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A SINGLE CASE STUDY ON THE EFFICACY OF *VISHALA MOOLA LEPA* FOR LOCAL APPLICATION ON BREAST ENGORGEMENT IN *SUTIKA AVASTHA*

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ABSTRACT

Background: Breast engorgement (Stana Shotha) is a prevalent and distressing condition in the puerperium (*Sutika Avastha*), characterized by painful swelling, tension, and warmth of the breasts. It poses a significant barrier to successful lactation. Classical Ayurvedic texts recommend *Saptaparni (Alstonia scholaris)* for *Stana Pida* (breast pain). **Case Presentation:** A 26-year-old primigravida presented on her 3rd postpartum day with severe, bilateral breast engorgement. Symptoms included agonizing pain (Grade ++++), severe hardness (Grade III), marked warmth, and visible venous engorgement, causing significant distress and difficulty in breastfeeding. **Intervention:** The intervention was local application of *Vishala Moola Lepa* (*Citrullus colocynthis* a paste made from the root powder of *Vishala moola* and lukewarm water) applied over both breasts three times a day for three days. **Outcomes:** The patient reported substantial relief within 24 hours. By the third day, breast hardness had resolved to a soft consistency (Grade I), pain had completely subsided (Grade 0), and local temperature normalized. No adverse effects were observed. The patient resumed comfortable breastfeeding. **Conclusion:** This case demonstrates that *Vishala Moola Lepa* is a rapid, highly effective, and safe therapeutic modality for severe postpartum breast engorgement. *Vishala Moola Lepa* (a paste made from the root of Citrullus colocynthis) is mentioned in classical texts for its *Shothahara* (anti-inflammatory) and *Shoolahara* (analgesic) properties, making it a potential therapeutic agent for this condition. This promising result warrants further controlled clinical trials to validate these findings on a larger scale.

KEYWORDS: *Vishala Moola Lepa (Citrullus colocynthis*, Breast Engorgement, *Sutika Avastha*, Puerperium, *Lepa*.

INTRODUCTION

The puerperium, or *Sutika Avastha*, is the period of approximately six weeks following childbirth during which the mother's body reverts to its pre-pregnant state.[1] A critical aspect of this period is the establishment of lactation. Breast engorgement is a common complication, typically occurring between the second and fifth postpartum days.[2] It results from a combination of increased blood flow, lymphatics, and milk production, leading to painful swelling, tension, and warmth of the breasts.[3]

Clinically, engorged breasts are hard, tender, warm to the touch, and often exhibit prominent superficial veins. The areola may become too taut for the infant to latch onto effectively, leading to a vicious cycle of inadequate milk drainage and worsening engorgement.[4] If left unmanaged, this condition can progress to plugged ducts, mastitis (inflammation of the breast tissue), and in severe cases, a breast abscess, severely compromising maternal health and the infant's nutrition.[5]

Modern management strategies include frequent breastfeeding, cold compresses, anti-inflammatory drugs (e.g., ibuprofen), and in some cases, therapeutic ultrasound.[6] While effective, the search for natural, topical, and easily applicable alternatives is ongoing, particularly in communities with strong traditions of herbal medicine.

In Ayurveda, this condition is correlated with *Stana Shotha* or *Stana Pida* in *Sutika*. The pathogenesis involves vitiation of *Vata* and *Kapha doshas* in the *Stanyavaha Srotas* (channels carrying breast milk).[7] *Vata* vitiation causes pain (*Vedana*), while *Kapha* vitiation, along with *Srotorodha* (channel blockage), leads to swelling (*Shotha*) and hardness.[8]

Ayurveda offers a rich repository of herbal remedies for inflammatory conditions. *Vishala (Citrullus colocynthis Schrad.)* is a well-known medicinal plant, though its fruit is recognized for its strong purgative action, its root is described for external application in various *Shopha* (inflammatory swellings).[9] Classical texts like the *Sushruta Samhita* and *Bhavaprakasha Nighantu* extol the virtues of *Vishala Moola* for its *Shothahara* (anti-inflammatory), *Shoolahara* (analgesic) properties.[10,11] The formulation *Vishala Moola Lepa* (a paste made

by grinding the root with water) is specifically indicated for conditions involving pain and inflammation.

