names, thickness and associated skin disorder affecting the particular layer of skin. Vyanga Roga[5] is a disorder of 3rd layer of skin i.e., lohita[6] layer. Excess vata in the body is marked by darkness of complexion[7]. Loss of pitta results in the dullness of complexion[8]. Loss of kapha causes rukshta of the skin[9]. Acharya charak mentioned reflection of rasa dhatu is seen on Twak in context of twaksara purusha. The twaksara purusha is characterized by smooth, soft, fresh, thin, naturally glowing skin, while loma are numerous, fine, deeply rooted, soft, silky, and lustrous. A healthy twacha is characterized by happiness, wisdom, and a long life span[10]. Melasma is a pigmentary disorder caused by the skin's melanin pigment, affecting areas such as the forehead, cheeks, temples, and upper lips. It is more common in women, who are more susceptible to factors like elevated oestrogen levels, genetics, sun exposure, cosmetics, medicines, and auto-immune thyroid illness. Treatment modalities include broad spectrum sunscreen, hydroquinone, tretionin, fluorinated steroids, kojic Acid, salicylic Acid, glycolic Acid, azelaic Acid, lactic Acid, chemical peels, and laser therapy. Cosmetics play a significant role in treating hyperpigmentation as a short-term concealment tool. Vyanga, a disease described by Acharya Sushrut in Nidana Sthana chapter Kshudra Rogadhikar[10] Thus, the primary sign of Vyanga is a change in facial colour (Vaivarnyata). The presence of Shyava varna, Nirujam and Tanu Mandala[11] on the face are the primary characteristics of the Vyanga. In modern science it is characterized by a change in facial colour, with symptoms resembling facial melanosis. Total Five patients in this study were treated with Raktchandanadi lepa[12] along with Pathyapathya.

Material and Methods

This case series included 5 participants who visited the OPD of the department of Kriya Sharir, Institute for Ayurveda studies and research Umri Road, Kurukshetra with the primary history of the *Vyanga* over skin of the face. Cases evaluated initially included the history and physical examination and grading based on the MSI score. Demographic data collected as shown below in Table No. 1.1 included age, gender, and personal and medical history with duration since the onset of the condition. Pre and post assessment was done.

Case Series	Patient 1	Patient 2	Patient 3	Patient 4	Patient 5
**Table 1.1: Demographic Data of All Patients (*Vyanga*).**					
Age	36 Years	30 Years	34 Years	30 Years	33 Years
Gender	Female	Female	Female	Male	Female
Symptoms (BT)	Hyperpigmentation over skin in the last 2 year RM-8 CM, LM-7 CM NOSE 2.5 CM, Eczema, dryness over face	Hyperpigmentation over skin in the last 1 year RM-3.5 CM, LM-3.5 CM, dryness over face	Hyperpigmentation over skin for 3 years RM-8 CM, LM-8 CM NOSE 2.5 CM, Eczema occasionally, oiliness skin	Hyperpigmentation coin size macular patches over skin for 1 year RM-1.5 CM, LM-1.5 CM occasionally oiliness skin Using skin lightening creams containing steroids/ tretinoin/ hydroquinone	Hyperpigmentation coin size macular patches over skin for 8 months after delivery RM-1.5 CM, LM-1.5 CM dryness over skin

Table 1.2: Before and After treatment Data of All Patients (*Vyanga*).

Case Series	Patient 1		Patient 2		Patient 3		Patient 4		Patient 5	
	BT	AT	BT	AT	BT	AT	BT	AT	BT	AT
Melasma skin tone	F9	F6	D6	D2	B9	D6	E7	E3	E7	C1
MSI Score	35.2	8	8.8	0.8	35.2	9.4	7.2	0	19.8	0
Skin health score	16/30	7/30	13/30	9/30	13/30	8/30	10/30	6/30	11/30	5/30
Blotting paper test	– 0	– 0	++ T- zone 2	– 0	– 0	– 0	++ T- zone 2	– 0	– 0	– 0
Relief	4	3	3	1	4	3	3	2	3	1

Name of dravya, their Latin name, used part and proportion of Raktchndanadi lepa (Sharangadhara/uttara khanda/11):
1. Rakta Chandana Kandasara: Pterocarpus santalinus Linn.
2. Manjishtha Mula: Rubia cordifolia Linn.
3. Kushtha Mula: Saussurea lappa C.B.Clarke.
4. Lodhra Tvak: Symplocos racemosa Roxb.
5. Priyangu Bija: Callicapra macrophylla Vahl.
6. Vata Ankura: Ficus benghalensis Linn.
7. Masur Bija: Lens culinaris

Proportion: 1 Part each

Method of Preparation: All the drugs taken in equal quantity were cleaned properly and dried under sunlight. After complete drying of the drug, they were pulverized to make powder in Pharmacy of Institute for Ayurved Studies and Research, Kurukshetra, Haryana, Kurukshetra under the supervision of H.O.D. of Rasa shastra & Bhaishajya Kalpana. These powders were packed in air tight poly packs of 150 gm. This powder was administered to patient locally by making its thin paste with simple water/honey as per quantity sufficient (5gm), once daily for 30 days. Ahara and Vihara advised during treatment.

