



## CLINICAL EVALUATION OF JATIPHALADI LEPA IN THE MANAGEMENT OF MUKHADUSHIKA: INSIGHTS FROM YOGARATNAKARA

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## ABSTRACT

**Background:** *Mukhadushika* (acne vulgaris) is a prevalent dermatological condition described in Ayurveda as resulting from the vitiation of *Vata*, *Kapha*, and *Rakta*. Effective management necessitates treatments with *Vata-Kapha* pacifying and *Rakta-shodhana* (blood-purifying) properties. *Jatiphaladi Lepa*, an Ayurvedic formulation, was selected for its potential to address these factors.

**Objective:** This study aimed to evaluate the efficacy of *Jatiphaladi Lepa* in managing *Mukhadushika* and its ability to restore homeostasis of *Vata*, *Kapha*, and *Rakta*.

**Materials and Methods:** A total of 60 subjects with *Mukhadushika* were divided into two groups: Group A (trial group, 30 subjects) received *Jatiphaladi Lepa* with a prescribed diet, while Group B (control group, 30 subjects) followed the diet plan alone. In Group A, *Jatiphaladi Lepa* was applied once daily for 30 days, with follow-ups every 15 days. Group B adhered only with the diet chart with similar follow-ups.

**Results:** The trial group significantly reduced symptoms, especially in managing *Yuvan Pidaka* (acne lesions). The formulation effectively restored the balance of *Vata*, *Kapha*, and *Rakta*.

Conclusion: Jatiphaladi Lepa is an effective Ayurvedic treatment for *Mukhadushika*. It offers significant improvements by addressing the condition's root causes, as described in Ayurveda.

**Keywords:** *Mukhadushika*, *Yuvan Pidaka*, *Mukha lepa*, *Jatiphaladi Lepa*, *Rakta-shodhana*, acne vulgaris, Dermatological conditions

## INTRODUCTION

*Mukhadushika* [1], classified under *Kshudra Roga* [2] in Ayurveda, is described by prominent *Acharyas* such as Vagbhata [3], Sushruta [4] and Yogaratnakara [5]. In Ayurveda, *Mukhadushika* (acne vulgaris) is described as a condition characterised by lesions resembling the thorns of the *Shalmali* (Silk Cotton tree), attributed to the vitiation of *Kapha*, *Vata*, and *Rakta doshas*. The term '*Shalmali Kantaka Prakhya*' [6] highlights the sharp, thorn-like appearance of these lesions, which predominantly manifest on the faces of adolescents, as indicated by the phrase '*Yunam Vaktre*.' This condition, commonly observed in younger individuals, aligns with the modern understanding of acne as an inflammatory skin disorder. The classical description underscores the doshic imbalance and the distinct clinical presentation, emphasising its relevance in Ayurvedic pathology and treatment approaches. *Acharya Sushruta* extensively elaborates on *Mukhadushika* in *Nidan Sthana* and *Chikitsa Sthana*, categorising it under *Kshudra Roga* [7]. In Ayurveda, acne vulgaris is often correlated with *Mukhadushika* or *Yuvan Pidika* due to similar etiopathogenesis and clinical manifestations. *Acharya Sharangadhara* describes *Yuvan Pidika* as a mala (waste product) of *Shukra Dhatu*, characterised by symptoms like *Vaktra Snigdhatta* (oily skin) [8]. Modern dermatology identifies acne vulgaris as a chronic inflammatory condition affecting the pilosebaceous units, commonly seen in over 90% of adolescents. Its onset typically occurs post-puberty due to hormonal changes, with significant physical and psychological impacts on quality of life [9]. Since *Mukhadushika* predominantly affects adolescents, it is aptly referred to as *Yuvan Pidika* in Ayurveda. *Mukhadushika* (acne vulgaris) is a prevalent condition among adolescents, impacting physical and psychological well-being. Ayurvedic texts like

*Yogaratnakara* attribute it to *Kapha*, *Vata*, and *Rakta dosha* vitiation, aligning with modern acne pathology. Conventional treatments often have limitations, including side effects and recurrence, necessitating safer alternatives. *With its dosha-balancing properties*, *Jatiphaladi Lepa* [10] shows promise in managing *Mukhadushika* yet lacks systematic clinical evaluation. This study aims to assess its efficacy and safety, offering a holistic, affordable, and sustainable therapeutic option while validating Ayurveda's relevance in modern dermatology.

