

ANALGESIC EFFECT AYURVEDIC MEDICINE MADHUKA MANJISHTA RAKTACHANDANDI LEPAM IN ACUTE KNEE INJURY: A CASE STUDY

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ABSTRACT

This case study explores the analgesic and anti-inflammatory effects of hydrogel made from the alcoholic extract (90:10) of Ayurvedic medicine Madhuka manjishta raktachandanadi lelam on acute knee injuries. It focuses on a 22-year-old male footballer and shop assistant with severe pain and restricted mobility following a sports-related injury. The study examines the efficacy of the topical application of Ayurvedic medicine Madhuka manjishta raktachandana lelam in alleviating symptoms and supporting recovery. It aims to provide broader insights into the potential clinical applications of this herbal intervention.

INTRODUCTION

Acute knee injuries, particularly those involving inflammation and pain, are common in sports and can significantly affect quality of life and productivity. Conventional analgesics and anti-inflammatory drugs often come with side effects, prompting the exploration of natural remedies like Ayurvedic medicine Madhuka manjishta raktachandanadi lelam.¹ This preparation is traditionally recognized for its anti-inflammatory and therapeutic properties in Ayurveda, making it a promising candidate for musculoskeletal injury management.²

Acute Soft Tissue Injuries

Soft tissue injuries involve damage to muscles, ligaments, and tendons, typically resulting from trauma or overuse. These injuries are often acute and characterized by pain, swelling, and limited mobility.³ Common soft tissue injuries include sprains, strains, and contusions. Among these, knee injuries are particularly prevalent due to the joint's complex structure and critical role in movement and weight-bearing.

Knee Injuries

Knee injuries are a subset of soft tissue injuries that involve damage to the ligaments, cartilage, tendons, or surrounding muscles.⁴ These injuries often occur in sports due to high-impact movements, sudden changes in direction, or collisions. Acute knee injuries, such as sprains and ligament tears, are frequently observed in sports activities like football, where dynamic and high-energy actions are involved.

Sports-Related Injuries

In this case, the sport was football, specifically gully football, which is often associated with a lack of proper training, inadequate exercise routines, and insufficient preparation. Common causes of injuries in gully football include:

1. Improper Training: Lack of structured warm-up and stretching exercises.
2. Inadequate Equipment: Absence of protective gear.

3. Pitch Issues: Uneven or poorly maintained surfaces.
4. Improper Preparation: Insufficient physical conditioning and readiness.
5. Insufficient Techniques: Poor understanding of movement mechanics.

Turf Football Injuries

Turf football poses specific risks, particularly due to the role of artificial grass. Factors contributing to injuries include:

1. Increased traction leading to higher stress on joints.
2. Harder surface causing impact injuries.
3. Reduced cushioning compared to natural grass.
4. Strategies for Turf Management
5. Effective strategies to manage acute injuries on turf include:
6. Ensuring proper surface maintenance to reduce unevenness.
7. Educating participants on injury prevention techniques.
8. Encouraging the use of appropriate footwear for artificial surfaces.
9. Implementing the RICE protocol (Rest, Ice, Compression, Elevation) immediately after injury.

Objectives

1. To evaluate the analgesic and anti-inflammatory effects of Ayurvedic medicine Madhuka manjishta raktachandanadi lelam in acute knee injuries.
2. To assess patient outcomes, including pain reduction and improved mobility.
3. To contribute to the growing body of evidence supporting natural, plant-based interventions for musculoskeletal conditions.

Methods

Study Design

This study followed an observational single-case design. Data were collected through direct observation, clinical assessments, and patient-reported outcomes.

Participant

A 22-year-old male presented to the outpatient department with acute knee pain and inflammation caused by a sports injury. He had a prior history of a right knee injury but no significant comorbidities. The participant is the sole breadwinner for his middle-class family and reported anxiety and distress over his injury.

