



## EFFICACY OF MRITTHIKADHI LEPA IN SHOULDER INSTABILITY- A CASE REPORT

Dr Shilpa P. N.<sup>1</sup>, Dr. Shanmugaloga S.<sup>2\*</sup>

<sup>1</sup>Professor, Department of Shalya Tantra, Government Ayurveda Medical College and Hospital, Bengaluru, Karnataka.

<sup>2</sup>Post Graduate Scholar, Department of Shalya Tantra, Government Ayurveda Medical College and Hospital, Bengaluru, Karnataka.



\*Corresponding Author: Dr. Shanmugaloga S.

Post Graduate Scholar, Department of Shalya Tantra, Government Ayurveda Medical College And Hospital, Bengaluru, Karnataka. DOI: <https://doi.org/10.5281/zenodo.18439814>



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### ABSTRACT

Shoulder instability is characterized by excessive humeral head translation within the glenoid cavity, arises from complex interactions between static stabilizers (labrum, ligament, capsule) and dynamic stabilizers (rotator cuff, scapulothoracic muscles) either due to traumatic causes or non-traumatic causes. Globally, anterior instability accounts for 95% of cases, with a 75.54/100,000 crude incidence rate (2019 data) and higher prevalence in males (88.92/100,000) <25 years engaged in collision sports. Surgery being the reserved option for recurrent cases. The case study evaluates the efficacy of *Mritthikadhi lepa* along with Panchatikta ksheerabasti for managing the shoulder instability. Results showed a significant reduction in pain, restored mobility, and improved muscle strength promoting tissue repair and anti-inflammatory effects. This approach underscores Ayurveda's potential in addressing chronic shoulder instability non-invasively offering a cost-effective alternative.

**KEYWORDS:** shoulder dislocation, shoulder instability, *mritthikadhi lepa*.

### INTRODUCTION

The shoulder joint, or glenohumeral joint, is a marvel of anatomical design, offering the widest range of motion among all joints in the human body. It is formed by the articulation of the humeral head with the shallow glenoid cavity of the scapula, supported by a complex network of muscles, ligaments, and tendons such as the rotator cuff, labrum, and deltoid.<sup>[1][2]</sup> This intricate balance between mobility and stability makes the shoulder highly susceptible to instability and dislocations, especially when its dynamic stabilizers (muscles) or static stabilizers (ligaments and capsule) are compromised. In Ayurveda, the shoulder is referred to as *Amsa Sandhi*, and conditions like instability are attributed to *Vata dosha* vitiation, leading to *shula* (pain), *shopha* (swelling), and *prasarana akunchana pravrutti sa vedhana* (impaired function).<sup>[3][4][5]</sup> Modern management of shoulder instability often involves physiotherapy, bracing, or surgical interventions targeting ligament repair or muscle strengthening. In our fast-paced world,

where advanced medical treatments often take the spotlight, the healing power of nature is sometimes overlooked. Mud therapy, also known as pelotherapy, stands as a testament to the age-old wisdom of utilizing natural elements of wellness and exploring its advantages of therapeutic properties to enhance our overall state of general health and well-being. Ayurveda emphasizes that human body is made up of *Panchamahabhutas- Agni, Vayu, Akash, Prithvi* and *Jala*.<sup>[6]</sup> Mud, being one of the five major elements, the constitution of *Prithvi* (earth) has classical references in treating *urusthambha* (muscle stiffness), *visha* (poisoning), *udavarta* (*vayu* moving in upward direction), *amavata* (rheumatoid arthritis), *rakta pradara* (haemorrhage), *raktapitta* (bleeding disorders), *shula* (pain), *shotha* (swelling), *varnya* (improve complexion). So, the explored healing effects of mud therapy in osteoarthritis<sup>[7]</sup> has inspired us to use the *mrittika* (mud) in this case.

*Mritthikadhi Lepam* offer a holistic alternative by addressing the root cause through *Vata* pacification, improving circulation, reducing inflammation (*Shotha*), and enhancing joint stability. This integrative approach not only aids in healing but also restores functional mobility effectively, making it a promising solution for shoulder instability.