This case study aims to document the therapeutic efficacy of *Vishala Moola Lepa* as a localized treatment for breast engorgement in a postpartum woman, thereby providing evidence for a simple, cost-effective, and natural alternative from the Ayurvedic pharmacopoeia.

CASE PRESENTATION

Patient Information

- A 26-year-old primigravida presented to the OPD of *Prasuti Tantra Evum Stree Roga*, on the 3rd day following a full-term, normal vaginal delivery.

Chief Complaints

The patient reported the following symptoms, which began 24 hours prior to presentation:

- Severe, unbearable pain in both breasts.
- Extreme hardness and tightness of the breasts.
- A feeling of intense warmth over the breast tissue.
- Difficulty and pain while attempting to breastfeed her infant.

HISTORY OF PRESENT ILLNESS

- The patient had an unremarkable pregnancy and delivery.
- Lactogenesis II (the onset of copious milk secretion) commenced on postpartum day 2.
- The patient reported that the infant had been feeding infrequently and seemed unable to latch effectively, which she attributed to the increasing tension in her breasts.
- By the morning of the 3rd day, the symptoms had become severe, prompting her to seek medical attention.
- She had not taken any medication for the condition prior to the consultation.

Clinical Findings on Examination (Pre-Treatment)

- Inspection: Bilateral, symmetrical breast swelling. The skin was tense and shiny. Prominent superficial veins were visible across the chest wall. The nipples and areola were edematous but without cracks or fissures. No erythema was observed.
- Palpation: Breasts were uniformly hard, with a wooden consistency, and were very warm to the touch. Palpation elicited severe pain. No distinct, localized lumps were felt.

- Systemic Examination: The patient was afebrile (oral temperature 98.6°F). Her pulse rate was 88 beats/minute, and blood pressure was 118/76 mmHg. Other systemic examinations were within normal limits.

Ayurvedic Assessment

- *Prakriti: Vata-Kapha*
- *Agni: Manda*
- *Nadi: Vata-Kapha*
- *Jivha: Saama* (coated)
- *Mala, Mutra:* Normal

DIAGNOSIS

- Based on the clinical presentation, a diagnosis of severe postpartum breast engorgement (*Stana Shotha in Sutika Avastha*) was made.

THERAPEUTIC INTERVENTION

Drug Preparation[12,13]

- The paste (*Lepa*) was prepared fresh at the time of each application by mixing approximately 20 grams of the fine powder with lukewarm water to achieve a smooth, spreadable consistency.

Posology and Mode of Administration

- Intervention: *Vishala Moola Lepa*
- Dose: A thick layer (approximately 2-3 mm) of the paste was applied over the entire breast surface, carefully avoiding the nipples and areola.
- Frequency: Three times a day.
- Duration of Application: The paste was left in place for 30-45 minutes or until it began to dry, after which it was gently washed off with lukewarm water.
- Duration of Treatment: Three consecutive days.
- Adjunct Advice: The patient was strongly encouraged to continue breastfeeding on demand, ensuring proper latching techniques. She was also advised to apply a cold compress after feeding if discomfort persisted.

ASSESSMENT CRITERIA AND METHODOLOGY

The therapeutic response was assessed daily based on the following graded criteria, which were adapted from the parent study protocol for a single-case analysis.[14]

Grading Criteria for Breast Pain

Grade	Severity	Symptom Signs
0	No pain	None
+	Mild	Discomfort only during movement or feeding
++	Moderate	Continuous, existing pain at rest
+++	Severe	Restless and wakes up at night due to pain
++++	Agonizing	Unbearable pain, causing significant distress

Grading Criteria for Breast Hardness

Grade	Severity	Description
1	Soft	Normal, pliable breast tissue
2	Mild	Firm but easily compressible
3	Severe	Hard, wooden feel, difficult to compress

Local temperature was assessed subjectively as Normal, Slightly Increased, or Markedly Increased.

RESULTS

The patient was assessed before the start of treatment (Baseline) and then daily for three days.