Clinical Assessment

General Appearance: Anxious, hyperhidrotic, and limping gait

Past medical history: No significant other medical history noticed

Vital Signs:

1. Blood Pressure: 120/80 mmHg
2. Pulse Rate: 98 bpm
3. Respiratory Rate: 20 breaths/min
4. SpO₂: 98%

Local Examination:

1. Oedema and inflammation over the left knee.
2. Restricted range of motion (~145 degrees of flexion).

Intervention

The Ayurvedic medicine Madhuka manjishta raktachandanadi lepan was applied topically to the affected knee using a applicator uniformly covering the affected area. The patient was positioned on a well-lit area and was resting on the bed for the entire time of intervention. The area was cleaned with cotton and sweat dirt were removed. The application lasted 50 minutes, during which pain intensity was assessed using the Visual Analogue Scale (VAS) at intervals of 15, 30, and 45 minutes. After 50 minutes the medicine was removed using cotton balls and area was wiped thoroughly.

Outcome Measures

VAS Scores:

1. Pre-application: 8/10
2. 15 minutes: 8/10
3. 30 minutes: 7.5/10
4. 45 minutes: 6/10
5. Post-application (50 minutes): 5-7/10

Results

The application of Ayurvedic medicine Madhuka manjishta raktachandana lepan resulted in a notable reduction in pain and inflammation. The patient reported improved comfort and mobility following the intervention. This aligns with the preparation's known therapeutic properties, including its ability to alleviate acute inflammation and localized heat.

DISCUSSION

The study highlights the potential of Ayurvedic medicine Madhuka manjishta raktachandanadi lepan as a topical agent for managing acute musculoskeletal injuries. Ayurveda, as explained by Acharya Sushruta, provides a detailed classification of different causes for injuries especially related to bhagna (fracture) which are related to the current scenario⁵. The main factors are listed below.

1. Pathana: Fall injuries.⁶
2. Peedana⁷: Blunt trauma.
3. Praharana⁸: Collision or hit injuries
4. Akshepanam⁹: Jolting movements.
5. Vyala Mruga Dasana¹⁰: Bites from animals.

Sushruta describes six types of acute injuries:

1. Chinnam¹¹: Cut injuries.
2. Bhinnam¹²: Breaking injuries.
3. Vidham¹³: Piercing injuries.
4. Kshatam¹⁴: Blunt injuries.
5. Pichitham¹⁵: Contusive injuries with swelling.
6. Ghrushta Vrana¹⁶: Blunt injuries without significant external bleeding.

In cases like Pichitha and Ghrushta injuries, external bleeding is minimal, but blood and Vata dosha are significantly vitiated¹⁷. Inflammatory actions are pronounced due to Pitta dosha aggravation, necessitating interventions to reduce this imbalance. Madhuka manjishta raktha Chandana are pitha -vata samanam , rakta prasadanam, rasa prasadanam, abhighata haram in action , thikta , seetha , in guna seetha in veerya pachana, in action.

The findings suggest that Ayurvedic medicine Madhuka manjishta raktachandana lepan offers a natural, side-effect-free alternative for pain management. However, further research involving larger sample sizes and controlled trials is needed to validate these findings and explore its long-term benefits.

CONCLUSION

Ayurvedic medicine Madhuka manjishta raktachandana lepan demonstrates significant analgesic and anti-inflammatory effects in acute knee injuries. Its application could serve as an effective, non-invasive treatment for similar musculoskeletal conditions. This case underscores the need for integrating traditional remedies with modern clinical practices.

Implications for Practice

The findings support the use of Ayurvedic medicine Madhuka manjishta raktachandana lepan as a complementary approach in pain and inflammation management. Practitioners may consider this intervention as part of an integrative treatment strategy, especially for patients seeking natural alternatives to conventional medications.

Limitations

1. Single-case observation limits generalizability.
2. Lack of a control group to compare outcomes.
3. Short follow-up period.

Recommendations

1. Future studies should focus on:
2. Randomized controlled trials to validate findings.
3. Long-term studies to assess sustained effects.
4. Exploring the mechanisms of action underlying Ayurvedic medicine Madhuka manjishta raktachandana lepan's therapeutic properties.

Consent

Written informed consent was obtained from the participant for the publication of this study.

Conflict of Interest

The authors declare no conflicts of interest related to this publication.

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