



ISSN 2456-3110

Vol 9 · Issue 12

December 2024

Journal of  
**Ayurveda and Integrated  
Medical Sciences**

*www.jaims.in*

**JAIMS**

An International Journal for Researches in Ayurveda and Allied Sciences



**Maharshi Charaka**  
Ayurveda

**Indexed**

# Role of Leech therapy in the management of *Vyanga* w.s.r. to Melasma - A Single Case Study

Sunita Bola<sup>1</sup>, Sunita Kumari<sup>2</sup>

<sup>1,2</sup>Assistant Professor, Dept. of Panchakarma, Shekhawati Ayurved Medical College & Hospital, Pilani, Rajasthan, India.

## ABSTRACT

*Vyanga* is categorized under *Kshudra Rogas* and primarily occurs due to the vitiation of *Vata*, *Pitta*, and *Rakta*. It can be correlated with Melasma in terms of its signs and symptoms. A key feature of *Vyanga* is the presence of *Niruja*, *Tanu*, and *Shyava Varnayukta Mandala* (a type of pigmentation) on the facial area (*Mukhapradesha*). Melasma is an asymptomatic, acquired, and chronic condition characterized by hyperpigmented macules or patches that develop slowly and symmetrically on areas like the molar region, bridge of the nose, forehead, temples, and upper lips. These patches are typically dark, irregular, sometimes small, and well-demarcated. *Brhajaka Pitta*, which is responsible for skin coloration, is closely related to the complexion of the skin. Vitiating *Pitta Dosh* plays an important role in the development of Melasma. The management of this condition should focus on pacifying the aggravated *Doshas* and promoting *Raktashodhana* (blood purification or detoxification). Leech Therapy (*Jalaukavacharana*) is considered a key treatment modality, as it aids in blood purification, removes toxins, and eliminates the vitiated *Doshas* accumulated in the body. This case study presents a single patient suffering from Melasma, who was selected for the study at Shekhawati Ayurved Medical College & Hospital, Pilani. The efficacy of Leech Therapy was found to be significant, yielding positive results.

**Key words:** *Vyanga*, *Kshudraroga*, *Jalaukavacharana*, *Melasma*, *Leech Therapy*.

## INTRODUCTION

Melasma is a condition that diminishes the natural glow of the face and affects the skin, leading to cosmetic concerns. It significantly impacts a person's quality of life, particularly their emotional well-being and social interactions. This condition is more commonly observed in females than in males and holds considerable importance as a cosmetic disorder in society.

*Vyanga*, as mentioned by various Ayurvedic scholars, is

classified under *Kshudra Roga*. Acharya Charaka describes it as a *Raktadushtigata Vyadhi*<sup>[1]</sup> (disease caused by impurity of blood) in the *Trishotheya Adhyaya*.<sup>[2]</sup> Acharya Vagbhata considers *Vyanga* as a manifestation of *Rakta Vriddhi Lakshana*,<sup>[3]</sup> and Acharya Sushruta categorizes it as a *Raktaja Roga*.<sup>[4]</sup> Additionally, a separate description of *Vyanga* is found in the *Sushruta Samhita* under the chapter of *Kshudra Roga*.

*Krodhaayas Prakupito Vayuh Pitten Samyuktah: |*

*Sahasa Mukhamagatya Mandalam Visrajtyata: |*

*Nirujam Tanukam Syavam Mukhe Vyangam Tamadishet || (Su.Ni. 13/45-46)*

Acharya Sushruta explains that due to the vitiation of *Vata* and *Pitta* arising from *Krodha* (anger) and *Ayaasa* (fatigue), the doshas reach the *Mukha* (face) and cause *Vyanga*, which is characterized by *Niruja* (painless), *Tanu* (thin), and *Shyavavarna Mandalas*<sup>[5]</sup> (bluish-black patches) on the face, due to the vitiation of *Vata*, *Pitta*, and subsequently *Rakta Dosh*.

*Vyanga* can be closely correlated with hyperpigmentation, especially in the case of Melasma.

### Address for correspondence:

Dr. Sunita Bola

Assistant Professor, Dept. of Panchakarma, Shekhawati Ayurved Medical College & Hospital, Pilani, Rajasthan, India.

