



## **Ayurvedic Management of Meniscal Injuries Around The Knee- A Case Study**

**Dr. Sarika<sup>1</sup>, Dr. Chandramouleeswaran P<sup>2</sup>, Sakunthala Priya Suresh Kumar<sup>3</sup>, Saraswathi. S<sup>3</sup>**

<sup>1</sup>*Assistant Professor, Department of Shalya Tantra, Ayurveda College and Hospital, Coimbatore*

<sup>2</sup>*Professor, Principal, Ayurveda College & Hospital, Coimbatore*

<sup>3</sup>*Undergraduate Scholar, Ayurveda College and Hospital, Coimbatore  
Corresponding Author - Dr. Sarika*

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### **Abstract:**

*The knee joint is a complex synovial hinge that is central in supporting body weight, enabling stability and smooth movement. The cartilage in the knee, the meniscus, which cushions the joint and distributes the weight is prone to frequent injury due to repetitive stress, degeneration and sudden twisting and pivoting. Generally, the management includes rest, NSAIDS or surgery. However, Ayurveda involves a way less invasive approach and this single case study is an effort to manage the injuries of meniscus with simple yet effective Upanaham, Lepam and Cupping therapy. In a period of 15 days, there was a significant reduction in pain and swelling.*

**Objectives:** *To treat patients with acute meniscal injuries with simple, effective, non-invasive Ayurvedic treatments in a short duration and provide effective relief.*

**Methodology:** *A single case study of a 45-year-old patient diagnosed with meniscus injury was prescribed internal medication and was treated with ayurvedic procedures such a Lepam, Upanaham and also cupping therapy.*

**Result:** *Significant improvement in pain, swelling and stiffness*

**Conclusion:** *Ayurvedic management proved effective in the treatment of acute meniscal injury of knee.*

**Keywords:** *Cupping Therapy, Lepam, Meniscal Injury, Upanaham.*

### **Introduction:**

In terms of gross anatomy, the menisci are C-shaped or semicircular fibrocartilaginous structures with bony attachments at the anterior and posterior aspects of the tibial plateau [1] present in the knee, wrist, temporomandibular, acromioclavicular and sternoclavicular joints of the human body. It is concave at the top and flat at the bottom with a small depression in the middle called fossa. The

menisci around the knee joint helps to disperse the body weight and to reduce the friction during locomotion. The mean annual incidence of meniscal tears is about 60-70 per 100,000 with a male to female ratio ranging from 2.5:1 to 4:1. The reason why meniscal tears are so common is, the wear and tear of knees as the age progresses, obesity and more athletic activities [2]. Patient may present with pain, jerk on

walking, swelling and restricted range of movements.

### Management [3]:

The current management of meniscal injury includes PRICE method (protection, rest, ice, compression, elevation) and surgical methods like Arthroscopic meniscus suturing, partial meniscectomy and meniscus replacement. In cases of locking, manipulation under general anesthesia, immobilization for 2 to 3 weeks and physiotherapy are viable options. A meniscal tear with non-surgical management takes around 6-8 weeks to heal, adequate rest being the key factor for faster recovery.

### Meniscal Injury in Ayurveda:

There is no exact reference of meniscal tear in ayurveda but it can be correlated with *abhigata sandhigata vatam* and the treatment adapted is similar to that of *vata vyadhi chikitsa*. The treatment mainly focuses on healing the meniscal injury, promoting strength to the surrounding areas and balancing *vata dosha*. Through this article an attempt is made to bridge the gap between the existing knowledge and clinical efficacy in treating meniscal tear through Ayurveda.

### Case History:

A 45-year-old female patient, came to Shalya Tantra department, of Ayurveda

college and Hospital, Coimbatore with complaints of severe shifting type of pain and swelling over left knee post an injury during a sports activity a day before. Patient consulted an allopathic physician and was prescribed T.Ezact 6mg, T.Panpraz 40mg, Tapol er 50 for a period of 3days.

On examination, notable swelling over anteromedial aspect of left knee was observed with no bruising or deformity. Flexion and extension were restricted due to pain and there was localized tenderness, with mild increase in temperature over left knee. McMurray's test and Apley's test were positive for the left knee. An MRI scan was then suggested.

### MRI Findings:

Partial tear of medial patellar with menisco capsular separation, Focal complex tear in outer rim of anterior horn of medial meniscus, grade 1 injury of posteromedial structure, and moderate haemarthrosis of knee joint.

Patient was diagnosed with meniscus tear on the basis of MRI report.

