



## Pain Management by Herbo-Mineral Paste Application (*Manjishthadi Lepa*) in Post Traumatic Joint Disorder

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### ABSTRACT

**Background:** *Sushruta-the ancient Hindu surgeon has explained about the diagnosis and management of traumatic joint injuries and stating clearly the basic principles involved in handling these cases with the most methodical approach. Among commonly occurring traumatic skeletal disorders, fracture, sprains and strains of ankle joint and inter- phalangeal joints are more prone. In all such conditions initial complaint of patients will be pain associated with swelling with or without deformity. Sometimes it has been chronic due to improper treatment. These clinical conditions hamper the routine activities and also financial status of the individuals. Sushruta- the ancient Hindu surgeon thoroughly explains many preparations including application of Manjishthadi Lepa (herbo-mineral paste application) in the different traumatic joint injuries in his book Sushruta samhita.*

**Method:** *In this study, randomly selected 25 patients from the hospital of government Akhandanand Ayurved College, Ahmedabad-India, with diagnostic criteria of swelling, tenderness, difficulty in movements and patients with history of traumatic joint injury.*

**Results:** *Out of 25 patients, complete relief was observed in 54 %, moderate relief in 24%, mild relief in 12 % and no relief in 08 % of patients.*

**Conclusion:** *Manjishthadi Lepa (herbo-mineral paste application) was observed to be very beneficial in traumatic joint disorders like sprain, strain and hairline fracture.*

### Introduction

The dynamic sophistication of present day life styles has resulted into a manifold increase in incidences of accidents and they make traumatic injuries. The commonly occurring traumatic joint disorders are fractures, dislocations, synovitis, sprains and strains<sup>[1]</sup>. The ankle joint and inter-phalangeal joints are more prone to this and

characterized by a painful tear of ligament at joints. In all such conditions initial complaint of patients will be pain associated with swelling with or without deformity. These traumatic joint injuries appear to be simple, but are more painful and troublesome to the patient. These clinical conditions hamper the routine activities of the individuals along with disturbance in the financial

status. *Acharya Sushruta* has advocated the application of *Manjistadi lepa* in traumatic joint injuries in *chikitsa sthana* which made me to undertake this work. Previously on my pilot study Patient of tibial head hairline fracture management by *Manjishthadi lepa* excellent result in fracture healing, swelling and pain. It was found that, a very good analgesic and anti-inflammatory action. The management of such traumatic disorders varies in allied sciences like analgesics, brace, crepe, below knee cast for 2-6weeks followed by immobilization and so on<sup>[2]</sup>. At first, treatment of both sprains and strains usually involves resting the injured area, icing it, wearing a bandage or device that compresses the area and medicines. Later treatment might include exercise and physical therapy. Injuries to the soft tissues of joint require more skill in diagnosis than fracture because the lesion is not evident on the radiographs, but the risk of stiffness is even greater. The key to manage these injuries is a careful clinical assessment based upon an understanding of the anatomy and physiology of the joint involved. Injuries to the soft tissues alone may be grouped under following headings.

- 1) Contusions and cuts
- 2) Sprains / strains

- 3) Traumatic synovitis
- 4) Complete tear of soft tissues on one aspect of joint
- 5) Dislocations

In these conditions some invasive techniques have their own disadvantages like infection of the joints, post-operative problems etc. so to overcome these and to avoid such invasive and painful procedures a clinical trial was conducted at the Hospital of Government Akhandanand Ayurved College, Ahmedabad using *Manjistadi Lepa*<sup>[3]</sup>. (Medicated Paste Application)

### Aim and Objective

To evaluate the efficacy of *Manjishthadi Lepa* in traumatic joint disorders.

### Material and Methods

**Source of Data:** It is an observational study with a pre-test and post-test design conducted on 25 patients to assess the efficacy of *Manjishthadi Lepa* on traumatic joint disorders. Patients were selected from OPD and IPD of Hospital of Government Akhandanand Ayurved College, Ahmedabad, who were fulfilling the inclusion and exclusion criteria.

## Manjishthadi lep



### Lepa Drugs:<sup>[4] [5]</sup>

1. *Manjishta* (*Rubia cordifolia* - root),
2. *Raktachandana* (*Santalum rubrum* - heartwood),
3. *Yashtimadh* (*Glycyrrhiza glabra* - wood),
4. *Shali Pishti* (*Oryza sativa* - grain) and
5. *Shatadhauta Ghrta* (hundred times processed Ghee).

### Preparation of *Manjishthadi Lepa*:

The above said drugs are grinded separately and then mixed one

by one. The required quantity of powder was taken and paste was made by adding *Shatadhauta Ghrta* and used for application over the injured area. For each application fresh paste was prepared.

**Diagnostic Criteria**

Patients with history of Traumatic joint injury presenting with

- 1) Swelling
- 2) Tenderness
- 3) Colour change
- 4) Difficulty in movements

**Inclusion Criteria**

1. Patients with history of Sprains or Strains were randomly selected irrespective of age and sex.
2. Patients with subluxation were also selected.