E-mail: sbola2012@gmail.com

Submission Date: 09/11/2024 Accepted Date: 20/12/2024

### Access this article online

Quick Response Code



Website: [www.jaims.in](http://www.jaims.in)

DOI: 10.21760/jaims.9.12.41

The patches of hyperpigmentation are predominantly found on the cheeks, nose, forehead, and chin. Melasma is a common acquired, symmetric form of hyper melanosis, characterized by light brown to dark brown macules<sup>[6]</sup> and patches, primarily in sun-exposed areas of the face. Although several etiological factors<sup>[7]</sup> are associated with Melasma, such as pregnancy, hormonal disturbances, racial predisposition, photo-toxicity, and sensitivity to certain drugs and food, the primary aggravating factor remains the exposure to sunlight.<sup>[8]</sup>

*Raktamokshana* (bloodletting) is an important therapeutic procedure for *Raktaja Rogas*.<sup>[9]</sup> Among the various methods of *Raktamokshana*, such as *Siravedha*, *Shringa*, *Alabu*, and *Jalaukavacharana*, Leech Therapy (*Jalaukavacharana*) is considered the safest and most effective methods in *Vyanga* (Melasma). In conditions of *Pitta* predominance, *Jalaukavacharana*<sup>[10]</sup> is particularly beneficial, as the leech's secretions have a *Sheeta* (Cooling) property and possess *Madhura Rasa*<sup>[11]</sup> (sweet taste), which helps to purify the blood (*Raktashodhana*), remove toxins, and alleviate the vitiated *Doshas* from the body. Therefore, Leech Therapy is highly recommended for managing diseases like Melasma, especially when localized to the affected sites.

## CASE STUDY

### Present Complaints

A 35-year-old female patient presented to the *Panchakarma* Department OPD of Shekhawati Ayurved Medical College & Hospital, Pilani, Rajasthan. She began noticing dark brown patches appearing gradually on both cheeks and the forehead without any itching or burning sensations over the past 9 months. She received allopathic treatment, but there was no significant improvement. As a result, she sought further treatment at our hospital's *Panchakarma* department.

**Past History:** No significant medical history.

**Family History:** No significant family history.

**Menstrual History:** Regular menstrual cycle.

### Personal History

**Pulse rate** - 74/minute

**Blood Pressure** - 110/70 mm of Hg

**Appetite** - Normal

**Bowel** - Clear

**Bladder** - Clear

**Sleep** - Normal

**O/E** - Dark brown coloured patches on the face.

### Astvidha Pariksha

**Nadi** - Vata - Pittaja (74/min)

**Mutra** - D-5/ N-2 Times

**Mala** - Nirama (1 time/day)

**Jihva** - Malavaritta

**Shabda** - Prakruta

**Sparsha** - Ruksha (dry, rough)

**Drik** - Samanya

**Akrati** - Madhyama

### Assessment Criteria

#### Melasma Area and Severity Index (MASI):<sup>[12]</sup>

The MASI is a commonly used system for assessing the severity of melasma, especially in clinical settings and research. It measures both the extent and intensity of pigmentation across different areas of the face. The evaluation criteria include:

- **Area of Involvement:** This is expressed as a percentage of the total facial surface, ranging from 0% to 100%.
- **Severity of Pigmentation:** The intensity of pigmentation is rated on a scale from 0 (no pigmentation) to 4 (severe pigmentation).
- **Homogeneity:** This measures the uniformity of pigmentation within the affected areas, scored from 0 to 4.

#### MASI Score Calculation:

For each facial region, the MASI score is calculated as follows:

$$MASI = 0.3 \times (DF \times HF \times AF) + 0.3 \times (DRM \times HRM \times ARM) + 0.3 \times (DLM \times HLM \times ALM) + 0.1 \times (DC \times HC \times AC)$$

Where:

D = Darkness score

H = Homogeneity score

A = Area score

F = Forehead

RM = Right Malar (Right Cheek)

LM = Left Malar (Left Cheek)

