

Contribution of Jalaukavacharana and Ayurvedic formulation in the management of Vyanga (Melasma) - A case report

Devika Tople^{1*}, Shweta Parwe², Vaishali Kuchewar³, Milind Nisargandha⁴

¹Department of Panchakarma, Mahatma Gandhi Ayurved College Hospital and Research Centre, Wardha. Datta Meghe Institute of Health Education Research Wardha.

²Department of Panchakarma, Mahatma Gandhi Ayurved College Hospital and Research Centre, Wardha.

³Datta Meghe Institute of Health Education Research Wardha.; Department of Kayachikitsa, Mahatma Gandhi Ayurved College Hospital & Research Centre, Salod (H.), Datta Meghe Institute of Health Education Research Wardha.

⁴Saveetha Medical College and Hospital, Chennai - 602105 0000-0001-6523-4797 Saveetha Institute of Medical and Technical Sciences (DU) Chennai.

ABSTRACT

Background: One condition that causes facial skin to darken is Vyanga. Because of its aesthetic value, it stresses out the populace. Most Acharyas classify the illness Vyanga (Melasma) as a "Kshudraroga." Acharya Sushurata regarded Vyanga as a Rakta Pradoshaja Vyadhi. Classical sources provide a brief account that point to the Dushti of Vata, Pitta dosha, and Raktadhatus in developing the ailment Vyanga. In modern science, it may correlate with Melasma. Melasma is a skin condition marked by pigmented patches on parts of the face that are typically exposed to direct sunlight, such as the cheeks, forehead, nose, and upper and lower lips. Melasma is thought to be brought on by U.V. radiation from sunlight exposure.

Aim and Objective: To demonstrate the efficacy of Ayurvedic treatment in treating Vyanga symptoms and to support the potential mechanisms of action of prescription medications in Vyanga Melasma, a disorder that drastically detracts from a person's beauty and should be treated as soon as possible. According to Ayurveda, remedies with Twak & Rakta Prasadaka qualities are beneficial.

Material & Method: In a single case study, a female patient aged 45 yr had blackish patches over both cheeks with no itching for the last four months.

Result: The results for all criteria, including the number of Mandalas, Color of Mandalas, Length of Mandalas, Kandu, and Daha, are Gradually reduced with the help of the given Intervention.

Conclusion: Jalaukavacharan, ShamanaAushadhi, and topical application have shown excellent results in this Case study.

Corresponding Author e-mail: djtople1379@gmail.com

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INTRODUCTION

Beauty is a concept that predates both humankind and society. Healthy and attractive skin indicates the patient's overall fitness and health. There has been a noticeable rise in dermatological illnesses as a result of alterations in lifestyle (*Aahar, Dinacharya*, etc.), environmental disturbances, air pollution, and dust¹. Melasma is the most prevalent disease among dermatological conditions². The Greek word "melas," which signifies black, is where "melasma" first appeared³. It alludes to its tan clinical appearance. The second name for this condition is chloasma, which has similar characteristics to Melasma but is present during pregnancy and entirely goes away after delivery (derived from the Latin ethos and the Greek casein: greenish)⁴. U.V. rays, birth control pills, some phototoxic topical or systemic drugs, hormonal imbalances, cosmetics, and genetic factors are among the etiopathogenesis of Melasma. Melasma occurs in three patterns: mandibular, malar, and centruofacial, with centruofacial being the most prevalent pattern.

KEYWORDS:

Melasma,
Vyanga,
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In South East Asia, it affects 0.25 to 4% of the population overall and is most prevalent in Indians¹, with Asians and Hispanics being more susceptible than any other group⁵. Females have a more significant impact than males, which balances the ratio 4:1 in India. 50 -60% of pregnant ladies are affected by this disease. It is rarely found before puberty⁶.