### CASE DESCRIPTION

A male patient of age 24 reported at our OPD on 28<sup>th</sup> February 2025 with complaints of instability of left shoulder with mild pain and decreased tolerance for activities that stress the joint. Patient had the history of left shoulder anterior dislocation 3 years before when practising high jump. He was normal on take-off phase when after landing he suddenly developed severe pain over left shoulder with swelling. He was taken to the nearby hospital where radiography was done and found to have anterior left shoulder dislocation and reduction was performed under local anaesthesia. Patient was stable after the reduction and also there was a notable reduction in pain. He was then conservatively managed with oral NSAID and shoulder-arm sling brace for immobilisation. Patient had approached folk lore practitioner and underwent bandaging treatment (*puthoor maavu kattu*) for 25 days. From then patient was asymptomatic till 6 months. Again, on strenuous practice of high jump, he suffered from another attack of anterior left shoulder subluxation. At the field of injury, patient himself had reduced. Then he had suffered frequent subluxation up to 5 times till now, whenever got exposed to actively indulging on movements including abduction and external rotation. So, with referral by his neighbours, he visited our service. He was advised to get MRI scan done in which left shoulder joint appears normal with no e/o bony lesions and ligament tear.

### DIAGNOSIS

Here, the diagnosis of traumatic left shoulder instability with recurrent subluxation was made based on history and physical examination. Also, MRI done in which the left shoulder joint appears normal.

### Local examination

#### On inspection

Shoulders bilaterally symmetrical  
No visible wasting of muscles.  
No edema and scars

#### On palpation

Tenderness elicited at glenohumeral and coracohumeral joint of left shoulder  
Grade 2 according to VAS scale  
Temperature- normal  
No spasm / stiffness  
No swelling  
Crepitus- absent

### Range of movements

Flexion (150 – 180) and extension(40)- possible

Abduction(up to 180) - <180  
Adduction (30-40)- possible  
External rotation (80-90)- <70  
Internal rotation(80-90) – possible

**Superficial sensation** (pain, touch, pressure)-intact.

**Reflexes**(biceps, brachioradialis, triceps)-grade 2(normal).

### Special tests

- 1) Apprehension test – positive
- 2) Crank test – positive
- 3) Jober's reduction test- positive
- 4) Surprise test-positive
- 5) Fulcrum test- positive

### INTERVENTION

Treatment was planned to improve the strength and stability of left shoulder joint and restore the maximum range of movements.

- ❖ *Panchatiktaka ksheerabasti* was administered in *kalabasti* pattern(16 days).
- ❖ *Rakta mritthikadhi lepa* for 14 consecutive days.

### Method of preparation of *Rakta mritthikadhi lepa*

Red soil collected from an uncontaminated area. Sieved using a filter to remove stones and minute particles.

Red soil 50g taken and added with *Rasna churnam* 10g, eucalyptus oil 2-3 drops, honey 10ml, *nimbuswarasa* taken from 1 lemon, *pinda tailam*.

*Lepa* prepared on heating the above mixtures by adding water.

Once it becomes warm, it is applied locally.