C = Chin

**Table 1: Assessment Criteria**

Parameter	Finding	Score
Severity of Pigmentation	No Visible Pigmentation	0
	Slight Pigmentation	1
	Mild Pigmentation	2
	Moderate Pigmentation	3
	Severe Pigmentation	4
Area of Involvement	No Involvement	0
	<10 % Involvement	1
	11-29% Involvement	2
	30-49% Involvement	3
	50-69% Involvement	4
	70-89% Involvement	5
	90-100 % Involvement	6
Homogeneity	Absent	0
	Slight (Specks Involvement)	1
	Mild (Small Patchy area of involvement <1.5 cm diameter)	2
	Moderate (Patches involvement > 2cm diameter)	3
	Severe (Uniform skin involvement without any clear area)	4

**Treatment Protocol**

**Procedure:** *Raktamakshana* through *Jalaukavacharana* (Leech Therapy) was performed across three sessions. In the first session, leeches were applied simultaneously to both cheeks and the forehead. The subsequent sessions were conducted at 7-day intervals.

**Quantity:** Three leeches were used in each session, applied once a week to the affected area.

**Duration:** The duration of therapy was three weeks with each session lasting for 25-30 minutes with an interval of 7 days.

**Selection of Leeches:** *Yogya Jalauka* (*Nirvisha Jalaukas*)<sup>[13]</sup> were chosen for the therapy.

**Storage of Leeches:** Collected leeches were stored in a wide, new earthen pot filled with natural tank water containing lotus. The water was changed every 2-3 days, and food was added to the pot. The earthen pot was replaced every seven days to maintain hygiene.

**Preparation of Jalauka:**<sup>[14]</sup> Leeches were coated with a paste of *Haridra* (turmeric) and then kept in clean water for one *Muhurta* (approximately 48 minutes). This process activated the leeches and alleviated exhaustion.

**Application of Procedure:** The patient’s face was thoroughly cleansed with cold water, and the treatment area was dried. The patient was positioned in a supine position, and leeches were applied directly to the cheeks and forehead. Once an adequate amount of blood was extracted, the leeches detached naturally within approximately 25 to 30 minutes. They primarily consumed impure or vitiated blood from the area.



**Leech Therapy**

**OBSERVATIONS AND RESULTS**

**Table 2: Showing the Result of Improvement**

Parameter		Before Treatment Score	After Treatment Score
<b>Severity of Pigmentation</b>	Forehead	4	1
	Right Cheek	4	2
	Left Cheek	3	1
	Chin	0	0
<b>Area of Involvement</b>	Forehead	3	1
	Right Cheek	5	2
	Left Cheek	4	2
	Chin	0	0
<b>Homogeneity</b>	Forehead	3	1
	Right Cheek	3	2
	Left Cheek	3	1
	Chin	0	0
<b>MASI Score</b>		<b>39.6</b>	<b>3.3</b>