Clinical Outcomes Following Saptaparni Moola Lepa Application

Assessment Day	Breast Hardness (Grade)	Breast Pain (Grade)	Local Temperature	Clinical Remarks
Day 1 (Baseline	III (Severe)	++++ (Agonizing)	Markedly Increased	Patient in significant distress, unable to breastfeed comfortably.
Day 2 (After 3 applications)	II (Mild)	++ (Moderate)	Slightly Increased	Patient reported >50% relief. Able to breastfeed with moderate discomfort.
Day 3 (After 6 applications)	(Soft)	+ (Mild)	Normal	Breasts significantly softer. Pain only during initial latch.
Day 4 (After 9 applications)	I (Soft)	0 (None)	Normal	Complete resolution of symptoms. Patient comfortable and breastfeeding successfully.

The patient reported a cooling and soothing sensation upon application of the Lepa. She noted that the feeling of tightness began to subside after the second application. No adverse effects, such as itching, rash, or irritation, were reported at any point during the treatment.

DISCUSSION

This case study provides compelling evidence for the efficacy of *Vishala Moola Lepa* in the rapid resolution of severe postpartum breast engorgement. The intervention led to a dramatic improvement in all assessed parameters—pain, hardness, and local warmth—within a 72-hour period, enabling the patient to establish successful breastfeeding.

This case study demonstrates a remarkable and rapid resolution of severe breast engorgement following the topical application of *Vishala Moola Lepa*. The improvement began within the first 24 hours and showed a consistent, progressive decline in all measured parameters over five days.

The therapeutic action of *Vishala Moola* can be explained through the lens of Ayurvedic pharmacology. The *Shothahara* property directly counteracted the inflammatory swelling (*Shotha*) of the breast tissue. The patient's report of a "cooling sensation" aligns with the Sita effect described for the Lepa, which would have provided immediate relief from the warmth and pain. The *Shoolahara* property effectively managed the pain, which is a dominant feature of *Vata* vitiation. By reducing the swelling and pain, the Lepa indirectly facilitated the primary treatment for engorgement: effective milk removal by the infant. As the tissue softened and became less painful, the baby was able to latch more effectively, creating a positive feedback loop that resolved the underlying milk stasis.

From a modern scientific perspective, the cucurbitacin compounds present in *Citrullus colocynthis* are known to possess potent anti-inflammatory activity by inhibiting cyclooxygenase (COX) and lipoxygenase pathways, thereby reducing the production of prostaglandins and leukotrienes.[15] This would explain the reduction in erythema, warmth, and pain. The astringent and drying property of the *Tikta* and *Katu Rasa* may have helped in reducing the interstitial edema by promoting fluid reabsorption.

The absence of any adverse effects in this case is significant. It underscores the safety of topical application of *Vishala Moola*, contrasting with the known systemic toxicity of its fruit

when ingested. This makes it a viable option for nursing mothers where systemic drug absorption is a concern.

Limitations: As a single-case study, the results cannot be generalized. The placebo effect and the natural history of engorgement, which often resolves spontaneously over several days, are confounding factors. However, the rapidity and magnitude of symptom relief observed in this case, which surpassed the typical natural course, strongly suggest a specific therapeutic effect of the intervention.

The rapidity of the response observed in this case—significant relief within 24 hours and complete resolution within 72 hours—is noteworthy. It suggests that the Lepa acts not merely as a palliative cooling agent but as an active anti-inflammatory and decongestant therapy. This finding is consistent with a previous clinical study by Zurange (2009-2010), which found another herbal paste, *Nisha Kanak Moola Lepa*, effective for *Stana Peeda*, reinforcing the potential of topical Ayurvedic formulations for this condition.[16]

CONCLUSION

The present case study provides compelling preliminary evidence that *Vishala Moola Lepa* is a highly effective, safe, and well-tolerated topical treatment for postpartum breast engorgement. Its rapid action in relieving pain, reducing swelling and hardness, and facilitating comfortable breastfeeding addresses the core challenges of this condition. The therapeutic outcome aligns perfectly with the documented Ayurvedic properties of *Vishala* and finds support in modern phytochemical evidence. This case serves as a strong justification for conducting larger, controlled clinical trials to statistically validate the efficacy of this promising, natural, and non-invasive therapeutic modality for a common and distressing postpartum condition.

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