



Case Study

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BANDHANA WITH BIBHITAKPHALA MAJJA LEPA IN THE MANAGEMENT OF ANKLE SPRAIN WITH SPECIAL REFERENCE TO SPORTS INJURIES: A CASE STUDY

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ABSTRACT

Introduction: Any form of bodily harm, pain, or injury sustained when participating in sports, exercising, or engaging in any other physical activity is referred to as a sports injury. The most frequent kinds of injuries are musculoskeletal, which affect the muscles, ligaments, bones, cartilage, and related tissue. According to estimates, up to 30% of injuries encountered in sports medical clinics are sprained ankles. It is one of the most frequent injuries for athletes, dancers, sportspeople, etc. **Correlations:** In Ayurveda, gulpha marma is one among 20 sandhi marma (vital points related to joints) and one of the 8 rujakara marma according to its traumatic effect of pain the sense of distress or pain is more over here compared to other parts of the body. A sprain injury usually happens suddenly due to injury around a joint, so they can be under agantuj vyadhi. Sports Injuries can be related to abhigataj shotha or agantuj shotha, and alepa is the first upakrama in sarvasotha. **Case Study:** A 22-year-old sports person complain of pain and difficulty in movement of the right ankle joint. Before one day, his foot was twisted while playing football, and he was diagnosed with an ankle sprain (gulpha sandhi aghata) and treated with Bibhitakphala majja lepa and bandhan for 15 days. **Result:** After completion of treatment, significant relief was observed in subjective and objective criteria.

Keywords: Gulpha sandhi, Ankle sprain, Rujakara marma, Lepa, Sports injury

INTRODUCTION

A sports injury is any kind of injury, pain or physical damage that occurs due to sport, exercise or physical activity. Sprained ankles have been estimated to constitute up to 16-40% of injuries seen in sports medicine clinics.¹ Ligamentary Injury in the ankle joint is termed an ankle sprain, also known as a twisted or rolled ankle. It is among the most common injuries to sports persons, athletes, dancers, etc. The ligaments play a significant role in maintaining the stability of the rather unstable ankle joint. A partial or total rupture of the ankle joint's medial and lateral collateral ligaments is the most frequent type of injury to the ankle. Despite their seeming simplicity, these injuries cause the sufferer greater discomfort and anxiety.

Ankle Sprain in Ayurveda

In Ayurveda, the ankle joint is called gulpha. It is one among 20 sandhi marma (vital points related to joints) and one of the 8 rujakara marma² according to its traumatic effect of pain. The distress or pain will be more significant here than in other body parts. Acharya Sushruta mentioned eight rujakara marma in shareer sthana and explained ruja (pain), stabdhata (stiffness), and khanjta (difficulty in walking) as viddha lakshana of rujakara marma.³ The symptoms of sprain are similar to these lakshana.

Case Report

Name: XYZ

Age: 22 years

Sex: male

OPD no: 12433

Occupation: Sports person and Student

Address: Ahmedabad

Date of visit: 02/05/2024

Socioeconomic status: Middle class

Marital status: Unmarried

Personal history: No any

Family history: No any

Chief Complaints with Duration

Pain in the right foot	1 day
Swelling on the right ankle joint	1 day
Difficulty in movement and walking	1 day

History of Present Illness

A male athlete, age 22, presented himself to the Shalyatantra outpatient department (OPD No 24) of Government Akhandanand Ayurveda Hospital, Ahmedabad, Gujarat, India, complaining of excruciating pain and swelling in his right ankle joint. Yesterday, while playing football, he had a history of twisting his right foot. He possessed difficulty walking and foot movements. On clinical examination, he had tenderness, restricted and painful movements.

Past History: No

METHODOLOGY

Consent: Before starting treatment, consent was obtained, an investigation was conducted, and the study was carried out as

per ICMR National Ethical Guidelines for Biomedical and Health Research Involving Human Participants.

Investigation: X-ray of right foot (AP and Lateral view) X-ray was normal. No fracture condition was seen.



Diagnosis: Gulpha Sandhi Aghata (Ankle Sprain)

Treatment

Application of Bibhitakphala majja (Seed kernel of *Terminalia Bellirica*) lepa with Shatadhauta ghrta and bandhana for immobilization twice daily (morning and evening) for 15 days.

Preparation of lepa: Dried fine powder of Bibhitakphala majja is taken in a bowl, and lepa is made by combining it with Shatadhauta ghrta, which is then applied to the patients' sprained ankle with a thickness of 4-5 mm and in pratiloma gati (opposite direction of hairs). Then, a Crepe bandage was applied over the affected part to provide support. After 1 hour, open the crepe bandage, and the lepa is removed with a cotton cloth soaked in warm water. The same procedure was done twice a day for 15 days.



Other Medication: No oral medication was given to this patient.

OBSERVATION

Assessment Criteria	Before Treatment	After 7 Days	After 15 Days
Pain	2	1	0
Tenderness	3	2	1
Difficulty in walking	2	1	0
Swelling	2	1	0
Discolouration	1	1	0
Dorsiflexion	1	1	0
Plantarflexion	2	1	1
Adduction	1	0	0
Abduction	1	1	0
Inversion	2	2	1
Eversion	1	1	1
Total score	18	12	4

RESULT AND DISCUSSION

Bandaging with Bibhitakphala majja lepa in ankle sprain significantly relieved subjective and objective criteria. After 15 days of treatment, swelling, pain, and tenderness were reduced, and movement improvement was also seen.



Before Treatment: Swelling and redness



After 15 days: No swelling or redness

Sports injuries can be related to abhigataj shotha or agantuj shotha, and alepa⁴ is the first upakrama in sarvasotha. Acharya Charaka⁵ and Acharya Sharangdhara⁶ advocated that Bibhitakphala majja lepa is useful in every sotha (swelling). It relieves daha (burning) and arti (pain) in every sotha and acts as an analgesic. With kashaya rasa (astringent taste), laghu (light), ruksha (dry) guna, ushna veerya (hot potency), sheeta sparsha (cold touch), madhura vipaka, shothahara (anti-inflammatory), dahashamaka (decrease temperature and burning), and vedanashamaka (analgesic) qualities, Bibhitakphala majja is Kaphavatahara⁷ which reduce pain and swelling. An active

principle of Bibhitakiphala majja lepa is released into Shatadhauta ghrita when the powder is placed on the skin's surface in the opposite direction from the direction of hairs. After that, this combination enters the romakupa (hair follicles) and further gets absorbed through the swedavahasrotas (sweat glands) and siramukha (venules). After that, the absorbed material is subjected to pachana (metabolism) by Bhrajakapitta (heat of skin) situated in twacha (skin) and pacifies the vitiated dosha (humors) locally and leading to the alleviation of the symptoms. Sheeta Sparsha⁸, madhura vipaka⁹, reduces the local temperature and redness. Its ushna veerya¹⁰ does vasodilatation, improves circulation and reduces swelling and pain. The basis of lepa is Shatadhauta ghrita, which increases the drug's permeability for skin absorption. In addition to having a cooling and Vatapittahara effect, Shatadhata ghrita¹¹ and snigdha guna also stop lepa from drying out too soon.

CONCLUSION

It was discovered that bandhana with Bibhitakaphala majja lepa was highly helpful for ankle sprains. The medications of this lepa can be used at the OPD level, are readily accessible in Ayurveda hospitals, and are reasonably priced. After further study of this kind of treatment on more patients with sports injuries, Ayurveda can significantly contribute to sports medicine.

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