It is a common pigmentary condition that manifests on the face as symmetrically hyperpigmented macules—localized, acquired hyper melanosis of the skin results from a failure in human melanogenesis⁷. Women are particularly afflicted, mainly affecting body parts exposed to the sun. In the Indian medical system, hyperpigmentation is described as the predominance of *Pitta* in the skin or blood⁸. The face, the body's most significant and attractive organ, is prone to certain anomalies at any stage of life⁹. Early physical and psychological preventative actions are necessary for both sexes because any minor illness can have a spectrum of impacts¹⁰, from an ugly appearance to lifelong damage, leading to an inferiority mentality or even social isolation¹¹. The ailment *Vyanga* concerning One of the severe conditions related to hyperpigmentation diseases¹². Melasma predominantly damages a person's radiant complexion by causing *Shyava Varna* on the face¹³. It is included in the category of *Kshudra Rogas*, which primarily results from the vitiation of *Vata*, *Pitta*, and *Rakta*¹⁴. The study assesses *Jalaukavacharan's* effectiveness in treating *Vyanga* (Melasma): The *Aashrya-Ashrayibhava* causes *Pitta* and *Rakta* to interact with one another. The *doshti* of *Pitta* or *Rakta*¹⁵ harms each other. Although the book refers to certain etiological elements like *Krodha* and *Aayas*, the appearance of the ailment is also influenced by the *Vataprakopaka*, *Pittaprakopaka*, and *Rasa*, *Raktadushtikar* nidan. The symptoms of *Vyanga* are described as *Mandala* (circle patches), *Shyava* (brown), *Tanu* (thin), *Niruja* (painless), etc., in the numerous extant Ayurvedic texts¹⁶. Melasma's clinical characteristics can be linked to *Vyanga*, and *Vyanga Chikitsa*¹⁷ can treat the condition.

Additionally, everyone values beauty because it contributes to a positive physical look and increases self-confidence. There are numerous therapeutic options for Melasma. However, using local preparations continuously might irritate the skin, and the likelihood of recurrence after stopping treatment is very high. Currently, products on the market contain hydroquinone, corticosteroids, Tretinoin, and Azelaic acid, along with methods including chemical peeling and laser therapy¹⁸. Although these treatment options are efficient, they could have unfavorable side effects, including skin sensitivity, erythema, cracking, P.I.H., and dyschromia¹⁹. Melasma disease symptoms are linked to *Vyangavyadhi* symptoms characterized as

kshrudraroga in

Ayurveda. According to *Acharya Charaka*, it is brought on by the vitiation of *pitta* and *Shonitadosha*. *Raktapradoshajvikara* is named. Even though it is listed under *Kshrudraroga* (Minor Ailments) in *Ayurveda*²⁰, it has importance among many diseases because it affects a person's appearance aesthetically. *Acharya Susruta* describes the leading causes of *Vyanga* as being *Niruja* (painless), *Tanu* (thin), and *Shavavarnamandals* (Blush Black Patches) on the face. On the other hand, *Vagbhata* claims that *Vyanga* is caused by *Krodha* and *Shoka*, which results in the vitiation of *Vata* and *Pitta* with *Rakta Dosha*²¹.

Case Report

Details of Case

A 45-year-old female reported to *Panchakarma* O.P.D. of Mahatma Gandhi Ayurved College (M.G.A.C.) Hospital and Research Centre, Salod (H), Wardha, with chief complaints of blackish patches over both cheeks with no itching but dryness. After completing the detailed history (Table.1), we learned that She had been using the topical ointment for the same condition. But nothing had changed. Then, she was planned for *Jalaukavacharana* therapy along with some *ShamanaAushadhi* and topical application. The patient was evaluated both before and following the treatment. The patient has significantly improved in black shadows, region involvement, burning, and dryness.

Disease Progression

The patient had no symptoms four months ago. Gradually, she developed patches of dark, painless skin on both cheeks. She had accompanied signs, including dryness in the impacted facial regions. The easy brownish patches were evenly spread over both cheeks for four months. She noted that the coloration pattern has not changed since then and altered, becoming steady and darker. She did a few allopathic medicines and a topical application for a month because she had seen some improvement. But when she stopped, the therapy patches grew more gloomy. Then, after all the physical examination and *Ashtavidha Pariksha* with an Ayurvedic perspective (Table.2), she was diagnosed with a *Vyanga* (Melasma) case.