Name, Dose, Route, Kala, of the drug and how to apply methods are described below:
Name of the medicine: Raktchandanadi lepa
Dose: As per Quantity sufficient
Route: Local Application on face (with honey/water)
Time: Between Day time (9am-5pm)
How to apply: The Lepa was advised to apply on the face once daily; Left for 10-15 minutes and rinsed off using cold water.

Type of treatment: OPD Basis

Duration: 30 Days

Follow up: After every 15 days

Pathya: Patient was advised to, Take Green gram, rice, wheat, green vegetable, fruits, light & easily digestible diet. Adequate sleep at night (8 hours), Wash face and use soft napkin to clean face after face wash. Always cover the face when strong sun exposure & dust atmosphere.

Apathya
Patient was advised to avoid oily/spicy food/junk food/cold drinks and all such things which vitiate Rakta, Pitta and Kapha. Avoid oil base cosmetic items like; cream, lotion, face wash.

Counselling
The patient experienced psychological distress and received counselling, learning about hormonal changes and stress as common causes, and being assured it is treatable.

Assessment
A. By MSI Score assessment:
MSI - $0.4(a \times p^2)$ lm + $0.4(a \times p^2)$ rm + $0.2(a \times p^2)$ n

Where,
"a" stands for area of involvement it is calculated from 0 to 4

- None – 0
- 1/10th (lesser than equal to 10%) – 1
- More than 1/10th but < 1/3rd of the face (11-30%) – 2
- 1/3rd and 2/3rd of the face, the score becomes (60%) – 3
- More than 2/3rd (>60%) - 4

'p' stands for – score of pigmentation. The scale scores melasma from 1 (none) to 4 (severe melasma) primarily on the basis of intensity/ type of pigmentation.

- None (Not clearly visible) - 1
- Mild (Light) - 2
- Moderate (Brownish) - 3
- Maximum (Dark Black/Brown) – 4

B. Skin tone chart
C. Blotting paper

Data was observed of 5 subjects, according to questionnaire (symptoms) & MSI Score assessment. t - Test for 2 dependent means was used & p - values were calculated in analysis of association in qualitative variables by using SPSS software. [P value < 0.05] as significant whereas [P value of >0.05] was considered as non-significant. All the results were calculated by using Microsoft Excel, SPSS software. Descriptive Statistics of Subjective and Objective Parameters among Studied Subjects Showed below in Table No. 2

MSI Score			
	t-Value	*df* (n-1)	*p*-value
Paired *t*-test	-4.122334	5-1=4	0.00729
No. of Cases	5		
Blotting Paper Test			
	t-Value	*df* (n-1)	*p*-value
Paired *t*-test	-1.632993	5-1=4	0.0889
No. of Cases	5		
Relief by Skin tone chart			
	t-Value	*df* (n-1)	*p*-value
Paired *t*-test	-5.715476	5-1=4	0.00232
No. of Cases	5		

Table 2: MSI Score, Blotting Paper Test and Relief by Skin tone chart Result:

Before and After Treatment Data of all Patients (*Vyanga*) shown above in Table No. 1.2

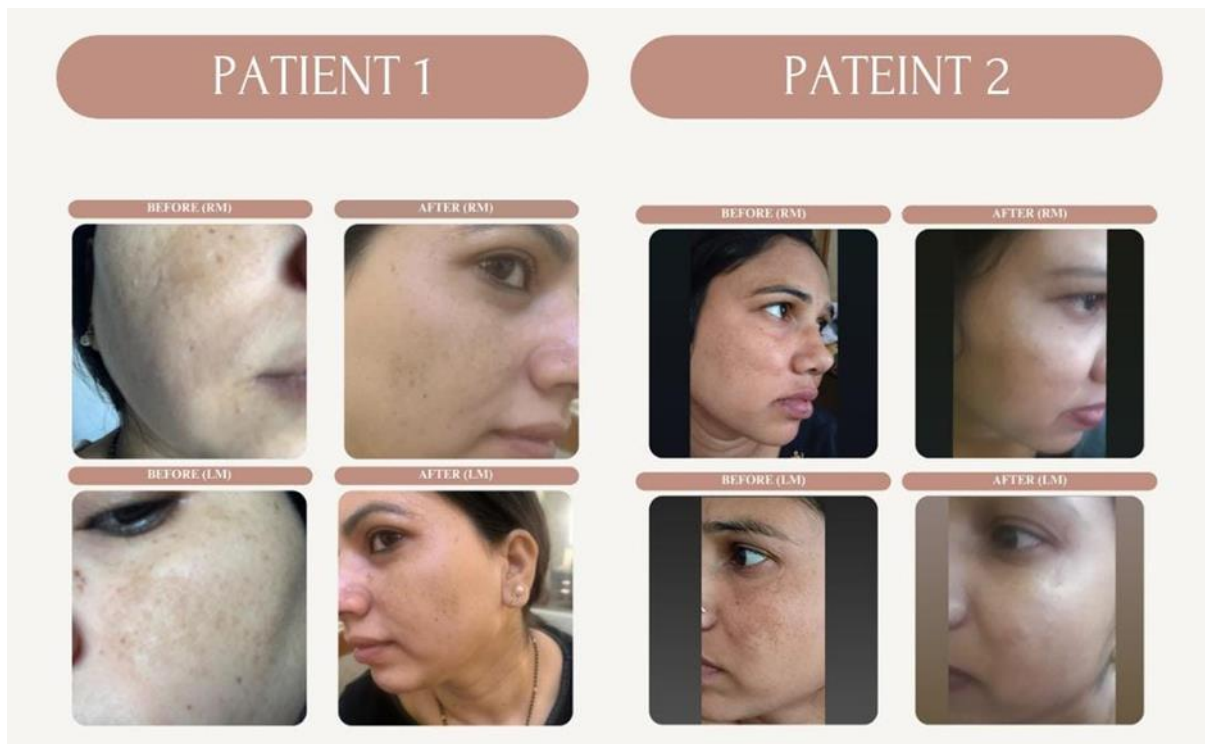Some of the recovery cases shown below in figure no. 1