**Exclusion Criteria**

1. Patients with dislocation of joint excluded.
2. Patients with open and displaced fracture excluded.

**Procedure of Application**

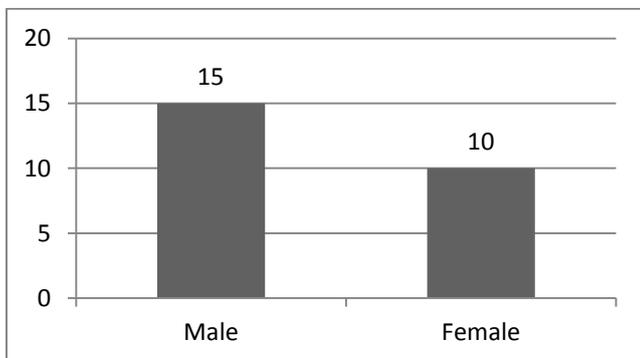
Selected patients were subjected to application of *Manjistadi Lepa* mixed with luke warm water. The thickness of *Lepa* was 1cm and removed after complete drying up of *Lepa*. This *lepa* was applied once a day for a period of 3-5 days.

**Assessment Criteria**

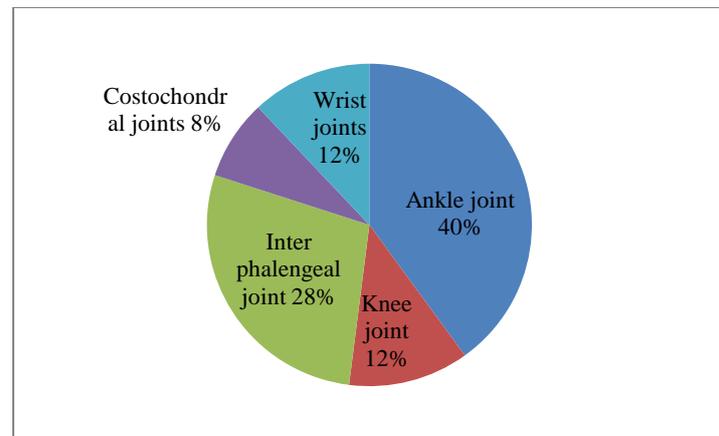
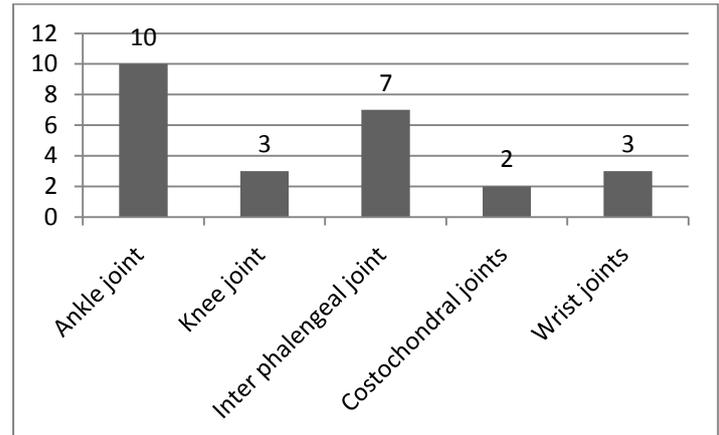
1. Pain
2. Swelling
3. Range of movements

**Observation and Results**

Sex wise distribution of Patients of Traumatized Joint Disorder:



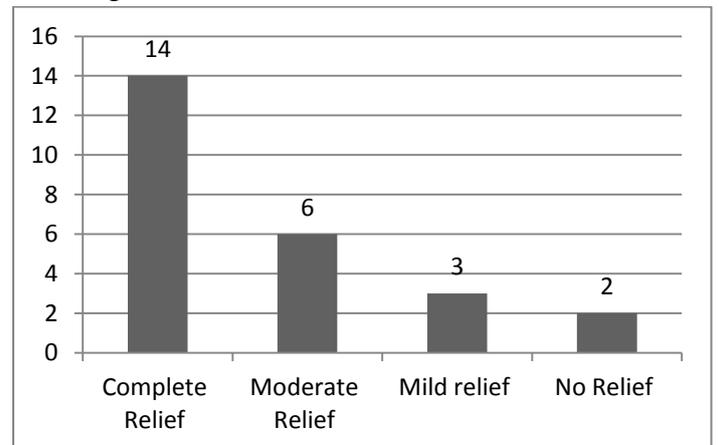
**Involvement of different joint with Traumatized Joint Disorder**



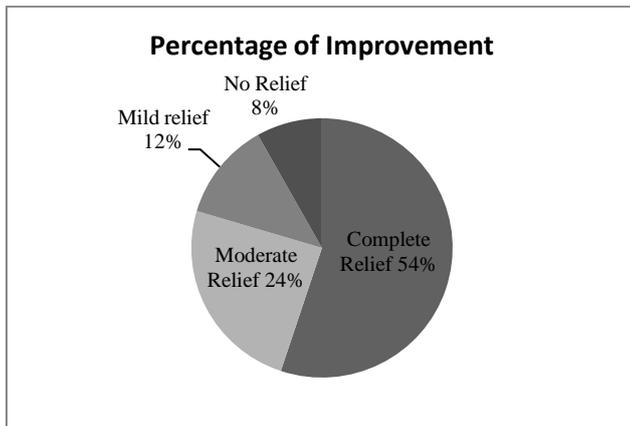
Among 25 patients of traumatized joint disorder, ankle joint was involved in 40 %, knee joint 12 %, interphalangeal 28 %, costochondral joints 08 % and wrist joint 12 % of patients.