Patient's History

Table 1: Information about the patient's medical history

Sr. no	Head	Details of patient
1.	History	No history of DM/HTN/Thyroid dysfunction/any other allergic illness.
2.	Family history	Not significant
3.	Medical history	Allopathic treatment and medications are taken with topical ointment. (here patient didn't have a prescription)
		No surgical history
4.	Personal history	Appetite - She used to eat a mixed diet, mostly spicy and fatty meals. 5-6 cups of tea intake every day. Reduction in appetite. Sleep - Normal Micturition - 2 to 3 times a day

		Habit - No habit of smoking, tobacco, or alcohol. Bowel - clear
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General Examination

1. Pulse - 80/min
2. B.P -110/80mmHg
3. RR -16/min
4. Temperature - 98 F
5. Weight - 58kg
6. Height - 155cm7. BMI- 24.1kg/m²

Skin Examination

- Inspection: Hyperpigmented Patches over both cheeks and forehead.
- Color: Blackish.
- Palpation: Dryness over the affected area.
- Temperature: Warmth to the touch.

Systemic examination with a Modern perspective

- C.N.S.: Well oriented
- CVS : S1 & S2 heard
- Respiratory: Air entry bilaterally equal

Agni,Aama, and Koshta of the patient.

- Agni - Mandagni
- Koshta - Mridu
- Ama - Samavastha
- Ashtavidh Pariksha (Ayurvedic)-

Table 2: AshtavidhParikshaof the patient

Sr. No	Pariksha	Observation
1.	Nadi	80/min
2.	Mootra	Samyak (3to4 times a day)
3.	Malam	Samyak (1 time a day)
4.	Jivha	Alpasaam (Slightly coated)
5.	Shabdham	Spashta
6.	Sparsham	Shitoshna
7.	Druk	Shwetabhrakta
8.	Akriti	Madhyam

Particular Test and Investigation / Assessment Criteria

1. The assessment was done based on both subjective (Table 3) and objective parameterthat is mentioned in (Table 4)
2. Area Severity Index (M.A.S.I.)²²,which assessed the

percentage of total area involved based on three variables,is mentioned (Table 5 and 6,respectively).

3. Assessment of Subjective and Objective parameters Before and After treatment is noted (Table 7 and 8, respectively).

Table 3: Assessment of subjective parameters

Sr. no.	Symptom	0	1	2	3
1.	Mukhamagatyamandalam (patches)	No patches	1 to 2 patches	3 to 4 patches	5 to 6 patches
2.	Shyavavarna (pigmentation)	No shyava varna	Mild pigmentation	Moderate pigmentation	Severe pigmentation
3.	Kandu (itching)	No kandu	Very mild itching	Mild itching	Moderate itching
4.	Parushasparsha(Dryskin)	No skin dry	Mild dry skin	Moderate dryskin	Severeskin dry

Table 4: Gradings for Assessment of Objective Parameter Percentage of Area involved

Percentage of Area involved (A)	SCORE
No involvement	0
Less than 10%	1
10-29%	2
30-49%	3
50-69%	4
70-89%	5
90-100%	6

Table 5: Area Severity Index (M.A.S.I.)Darkness (D)

	SCORE
Absent	0
Slight	1
Mild	2
Marked	3

Table 6: Area Severity Index (M.A.S.I.)Homogeneity (H)

	SCORE
Minimal	0
Slight	1
Mild	2
Marked	3

Table 7: Assessment of subjective parameters

SYMPTOMS	B/T 1 st day	On 15 th day	A/T 40 th day
<i>Mukhamaagatya Mandalam</i> (circumscribed Hyper pigmented patches on the face)	3	2	1
<i>Shyavavarna</i> (Brownish pigmentation)	3	2	1
<i>Kandu</i> (Itching)	1	0	0
<i>ParushaSparsha</i> (Dry skin)	1	0	0

Table 8: Assessment of M.A.S.I. Score

Area	Area involved		Darkness		Homogeneity		M.A.S.I. Score	
	BT	AT	BT	AT	BT	AT	BT	AT
Forehead	3	1	3	1	3	1	9	3
Right malar	3	1	3	1	3	1	9	3
Left malar	3	1	3	1	3	1	9	3
Chin	3	0	3	0	3	0	9	0
Total M.A.S.I. score							36	9

B.T.:Before Treatment. A: After Treatment.