### Treatment Protocol:

#### Internal Medication:

- 1.Mustadhi marma kashayam 15ml with 45ml warm water twice before food
- 2.Bonton granules – 1tsp with milk at night
- 3.T.lakshadi guggulu 1-1-1 after food

**External Treatment:**

SL.NO	NO.OF DAYS	TREATMENT	MEDICINES	OBSERVATION
1	Day 1 and 2	Sthanika dhara  Lepam	Dhanyamla  Jadamayadhi churnam + dhanyamla	Tenderness reduced
2	3 <sup>rd</sup> day	Lepam  Cupping therapy(wet)  Sthanika dhanyamla dhara	Jadamayadhi churnam dhanyamla + dhanyamla	Slight relief in pain Stiffness persisted Swelling reduced
3	DAY 4 to 14	Upanaham	Ajamamsa, egg, masha, murivenna and eranda patra for bandaging.	Profound relief from pain. Stiffness and swelling.

The treatment was given for a period of 14 days (26.11.2024 – 10.12.2024) comprising of sthanika dhanyamladhara and lepam for first three days followed by

cupping therapy on the third day. From days 4 to 14, upanaham with bandhanam were performed.

**Result:**

S.NO	SYMPTOMS	BEFORE TREATMENT	AFTER TREATMENT
1	Pain	Severe shifting type of pain	90% reduction of pain
2	Swelling	Present	Mild swelling
3	Stiffness	Present	Reduced
4	Range of motion	Flexion restricted due to pain Extension not possible	Flexion possible without pain  Extension possible with mild pain

**Discussion:**

Arthroscopic partial meniscectomy (APM) has been the gold standard treatment for meniscal injuries in the last few years. However, statistically no significant difference between the APM and placebo surgery for symptomatic patients with a

degenerative meniscus tear and no osteoarthritis (OA) in any of the used outcome measures over the course of 24-month follow-up were observed [4]. A meniscal repair is an effective alternative option without the adverse effects of partial and total meniscectomy. Although the short-

term outcome of meniscus repair shows less than a 10% failure rate at a two-year follow-up, the long-term failure rates have stayed consistent between 23% and 30% despite using various techniques [5]. While in Ayurveda, the combination of upanaham, lepam and cupping therapy, simple outpatient procedures with no major complication, are effective in management of meniscal injury. *Upanaham*, one of the *Sapta upakramas* (seven treatments) mentioned in *Sushrutha sutra sthana*, is a kind of sudation therapy effective in swelling and pain. It is the localized application of the medicated paste, prepared with *ajamamsa* (meat of goat), egg, *masha churnam* (black gram powder), *murivenna* and finally bandaging with *eranda pathra* (leaves of castor) offers prevention of loss of heat, increased effective absorption of active ingredients through a long duration contact of medicine with the affected area and presence of solubility enhancer. Goat meat, that is homologous to human body muscle is *guru* and *brhma* [6] (heavy and nourishing). On topical application it may promote the production of flaggirin and aquaporin, improving the skin barrier and providing anti-inflammatory action [7]. Egg with its cholesterol-rich composition, is readily absorbed into the skin, and is deeply hydrating. Black gram powder is *snigdha* (unctuous) and *ushna* (hot) and balances *vata dosha* to a great extent [6]. *Murivenna* contains phytochemicals such as alkaloids, glycosides, Tannins, saponins and steroids that support natural wound healing [8]. *Kera tailam* (coconut oil), *karanja* (*pongamia glabra*), *tuka* (*spermacoce articularis*), *thambula* (*piper*

*bottle*), *kumari* (*aloe vera*), *Shigru* (*moringa olifera*), *palandu* (*allium cepa*), *kanjika* (fermented liquid), *shatavari* (*Asperagus racemosus*) in *Murivenna* provides relief from pain, swelling and sprain. *Eranda patra* used to cover the joints ensures continuous fomentation during the procedure.

*Dhanyamla dhara* by nature is *Ushna Rooksha* thus causing *Vata Kaphahara* [9] and can bring the *Dosha* back from *Shaakha* to *Koshta*, thus showing evident reduction in symptoms of pain and swelling [10].

Ingredients such as *Brahmi* (*Bacopa monnieri*), *Turushka* (*Hydnocarpus laurifolia*), *Pushkaramoola* (*Inula racemose*), *Tagara* (*Valeriana jatamansi*), *Aswagandha* (*Withania somnifera*), *Usira* (*Vetiveria zizanioides*), *Rasna* (*Alpinia galangal*), *Sarala* (*Pinus longifolia*) in *Jadamayadhi churnam* [7] when used as *lepam* with *dhanyamla* (fermented rice water) helps in reducing the inflammation and swelling and also helps in relieving the pain effectively.

In cupping therapy, the vacuum created facilitates the movement of stagnated blood, improving blood circulation. This is particularly relevant in cases of joint injuries where *heamarthrosis* is present. This also helps to relax the muscles surrounding the knee joint which can reduce pain and stiffness.

### Conclusion:

Treatments like *lepam*, *upanaham*, *dhanyamla dhara* and cupping therapy along with internal medications proved excellent in cases of acute meniscal tear of knee joint in a short duration. Future studies should

explore controlled studies comparing ayurvedic management with conventional treatments. And a larger cohort and a long term study to establish standardized protocol for ayurvedic interventions in orthopedic cases.

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