### Objective:

To evaluate the clinical efficacy of *Jatiphaladi Lepa* from *Yogaratnakara* in managing *Mukhadushika* (acne vulgaris) by assessing its impact on symptomatic relief, exploring its relevance to modern dermatology, and correlating its actions with Ayurvedic principles.

### Material and Methods:

**Study Design:** The study was a randomised interventional study of patients aged 15 to 30 who presented with clinical signs and symptoms of *Mukhadushika* (acne vulgaris). Sixty subjects were enrolled and randomly divided into Trial Group A (30 patients) and Control Group B (30 patients).

### Inclusion Criteria:

- Voluntary, willing participants.
- Subjects aged between 15 and 30 years of both genders.
- Patients diagnosed with *Mukhadushika* (including chronic cases) who had not used any topical medications for at least one month before enrolment.

### Exclusion Criteria:

- Subjects unwilling to participate in the study.
- Subjects aged below 15 years or above 30 years.

- Patients with associated local skin diseases or systemic diseases like diabetes mellitus (DM) and hypertension (HTN).
- Individuals with blood coagulopathies.
- Subjects with benign or malignant growths in the body.
- Immunocompromised patients.

**Withdrawal Criteria:**

- Voluntary withdrawal by the participant, providing a valid reason.
- Serious adverse events pose a risk to the participant if the study is continued.

**Intervention:**

Trial Group A -

- It consisted of 30 subjects.
- Jatiphaladi Lepa was applied topically as part of the treatment.
- Participants were given a specific diet chart and advised on avoiding activities.
- Follow-up assessments were conducted every 15 days (two follow-ups during the study).

Control Group B -

- It consisted of 30 subjects.
- Participants were advised on dietary modifications and provided a specific diet chart emphasising a low-fat, non-oily, non-spicy, and low-salt diet.
- The following items were advised to be avoided:
- Foods: Oily, highly spicy, and salty foods.

- Beverages: Tea, coffee, cold drinks, and ice cream.
- Bakery products: Pizza, burgers, and sandwiches.
- Activities: Avoid touching or irritating pimples with fingers or nails.
- Cosmetics: Avoid using cosmetic products like face washes, soaps, and creams.

**Place of Study:** The study was conducted at the OPD and IPD facilities of the institute’s hospital.

**Duration of Treatment:** Both groups' treatment and observation period lasted 30 days.

**Follow-up:** Subjects were monitored for changes in symptoms, adverse reactions, and adherence to the prescribed interventions.

**Drug standardisation and authentication:** It was conducted at the institute’s affiliated drug research laboratory.

**Investigational Product Review:**

*Jatiphaladi lepa* formulation: *Yogaratnakara* has described that a paste prepared by mixing *Jatiphala* (*Myristica fragrans*), *Chandana* (*Santalum album*), and *Maricha* (*Piper nigrum*) destroys acne (pimples) caused by adolescence when applied as a facial treatment. This verse describes a formulation for topical application, emphasising its effectiveness in treating *Mukhadushika* (acne vulgaris), especially those arising during adolescence (*Yovanodbhava*). This formulation leverages the medicinal properties of the three ingredients to balance doshas, reduce inflammation, and enhance skin health.