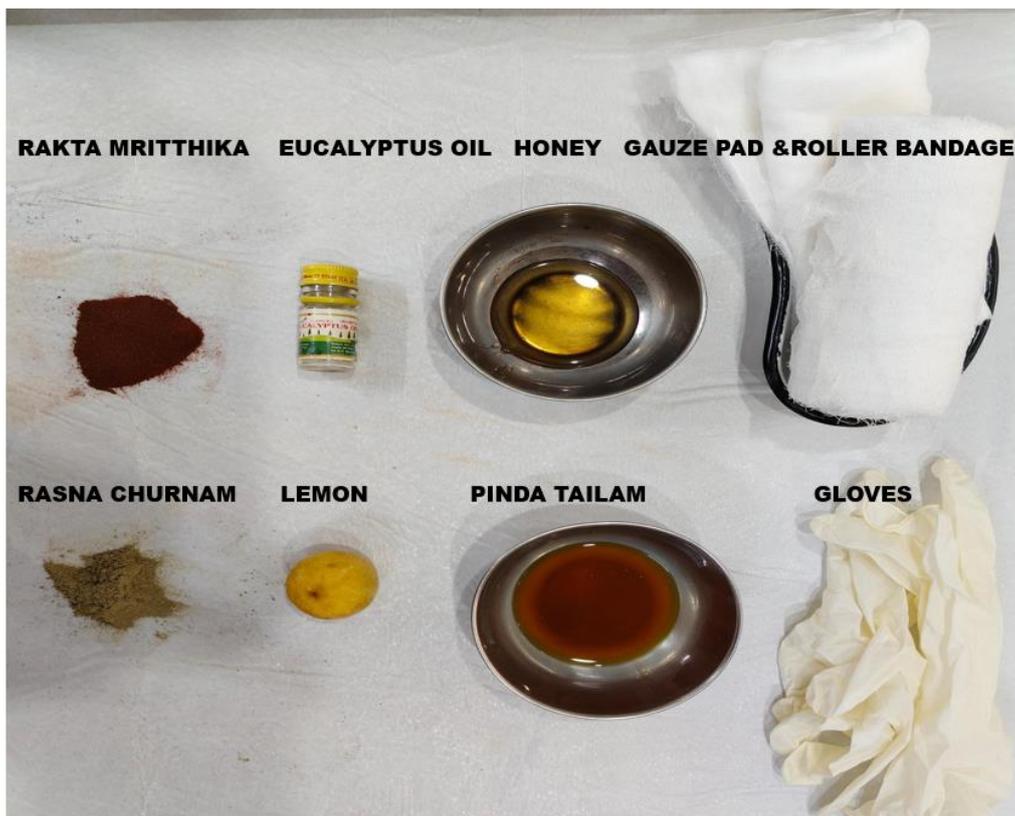


Fig 1: Ingredients of *mritthikadhi lepa*.



Fig 2: *Mritthikadhi lepa* application.

- ❖ Orally rasna erandathi kwatham 20ml before food with 30 ml of warm water and gandhataila capsules 1 bd after food was administered.

## OUTCOME

**Table 1: showing the result of the treatment.**

BEFORE TREATMENT	AFTER TREATMENT
Feeling of Instability	Feeling of instability has reduced
tenderness -grade 2	Tenderness -absent
Range of motion External rotation < 70*	Range of motion External rotation 80*
Abduction < 180*	Abduction -180*
Clinical special tests -positive	Negative

## DISCUSSION

Shoulder instability, referred to as *Amsa Sandhi Vata* in Ayurveda, is a condition characterized by pain, reduced mobility, and recurrent dislocations due to *Vata dosha* imbalance.

**Table 2: showing the chemical composition of red soil.<sup>[8]</sup>**

COMPOSITION	PERCENTAGE
Iron (Fe)	3.61%
Aluminium (Al)	2.92%
Organic matter	1.01%
Magnesium (Mg)	0.20%
Lime (CaCO <sub>3</sub> )	0.56%
Potassium (k)	0.24%

The mineral-rich clay in the formulation provides structural support to weakened ligaments, reduces swelling (*Shotha*), and alleviates pain. Additionally, its cooling nature counters the dryness and rigidity caused by *Vata* vitiation.

### Mode of action<sup>[9][10][11]</sup>

#### 1. Vata-Pacifying Action

- Red soil's cooling nature counteracts *Vata*'s inherent *Sheeta* (cold) and *Ruksha* (dry) qualities, reducing stiffness and improving joint lubrication.
- Its grounding properties stabilize excessive *Vata* movement, addressing *Sandhi Shaithilya* (ligament laxity).

#### 2. Mineral Infusion and Structural Support

- Rich in iron, magnesium, and silica, red soil may enhance collagen synthesis and ligament repair, restoring joint integrity.
- The clay's adhesive texture provides external support to weakened shoulder structures, mimicking a natural splint during healing.

#### 3. Anti-Inflammatory and Analgesic Effects

- Trace minerals in red soil inhibit inflammatory mediators, alleviating *Shula* (pain) and *Shotha* (swelling).

- Its porous structure draws out toxins (*Ama*) and excess heat (*Pitta*) from localized tissues, promoting detoxification.

#### 4. Thermal Modulation

- When applied as a paste, red soil maintains a stable temperature, enhancing blood circulation (*Rakta Dhātu*) and nutrient delivery to the joint.

These actions synergize to balance *Vata*, strengthen *Asthi Dhātu* (bone tissue), and restore functional mobility, in *Amsa Sandhi Vata*.

## CONCLUSION

*Mritthikadhi Lepam* represents a promising Ayurvedic intervention for *Amsa Sandhi Vata*, leveraging localized anti-inflammatory and stabilizing actions. While preliminary evidence from analogous therapies supports its utility, rigorous clinical studies are essential to validate its role in modern shoulder rehabilitation protocols. Integrating this therapy with lifestyle modifications (*Ahara-Vihara*) could offer a comprehensive solution for chronic instability.

## CONFLICTS OF INTEREST: Nil.

**Informed consent:** Informed written consent was taken before the treatment, provided that the images will be published for case study.

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