After First Session

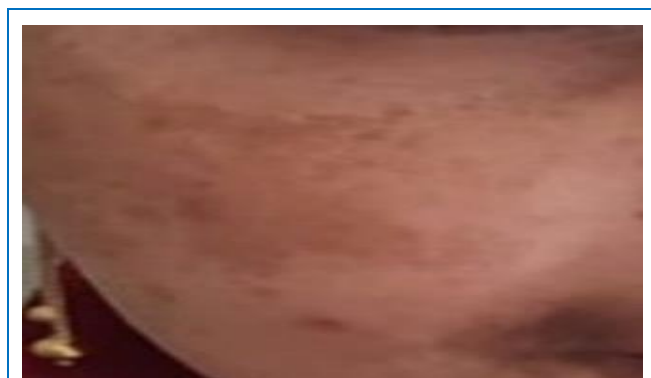


After Second Session



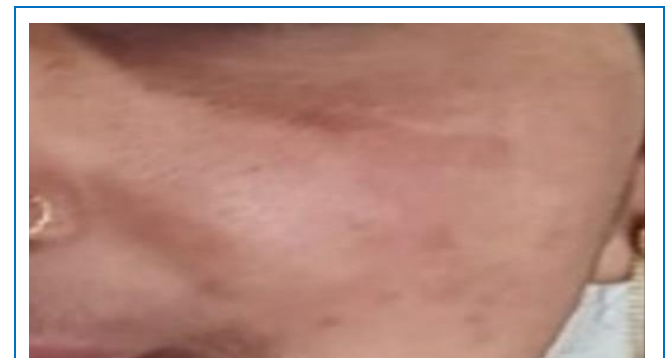
After Treatment

**Right Cheek**



Before Treatment

**Left Cheek**



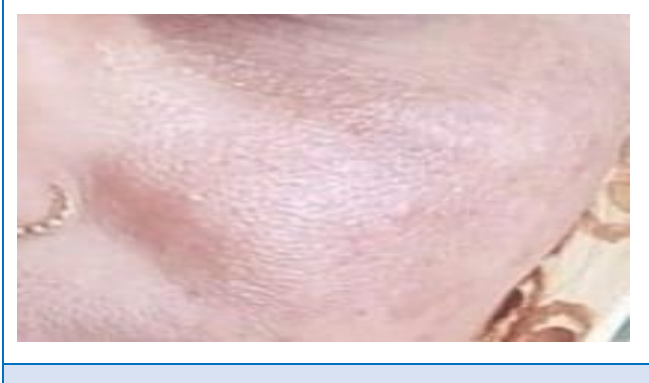
Before Treatment



After First Session



After Second Session



After Treatment



After First Session



After Second Session



After Treatment

**Forehead**



Before Treatment

After the first *Jalaukavacharana* session, mild improvement was observed in hyperpigmentation over the cheeks and forehead. By the second session, the patches started lightening in *Varna* (colour), transitioning from *Krishna Varna* (dark brown) to *Shyama Varna* (brown). After the third session, only a few patches remained on the cheeks and forehead, and the colour of Patches had turned from brown to a light brown. Post three sessions of *Jalaukavacharana*, there was a significant reduction in the MASI (Melasma Area and Severity Index) score, indicating substantial improvement in *Vyanga* (Melesma). The skin's *Prakriti*

(complexion) and *Sparsha* (texture) also improved, becoming smoother. Importantly, no adverse effects were observed throughout the treatment course.

## DISCUSSION

*Vyanga* is classified as a *Twakvikara* (skin disorder). *Twakvikaras* typically involve the vitiation of *Rasa* and *Rakta* dhatus. According to Acharya Sushruta, *Vyanga* results from the vitiation of *Vata* and *Pitta Doshas*, along with *Rakta Dosha*. Acharya Charaka has recommended *Virechana* (therapeutic purgation) and *Raktamokshana* (bloodletting) for conditions with *Pitta* predominance. Among the four types of *Raktamokshana* - *Siravedha* (venesection), *Shringa* (horn application), *Alabu* (gourd application), and *Jalaukavacharana* (leech therapy). *Jalaukavacharana* is particularly effective for conditions with *Pitta* predominance.

In the case of *Vyanga*, which involves *Pitta Dosha* vitiation and *Raktadushti* (impurities in blood), leech therapy (*Jalaukavacharana*) is highly beneficial. Leeches extract impure blood locally from the affected area, enhancing circulation and promoting healing. The removal of vitiated *Rakta* helps pacify *Pitta Dosha*, reducing discoloration and patches. Due to their *Sheeta* (cooling) nature and *Madhura Rasa* (sweet taste), leeches are especially effective for *Pitta* related disorders. Leech therapy targets superficial blood (*Avagadha Rakta*)<sup>[15]</sup> as leeches can easily access the superficial veins, removing stagnation and improving the flow of purified blood, thereby reducing local inflammation.

The therapeutic benefits of leech therapy include the removal of metabolic waste, enhanced microcirculation, and reduction of stagnant blood. The saliva of leeches contains numerous bioactive compounds with anti-inflammatory, analgesic, thrombolytic, antioxidant, vasodilatory, anticoagulant, and antibacterial properties. These constituents not only detoxify but also promote blood purification and tissue repair. Thus, leech therapy effectively pacifies *Pitta Dosha*, removes impure blood, and reduces hyperpigmentation, making it a valuable treatment for *Vyanga*.