**Table 1:** Characteristics and Ingredients

Ingredient	Botanical Name / Family	Useful Part	Pharmacodynamics
<i>Jatiphala</i>	<i>Myristica fragrans</i> / Myristicaceae	Seed, Seed Coat, Oil	<i>Guna:</i> Laghu, Teekshna; <i>Rasa:</i> Tikta, Katu; <i>Veerya:</i> Ushna; <i>Vipaka:</i> Katu; <i>Karma:</i> Deepana, Krimihara, Ruchikrut; Balances <i>Kapha</i> and <i>Vata Dosha</i>
<i>Chandana</i>	<i>Santalum album</i> / Santalaceae	Heartwood, Oil	<i>Guna:</i> Laghu, Sheetala; <i>Rasa:</i> Madhura, Tikta; <i>Karma:</i> Daha Prashamana, Varnya, Vishaghna, Kandughna; Balances <i>Pitta Dosha</i>
<i>Maricha</i>	<i>Piper nigrum</i> / Piperaceae	Fruit	<i>Guna:</i> Shula prashamana, Deepana, Krimighna; Balances <i>Kapha</i> and <i>Vata Dosha</i>

### Standard operating procedure (SOP) of preparation and Application of lepa:



Figure 1. Ingredients - Maricha, Jatiphala, Chandana

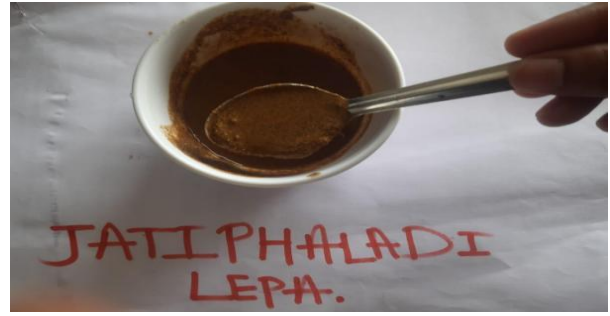


Figure 2. Jatiphala Lepa

The Standard Operating Procedure (SOP) for preparing and applying Lepa (herbal paste) ensures a consistent therapeutic approach. The process involves selecting fresh, contaminant-free herbs or clean, dry herbal powders. Fresh herbs are ground into a fine paste using a *Khalwa Yantra* (mortar and pestle) or a grinder, while dry herbs are powdered and mixed with water to achieve the desired consistency. For *Jatiphala Lepa*, ingredients like *Jatiphala* (*Myristica fragrans*), *Maricha* (*Piper nigrum*), and *Chandana* (*Santalum album*) are combined in the appropriate proportions and blended thoroughly. Before application, the skin is cleansed and dried. The Lepa is applied uniformly with the specific thickness (*Pramana*) - 1/4 of *Angula* for the *Doshaghna* effect and left on until it begins to dry, avoiding excessive cracking. It is then gently removed using lukewarm water. The *Lepa* is prepared fresh for each application or stored briefly in an airtight container if needed. Precautions include conducting a patch test to prevent allergic reactions and avoiding application on sensitive areas or open wounds. This procedure ensures the efficacy and safety of *Jatiphala Lepa* in managing *Mukhadushika* (acne vulgaris).

#### Observations and Results

**1. Shoola (Pain):** In Group A, a statistically significant reduction in *Shoola* (pain) scores was observed between the baseline (BT) and after treatment (AT) ( $p < 0.05$ ), indicating that *Jatiphala Lepa* along with a specific diet was effective in reducing pain associated with *Mukhadushika*. Similarly, Group B also demonstrated a significant reduction in *Shoola*

scores ( $p < 0.05$ ), suggesting the specific diet alone alleviated pain.

**2. Shotha (Swelling):** A significant difference ( $p < 0.05$ ) was noted between Group A and Group B in terms of mean reduction in *Shotha* (swelling) scores. This indicates that *Jatiphala Lepa* combined with diet was more effective than diet alone in reducing swelling in *Mukhadushika*.

