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An Ayurvedic approach to Knee Ligament Injury - A Case Study

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ABSTRACT

Knee joint is heavily stressed joint in the body. It has two completely incompatible properties of stability and mobility. It heavily depends on quadriceps femoris and collateral ligaments for stability. Due to increasing number of accidents and sports injuries, knee ligament injuries are also increasing in number, which more commonly occurs in anterior cruciate ligament (ACL), medial collateral ligament (MCL) and meniscus. However, surgical reconstruction does not guarantee a previous level of activity. In this single case study an effort has been made to manage knee ligament injury through Ayurvedic treatment. A 38 years old female suffering from anterior cruciate ligament tear and complex tear in body and posterior horn of medial meniscus was treated with *Janu Basti* and internal medicine. The duration of the treatment was 30 days, which provided relief from pain with noticeable improvement in the movement of knee joint.

Key words: Knee ligament injury, *Janu Basti*, *Shamana* treatment.

INTRODUCTION

Knee ligament injuries consist of trauma to the major stabilizers (anterior cruciate ligament, posterior cruciate ligament, medial collateral ligament and combination of these) of the knee. These injuries are characterized in the long term with mild to quite severe symptomatic instability of the knee.^[1]

Ligament injury^[2]

Injury to the anterior cruciate ligament, medial collateral ligament and Medial meniscus. Patient

may present with pain, swelling, local tenderness, haemarthrosis, sprain (ligament injury), strain (muscle and tendon injury).

Sprain

- I degree - minimal tear with local tenderness and no instability
- II degree - more disruption but no instability
- III degree - complete disruption

Current treatment option^[3]

These injuries are treated with surgical repair to restore knee function. However it does not guarantee the previous level of activities and good knee function. Surgery is costly option for middle class people.

Early medical treatment for knee ligament injury may include the following;

1. Rest
2. Ice pack application (to reduce swelling that occurs within hours of the injury)

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3. Compression (from an elastic bandage or brace)
4. Elevation
5. Analgesics

A knee ligament tear may be treated with the following;

1. Muscle-strengthening exercises
2. Protective knee brace (for use during exercise)
3. Activity limitations

A cost effective option - An Ayurvedic approach^[4]

An effort has been made to manage knee ligament injuries in cost effective manner based on treatment of *Sandhigat Vata*. The treatment protocol comprises of *Janu Basti* along with internal medication.

Case Presentation

A 38 years old female patient, housewife, living at Sardarnagar, Ahmedabad, Gujarat; was suffering from knee joint ligament tear for 5 years. She came to Government Akhandanand College, Ahmedabad, Gujarat. Patient came with complaints of pain in right knee joint with difficulty in walking.

Patient was apparently normal before 5 years. She had H/O fall from stair and after that her knee became painful and inflamed. At that time, she took treatment from local doctors, but didn't get satisfactory result, after that she took analgesics from her family doctor but didn't get relief, after that she consulted orthopedic doctor. On the basis of MRI findings doctor suggested for surgery. Patient refused to go for surgery and came to our OPD for further management. O/E *Prakruti- Vata-Kaphaja*, Wt. - 68 kg., Height - 5.3ft, B.P. - 130/80 mmHg, Pulse - 76/min, mild tenderness and swelling over right knee joint region, no crepitus were found, temperature over knee joint was normal, no redness was found. MRI reports of right knee joint suggested anterior cruciate ligament tear and complex tear in body and posterior horn of medial meniscus.

Treatment Protocol

From 4-12-2016 to 3-1-2017 treatment was given to the patient at Akhandanand Ayurveda Hospital,

Ahmedabad. She was given treatment of *Janu Basti Karma* with *Murivenna Taila* for 30 days and during the treatment *Pathya Ahara-Vihara* was advised to the patient like wheat chapatti with ghee, *Shira etc.*; and told to avoid *Ratrijagarana, Sheeta Aharavihara* and over exertion etc.

Treatment schedule

Drug/Therapy	Dose	Kala	Anupana	Duration
<i>Gokshuradi Guggulu</i>	2 BD (500 mg each)	Morning and evening Before meal	Luke warm water	30 days
<i>Navjivan Rasa</i>	1 BD (250 mg)	Morning and evening After meal	Luke warm water	30 days
<i>Shatavari Chura, Kamdudha Rasa</i>	2 g. each with milk - BD	Morning and evening After meal	Milk	30 days
<i>Janu Basti with Murivenna Taila</i>	OD	At morning	Swedana after <i>Basti Karma</i>	30 days

Ingredients of *Murivenna Taila* (Ref. - *Yogagrantham*)

- *Kera Tailam* – Coconut oil
- Juice of *Karanja* – *Pongamia glabra*
- *Tuka* – *Spermacoce articularis*
- *Tambula* – *Piper betle*
- *Kumari* – Aloe vera
- *Shigru* – *Moringa oliefera*
- *Paribhadra* – *Erythrina variegata*
- *Palandu* – Onion – *Allium cepa*
- *Kanjika* – Fermented liquid
- Paste of *Shatavari* – *Asparagus racemosus*

RESULTS

Sign and Symptoms	BT	After 10 days	After 20 days	After 30 days
Pain	+++	+++	++	+
Difficulty in walking	+++	++	++	+
Restricted movement of Rt. knee	+++	++	++	+
Tenderness over Rt. knee	+	+	-	-

DISCUSSION

Ligament tear can be symptomatically correlated with *Sandhigata Vata*. Ayurvedic points of view pathogenesis of *Sandhigat Vata* is as follows; Due to *Abhighata* (trauma) there will be *Rasa, Raktadi Dhatu Dushti* and *Vata Prakopa* which leads to *Vikruti* in *Asthi, Sandhi, Snayu, Kandra* and causes *Sandhigata Vata*.

Murivenna Taila is indicated in ancient text for fracture and dislocation. It is well known in reducing pain and helps in faster healing.^[5] So *Janubasti* with *Murivenna Taila* becomes very useful in knee injury. Besides this, *Shamana* treatment is also necessary to break down *Samprapti*. For this purpose patient was given *Shamana* drugs available in the hospital. *Shatavari* and *Kamdudha Rasa* has special function of improving strength. Overall it has an anabolic effect on muscle and ligaments and promotes early repair.^[6] *Navjivan Rasa* is used as *Dipana, Pachana, Shulahara, Balya, Raktaposhaka* and in *Vataj Roga*.^[7] *Gokshuradi Guggula* is *Balya, Rasayana* and indicated in all types of *Vata Vyadhi*.^[8] Thus combination of *Janubasti* along with *Shamana* provided good result in ligament tear.

CONCLUSION

From the present case study it can be concluded that the *Janu Basti* is a promising *Ayurvedic* management of chronic knee injury but further more work should be done on it.

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