**Total Effect of Therapy**

Showing overall effect of treatment



Out of 25 patients, complete relief was observed in 54 %, moderate relief in 24%, mild relief in 12 % and no relief in 08 % of patients.



### Probable mode of action of therapies

**Lepa:** Almost in all the patients the swelling was reduced within 24-36 hours after application of the *lepa*. This may be because; the *lepa* consists of following drugs:

**Manjishtha:** *Manjishtha* by its action it is *raktaprasadaka* and as it is having *Ushna Veerya* due to which it will dilate the peripheral vessels, especially there will be venous dilatation followed by increased peripheral arterial blood flow. This may be the reason for the reduction of the swelling around fracture area. As it is having *kapha-pitta-shamaka* property by which it will reduce the local edematous residue and its *ushna veerya* property helps to penetrate in to local tissue. The chemical composition is calcium salts, gum, resinous matter may be absorbed, by these properties it initiates for early callus formation. The swelling is the one of the reason for pain at fracture site due to pressure on peripheral sensory nerves. Where in here the reduction of the swelling and pain may be due to its *ushna* property and *madhura* rasa by which local *vata shamana* action takes place and pain is reduced.

**Yashtimadhu:** This drug is told in *Sandhaneeya gana* by *charaka*, and with *madhura* and *kashaya rasas*, it definitely enhances the bone healing. As this drug is having *Madhura* and *Snigdha* properties due to which it reduces the *Pitta* i.e. it does anti-inflammatory action locally. And also this drug, which is having the property of *Madhura Vipaka* and *guru guna* due to which it, does *vata shamana* i.e. responsible for *shoolahara*. As it is having anti-microbial properties by which it doesn't allow to grow any

microbes in the *lepa* and its chemical composition includes salts and potassium, these may also help for bone growth when it is absorbed internally.

**Shatadouta ghritha:** The *Laghu Guna* of *gritha* enhances, after it has been washed hundred times. Means it attains much *Laghutva* by its *sanskara* and becomes readily permeable in to skin by body temperature. As the molecules of *ghrita* and further reduced which is now rendered easily into the skin. The *Snigdha* and *Madhura* property of the same reduces swelling and pain. The *Snigdha guna* may also enhance the bone formation at fractured site. The fatty lobules of the absorbed *ghrita* may help for tissue repair as in case of fractures.

**Raktachandana:** Due to its *Madhura* Rasa and *Sheeta Veerya* it reduces *Sthanika daha* by which it helps to reduce pain. By *shotahara* property of this drug it will take out the edematous fluid of fractured site.

**Shalipisti:** The *Laghu Guna* makes the drug penetrate through skin very easily. The *pisti* prepared out of it will be having *Pichhila guna*, at the time the *Sheeta Veerya* and *Snigdha* property of the drug creates stickiness on the skin by which it puts a local pressure which makes the collected tissue fluid to escape out. The same drug may again absorb this. The starch content of the *Shali* gives strong support to fractured bone. Hence this may be very important drug in reducing swelling, pain and for immobilisation.

### Discussion

*Rakta Prasadana Karma* and hot potency (*Ushna Veerya*) of *Manjishtha Lepa* helps to penetrate into the local tissue that will dilate the peripheral vessels, thus resulting in venous dilation followed by increased peripheral arterial blood flow. This may be the reason for the reduction of the swelling at the affected area. The pain being the resultant of swelling which exerts pressure over the peripheral sensory nerve, the *Ushna Guna* and *Madhura Rasa* of the *Lepa dravya* probably act as *Vata Shamaka*, this results in relieving the pain. *Yastimadhu* along with *Shatadhauta Ghrita* act as *Vranaropana* and *Pitta Shamana* and *Madhura*

and *Snigdha* property act as anti-inflammatory. *Shatadhauta Ghrita* enhances tissue permeability aiding in tissue repair. The *Lepa* itself during the process of drying may cause local pressure and stiffness and the act of rest help in faster recovery.

### Conclusion

*Manjishthadi Lepa* was found to be very beneficial in traumatic joint disorders due to strain, sprain and hairline fracture. Among the various joints involved patients suffering from ankle joints responded well when compared to other joints. The drugs of *Manjishthadi Lepa* are easily available, cost effective and can be practiced in OPD level. The duration of treatment is also short, owing to the fast action of the drugs.

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