Diagnosis: Melasma

Samprapti, a treatment protocol was planned. *Shodhana Chikitsa Jalaukavacharan* (Table.9),

Therapeutic Intervention

Shamana Aushadhi (Table.10), and topical application. The patient was followed upon the 15th and 40th days.

After evaluating all of the *Nidana*, *Dosha* involvement, inclusion and exclusion standards, and

Table 9: Shodhana Chikitsa given to the patient.

Sr. no.	Procedure	Duration
1.	<i>Jalaukavacharan</i>	On 20 th day of once.

Table 10: ShamanaChikitsa given to the patient

Aushadhi	Dose	Period	Anupana	Aushadh kala
<i>Gandhak Rasayan</i>	250mg	Twice a day	Lukewarm water	After food

<i>Mahamanjishthadikadha</i>	15ml	Twice a day	Lukewarm water	After food
<i>Aayushprabhatchurna</i>	10gm	Before bedtime	Lukewarm water	After food
Cap. Antoxid	One capsule	Before bedtime	Lukewarm water	After food
Lactogalamine	As per requirement	Twice a day	Local application	-
Kumkumaditaila	As per requirement	Twice a day	Local application	-

Result, Observation, and Outcome

After therapy was finished, the area of involvement and pigmentation showed promising results in Symptoms, and the MASI SCORE, which had been 36 on the baseline, 23 on the

15th day, then had dropped to 9 on the 40th day of follow up respectively (Table.11). Related symptoms are reduced including dryness and itching. It demonstrated that the disease *Vyanga's* subjective and objective characteristics have improved. As a result, *Jalaukavacharan* (Figure 3), the chosen therapy, is discovered to be successful in treating *Vyanga*.

Table 11: Result and Outcome (Follow-up)

SYMPTOMS	Baseline	15 th day	40 th day
<i>Mukhamaagatya Mandalam</i> (circumscribed Hyperpigmented patches on the face)	3	2	1
<i>Shyavavarna</i> (Brownish pigmentation)	3	2	1
<i>Kandu</i> (Itching)	1	0	0
<i>Parusha Sparsha</i> (Dry skin)	1	0	0
Total M.A.S.I. Score	36	23	9

DISCUSSION

The following factors contribute to *Varna Vikruti*: *Mahbhuta-Agni Dosh*- *Pitta Dosh*-type- *Bhrajaka Pitta Dhatu-Rakta*.

The four factors can all be dealt with using the same techniques because they share the same characteristics—four varieties of *Raktamokshana* (*Shira-Vedhana*, *Shringa*, *Alabu*, *Jalaukavacharan*). For every *Pitta Pradhana Vikruti*, *Jalaukavachana* is one of the four recommended options.

Therefore, *Jalaukavacharana* can cure diseases like *Vyanga* that have *Pitta Pradhana Vikruti*.

According to *Acharya Charaka*, all types of *Kushtha* (*Twakvikara*) are caused by *Tridosha*, so the treatment should be done according to the predominant *Dosha*²³. According to *Doshapredominance*, *Acharya Charaka* has advised *Snehapana* for *Vata Dosh*, *Vamana* for *Kapha Dosh*, and *Virechana* and *Raktamokshana* for *Pitta Dosh*²⁴. *Vyanga* is a *twakvikara*. *Twakvikara* usually involves *Rasa* and *Raktadushti*. *Vyanga* as per *Acharya Sushruta* consists of the vitiation of *Vata* and *Pittadosha*.

Jalaukavacharan

For *Raktadushti*, *Jalaukavacharan* was done once weekly, which removes impure blood locally from the disease site. After four sittings of leech application, the patient reported significant improvement in her symptoms. This helps in increased circulation and healing in that area. The principle of the therapy (*Jalaukavacharana*) is the removal of vitiated *Pitta* and *Rakta*, impurities, and toxins from the body through blood. *Pitta* and *Rakta* have *ushnaguna*, and leeches described by *Acharya Sushruta* have *Sheetaguna* because they live in cold

water²⁵. Leech (*Hirudomedicinalis*) has the property of discrimination of impure blood and pure blood; it sucks the impure one and leaves the site. Leech contains *Hirudin* in saliva, inhibiting blood coagulation by binding to thrombin: *Hyaluronidase*, increasing interstitial viscosity: anti-inflammatory *b-dellins*, and *Acetylcholine*, which is a vasodilator²⁶. In *Vyanga*, mainly *Pitta* and *Raktadosha* are vitiated with *Vatadosha*. *Jalaukavacharana* helps remove *Pitta* and *Raktadosha*, and obstruction caused by *Vata* and *Kaphadosha* due to which pure blood circulation over an affected site occurs. This helps in reducing the patches.