**3. Kandu (Itching):** The mean difference in *Kandu* (itching) scores between Group A and Group B was statistically significant ( $p < 0.05$ ), demonstrating that *Jatiphala Lepa*, along with diet provided superior relief from itching compared to the specific diet alone.

**4. Srava (Discharge):** In Group A, significant improvement ( $p < 0.05$ ) was observed in *Srava* (discharge) scores between BT and AT, indicating the effectiveness of *Jatiphala Lepa* along with diet in managing this symptom. Group B also showed significant improvement ( $p < 0.05$ ), confirming the efficacy of the specific diet in reducing discharge.

**5. Daha (Burning Sensation):** In both Group A and Group B, a statistically significant reduction ( $p < 0.05$ ) in *Daha* (burning sensation) scores were observed between BT and AT. This suggests that *Jatiphala Lepa* with diet and the specific diet alone effectively alleviated burning sensation in *Mukhadushika*.

**6. Pitika Sankhya (Number of Pimples):** Both Group A and Group B exhibited a significant reduction ( $p < 0.05$ ) in the number of pimples between BT and AT. This confirms that *Jatiphala Lepa* with diet and the specific diet individually contributed to reducing pimple count in *Mukhadushika*.

**7. Vivarnata (Discolouration):** A significant difference ( $p < 0.05$ ) in the mean improvement of *Vivarnata* (discolouration) scores was noted between Group A and Group B. This indicates that *Jatiphaladi Lepa* and diet were more effective than diet alone in improving skin discolouration associated with *Mukhadushika*.

**Total Effect of therapy:**

**Table 2:** Total Effect of therapy on 30 patients from Group A

Sr. No.	Improvement	No. of Patients	Percentage
1.	Good Improvement (75% - 100%)	11	36.67 %
2.	Moderate Improvement (50% - 75%)	14	46.67 %
3.	Mild Improvement (25% - 50%)	05	16.67 %
4.	Unchanged (No Improvement) (0% - 25%)	00	00.00 %
Total		30	100%

The total effect of the therapy was assessed by calculating the percentage of symptom relief in each patient. Among the 30 patients, 11 patients (36.67%) demonstrated good improvement, 14 patients (46.67%) exhibited moderate improvement, and five patients (16.67%) showed mild improvement. All patients experienced some relief, with no individuals classified in the unchanged or no improvement category. This indicates that the therapy effectively provided varying levels of symptomatic relief across all participants.

**Table 3:** Total Effect of therapy on 30 patients from Group B

Sr. No.	Improvement	No. of Patients	Percentage
1.	Good Improvement (75% - 100%)	04	13.33 %
2.	Moderate Improvement (50% - 75%)	08	26.67 %
3.	Mild Improvement (25% - 50%)	18	60.00 %
4.	Unchanged (No Improvement) (0% - 25%)	00	00.00 %
Total		30	100%

The total effect of the therapy was evaluated based on the percentage of symptom relief in each patient. Among the 30 patients, four patients (13.33%) exhibited good improvement, eight patients (26.67%) showed moderate improvement, and 18 patients (60.00%) demonstrated mild improvement. All patients experienced some relief, with no cases observed in the unchanged or no improvement category. This highlights the effectiveness of the therapy in providing symptomatic relief across varying levels.

**Table 4:** Overall result of the two groups

Sr. No.	Symptoms	Group A	Group B
1	<i>Shoola</i> (Pain)	69.33	47.36
2	<i>Shoatha</i> (Swelling)	68.83	49.36
3	<i>Kandu</i> (Itching)	69.73	53.33
4	<i>Srava</i> (Discharge)	68.05	50.76
5	<i>Daha</i> (Burning sensation)	67.90	49.35
6	<i>Pitika Sankhya</i> (Pimples)	70.42	49.31
7	<i>Vivarnata</i>	69.44	52.94

Overall, the results suggest that while both *Jatiphaladi Lepa* with diet and diet alone effectively managed symptoms of *Mukhadushika*, the combination therapy provided superior outcomes in reducing swelling, itching, and discolouration.