## CONCLUSION

*Vyanga* can be clinically compared with Melasma described in ayurvedic classics and Symp toms of Melasma is patches of hyper pigmentation are seen especially on cheeks, nose, forehead and chin of light brown to dark brown colour. The Leech Therapy treatment given in three sessions with an interval of 7 days. This treatment is effective in the management of these disease. The main aim of treatment is to be pacify of *Pitta Dosha*. Leech therapy given in this case of *Vyanga* can treat vitiated *Vata* and *Pitta Dosha* and *Raktadushti*. Following the treatment, the Scoring shows a reduction in all evaluated parameters such as severity of pigmentation, area of involvement and symmetry, highlighting significant improvement. The Case study conclude that *Jalaukavacharan* (Leech Therapy) is highly effective in the treatment of *Vyanga*.

## REFERENCES

1. Sastri K, Chaturvedi GN, editors. Charaka Samhita of Agnivesha. Reprint ed. Vol. 1. Varanasi: Chaukhamba Bharati Academy; 2013. Sutra Sthana, Chapter 28, Shloka 11. p. 571.
2. Sastri K, Chaturvedi GN, editors. Charaka Samhita of Agnivesha. Reprint ed. Vol. 1. Varanasi: Chaukhamba Bharati Academy; 2013. Sutra Sthana, Chapter 18, Shloka 25. p. 379.
3. Gupta KA, editor. Astanga Hridaya with the 'Vidyotini' Hindi Commentary. 2016 ed. Varanasi: Chaukhamba Pratishtan; 2016. Sutra Sthana, Chapter 11, Shloka 9. p. 115.
4. Trikamji Y, editor. Sushruta Samhita with Nibandhasangraha. 2013 ed. Varanasi: Chaukhamba Sanskrit Sansthan; 2013. Sutra Sthana, Chapter 9, Shloka 24. p. 112.
5. Shashtri KA, editor. Sushruta Samhita of Mahrishi Sushruta. Reprint ed. Varanasi: Chaukhamba Sanskrit Sansthan; 2009. Part 1, Nidansthan, Shloka 13/45-46. p. 373.
6. Dorling Kindersley, editor. Oxford Dictionary. 80th ed. Oxford: Oxford University Press; 2007. p. 188.
7. James W, editor. Andrew's Diseases of the Skin: Clinical Dermatology. 11th ed. Chapter 36. p. 855.

8. Buxton PK. ABC of Dermatology. 4th ed. BMJ Publishing Group; 2003. p. 76.
9. Sharma AR, editor. Sushruta Samhita – ‘Sushruta Vimarshini’ Hindi Commentary. 7th ed. Vol. I. Varanasi: Chaukhamba Surbharati Prakashan; 2002. p. 560.
10. Murthi KPS, editor. Susruta Samhita – Illustrated Sushurt Samhita. Vol. I. Varanasi: Chaukhamba Orientalia; 2010. p. 82.
11. Shashtri KA, editor. Sushruta Samhita of Mahrishi Sushruta. Reprint ed. Varanasi: Chaukhamba Sanskrit Sansthan; 2009. Part 1, Sutrasthan, Shloka 13/6. p. 57.
12. Kimbrough-Green CK, et al. Journal of the American Academy of Dermatology (JAAD). 1994.
13. Shashtri KA, editor. Sushruta Samhita of Mahrishi Sushruta. Reprint ed. Varanasi: Chaukhamba Sanskrit Sansthan; 2009. Part 1, Sutrasthan, Shloka 13/13-15. p. 51.
14. Shashtri KA, editor. Sushruta Samhita of Mahrishi Sushruta. Reprint ed. Varanasi: Chaukhamba Sanskrit Sansthan; 2009. Part 1, Sutrasthan, Shloka 13/19. p. 60.
15. Shashtri KA, editor. Sushruta Samhita of Mahrishi Sushruta. Reprint ed. Varanasi: Chaukhamba Sanskrit Sansthan; 2009. Part 1, Shareer Sthana, Shloka 8/25-26. p. 92.

**How to cite this article:** Sunita Bola, Sunita Kumari. Role of Leech therapy in the management of Vyanga w.s.r. to Melasma - A Single Case Study. J Ayurveda Integr Med Sci 2024;12:301-307.

<http://dx.doi.org/10.21760/jaims.9.12.41>

**Source of Support:** Nil, **Conflict of Interest:** None declared.

\*\*\*\*\*