Gandhak Rasayana

Gandhak Rasayana is a potent rejuvenating compound nourishing the *dhatu*s (*Rasa*, *Rakta*, etc.) besides cleansing biological or metabolic waste. So, in this case, *Gandhakrasayan* played an essential role in nurturing *Rasa*, *Twak*, and purification of *Raktadhatu*²⁷.

Mahamanjishthadikadha

For *Rakta* and *Twakprasadana*, *Mahamanjishthadikwatha* was given, an excellent blood purifier due to the dominance of *Tikta* and *Kashayadravyas* and is an immune-modulator and anti-inflammatory as well. It eliminates excess *Pitta* from the body and also does *Vata anulomana*. It also has antioxidant and antimicrobial activity. It acts as *Rasayana*, reduces stress (an important cause of *Vyanga*), improves digestion, strengthens the liver, relieves burning, and digests toxins. It has been described as *Kushtaghna*, *Krimighna*, *Raktashodhaka*, *Varnya*, *Vishaghna* and *Vranaropaka*. Due to all these properties, it reduces *Melasma*, improves complexion, and heals the skin tissues²⁸.

Kumkumaditaila

Kumkumadi Taila contain *Kumkuma*, *Haridra*, *Darvi*, *Pippali* as *Kalka Dravya* and *Chitraka* as *KwathaDravya* along with *Taila*. All ingredients are *Katu*, *Tikta Rasatmaka*, and *Usna Viryamatka* having *Vata- Kaphahara* and *Varnya* properties²⁹. *Kumkumadi Tailam* makes skin radiant and decreases pigmentation. It acts on the epidermal inflammatory response. The chemicals in oil alter the activity of melanocytes and immune cells, which likely results in hyperpigmentation. *Kumkumadi Tailam* has an antioxidant, anti-inflammatory, and anti-hyperpigmentation effect. It is also probably to reduce the quantity of the release of melanin pigment³⁰.

Aayushprabhatchurna

For treating *Rasa dushti*, *Aayushprabhatchurna* was given, which helped relieve acidity and constipation as *Aayushprabhatchurna* is a mild laxative and acts as an antacid or *Amlapittashamaka*. It also improves digestion and thereby helps to digest and remove toxins. Being a laxative, it does

Nitya Virechana, which allows *Koshthashodhan* or mild detoxification daily. *Virechana* also helps in *Vata anulomana*. Also, it is *Pitta rechaka* means, which removes excess *Pitta* from the body, thereby helping in *pitta* or *raktaj* disorders. It stimulates the liver, which helps improve digestion and the formation of pure blood and *PrakritPitta*. All this helps reduce the patches and enhance the complexion³¹. **Cap. Antoxid:** To restore the body's antioxidants and helps provide healthy skin and its protection. To improve vision and ensure the proper functioning of skin and eyes. To reduce oxidative stress and prevent tissue damage.

CONCLUSION

Vyanga is a *Twakavikara* that is included in *Kshudraroga*. It can be treated safely and effectively with *Ayurvedic* treatment. The treatment depends upon the intensity and chronicity of the disease. Skin diseases like *Vyanga* can be effectively treated with *Shodhanachikitsa* (internal detoxification) and *Shamanachikitsa* (oral medication and external application of medicines). The oral drug, *Lepa*, and *Raktamokshana therapy* given in this case of *Vyanga* can treat vitiated *Vata* and *Pittadosha* and *Rasa* and *Raktadushti*.



Figure. 1. A. B. C

Figure 1: This figure shows the hyperpigmentation over the facial region before the treatment (A, B, and C, respectively)



Figure.2 A B

Figure 2: Procedures of *Jalaukavcharana* (A and B respectively).



Figure 3. A. B. C

Figure 3: This figure shows the improvement in pigmentation over the facial region after treatment (A, B, and C, respectively)

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