Fig. 1: Relief in the signs & symptoms of *Vyanga* after treatment.

Statistically explanation of results:
MSI Score: The value of t is − 4.122334. The value of p is 0.00729. The result is significant at p < .05.
Blotting Paper Test: The value of t is −1.632993. The value of p is 0.0889. The result is significant at p > .05.
Relief by Skin tone chart: The value of t is −5.715476. The value of p is 0.00232. The result is significant at p < .05.

Discussion

The study investigates the properties of herbs, including *Varṇya* drugs, and their potential in skincare. It combines traditional *Ayurvedic* wisdom with modern biomedical insights to reveal skin lightening mechanisms, with specific herbs showing tyrosinase inhibition. The study explores plant characteristics, their physical and chemical attributes. It suggests further investigation and application of these botanical riches in skincare formulas and therapies.

Conclusion

The patients were treated with *Raktchandandi Lepa*. Drug efficacy assessment was done by relief in sign and symptoms checked by the subjective (Skin Health scores) and objective (MSI Score, Blotting Paper, Skin Tone Chart) parameters. At the end of the treatment, there is 60 percent reduction in size of *Vyanga* and relief in itching. So it showed that *Raktchandanadi lepa* is effective in *Vyanga.*

Reference

1. Shastri K, Chaturvedi GN. Charaka Samhita. Vidyotini Hindi Commentary. Varanasi: Chaukhamba Bharati Academy; 2011.Vol-1, Sharir Sthana. ch-8/10. P.177.
2. Shastri AD. Sushrut Samhita. Ayurveda Tattva Sandipika Hindi Commentary. Varanasi:Chaukhambha Sanskrit Sansthan;2011.Vol-1,Sharir Sthana. ch-4/3.P. 321.
3. Prof.K.R. Srikantha Murthy, astanga sangraha of Vagbhata Chuakhambhalnikashuna, Varanasi 2012, vol. 2 sharir sthana 5/17-page no. 62
4. Shastri K, Chaturvedi GN. Charaka Samhita. Vidyotini Hindi Commentary. Varanasi: Chaukhamba Bharati Academy; 2011.Vol-1, Sharir Sthana. ch-16. P.855.
5. Shastri AD. Sushrut Samhita. Ayurveda Tattva Sandipika Hindi Commentary. Varanasi:Chaukhambha Sanskrit Sansthan;2011.Vol-1,Sharir Sthana. ch-4/4.P. 321.
6. Shastri AD. Sushrut Samhita. Ayurveda Tattva Sandipika Hindi Commentary. Varanasi:Chaukhambha Sanskrit Sansthan;2011.Vol-1,Sharir Sthana. ch-4/4.P. 321.
7. KA Gupt. Astanga hridayam, Varanasi:Chaukhumbha Prakashana;2012, Sutra Sthana.ch-11/6.P.115.
8. KA Gupt. Astanga hridayam, Varanasi:Chaukhumbha Prakashana;2012, Sutra Sthana.ch-11/6.P.116.
9. Shastri K, Chaturvedi GN. Charaka Samhita. Vidyotini Hindi Commentary. Varanasi: Chaukhamba Bharati Academy; 2011.Vol-1, Viman Sthana. ch-8/103. P.775.
10. Shastri KA. Sushrut samhita Varanasi: Chaukhamba Sanskrit Sansthana;2003.14th Ed, sutra sthana.ch-24/9.P.116.
11. Shastri AD. Sushrut Samhita. Ayurveda Tattva Sandipika Hindi Commentary. Varanasi:Chaukhambha Sanskrit Sansthan;2007. 14th Edition, Nidana Sthana. ch- 13/9.P.101.
12. Shastri PP. Sharangadhara Samhita. Varanasi: Chaukhambha Orientalia, 2002; 5th edition. Uttara Khanda.ch-11/66.P.357.