Overall Result	69.10	50.3442
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In the study group treated with Group A (*Jatiphaladi Lepa* along with diet), symptoms of *Mukhadushika*, including *Shoola* (Pain), *Shotha* (Swelling), *Kandu* (Itching), *Daha* (Burning sensation), *Srava* (Discharge), *Pitika Sankhya* (Pimples), and *Vivarnata* (Discoloration), showed 50% to 75% relief. Specifically, the relief percentages were 69.33% for *Shoola*, 68.83% for *Shotha*, 69.73% for *Kandu*, 68.05% for *Srava*, 67.90% for *Daha*, 70.42% for *Pitika Sankhya*, and 69.44% for *Vivarnata*, categorising the outcomes as moderate improvement.

In group Group B (treated with a specific diet alone), *Kandu*, *Srava*, and *Vivarnata* symptoms showed 50% to 75% relief, while *Shoola*, *Shotha*, *Daha*, and *Pitika Sankhya* showed 25% to 50% relief. Relief percentages were 47.36% for *Shoola*, 49.36% for *Shotha*, 53.33% for *Kandu*, 50.76% for *Srava*, 49.35% for *Daha*, 49.31% for *Pitika Sankhya*, and 52.94% for *Vivarnata*. These outcomes were categorised into moderate and mild improvement groups.

## DISCUSSION

### Discussion on the Overall Effect of Total Effect of the Therapy:

The total effect of therapy was evaluated based on the percentage of relief observed in patients. In Group A (treated with *Jatiphaladi Lepa* along with diet), 36.67% of patients (11 out of 30) showed good im-

provement, 46.67% (14 patients) showed moderate improvement, and 16.67% (5 patients) showed mild improvement. In Group B (treated with a specific diet alone), 13.33% of patients (4 out of 30) exhibited good improvement, 26.67% (8 patients) showed moderate improvement, and 60.00% (18 patients) showed mild improvement.

For individual symptoms:

- *Shoola* (Pain): 69.33% relief in Group A and 47.36% in Group B.
- *Shotha* (Swelling): 68.83% relief in Group A and 49.36% in Group B.
- *Kandu* (Itching): 69.73% relief in Group A and 53.33% in Group B.
- *Srava* (Discharge): 68.05% relief in Group A and 50.76% in Group B.
- *Daha* (Burning sensation): 67.90% relief in Group A and 49.35% in Group B.
- *Pitika Sankhya* (Pimples): 70.42% relief in Group A and 49.31% in Group B.
- *Vivarnata* (Discoloration): 69.44% relief in Group A and 52.94% in Group B.

Patients in Group A achieved 50% to 75% relief in all *Mukhadushika* symptoms (*Shoola*, *Shotha*, *Daha*, *Kandu*, *Srava*, *Pitika Sankhya*, and *Vivarnata*). In Group B, 50% to 75% relief was observed in *Kandu*, *Srava*, and *Vivarnata*, while 25% to 50% in *Shoola*, *Shotha*, *Daha*, and *Pitika Sankhya* symptoms.



Figure 3: Application process of *Jatiphaladi lepa* (Before and After)



Figure 4: Application of *Jatiphaladi lepa* (Before and After Effect)

## CONCLUSION

*Jatiphaladi Lepa* with dietary modifications (Group A) was more effective in managing *Mukhadushika* (acne vulgaris) compared to diet alone (Group B). In Group A, 83.34% of patients showed moderate to good improvement, with symptom relief ranging from 67.90% to 70.42%. In contrast, Group B demonstrated 40% moderate to good improvement, with relief ranging from 47.36% to 53.33%. Group A consistently provided 50% to 75% relief across all symptoms, while Group B achieved similar relief only in *Kandu*, *Srava*, and *Vivarnata*. These findings support the therapeutic efficacy of *Jatiphaladi Lepa* combined with dietary modifications.

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