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An Ayurvedic Approach to Knee Joint Ligament Injury (Grade-1 Strain of the Medial and Lateral Collateral with Knee Joint Effusion) - A Case Study

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ABSTRACT

Ayurveda is the complete science of life. Ayurveda takes whole man physically as well as mentally in to account while describing the principle of treatment. In case of knee injury (RTA) ligament tear most common along with fracture. Healing is a natural and spontaneous phenomenon which occurs irrespective of (and sometimes despite) the doctor. In present study we are using conservative treatment of grade - I strain of the medial and lateral collateral ligament with knee joint effusion. Regular follow-up for 30 days. Although the basic events have been observed and the factors which initiate and control the process remain incompletely understood.

KEYWORDS

Ligament tear, Effusion , Sprain



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INTRODUCTION

Knee ligament injury with knee joint effusion consist of trauma to the major stabilizers (Anterior cruciate ligament, Posterior cruciate ligament, Medial Collateral ligaments and other structures¹)of the knee. These injuries are characterized in the long term with mild to severe pain, swelling over knee with restricted flexion and extension.

LIGAMENT INJURY- Usually ligament injury occurs after traumatic events and depending up on severity of the injury. These injuries are serious and are due to high energy trauma injury to the anterior cruciate ligament, posterior cruciate ligament Medial collateral ligaments and medial meniscus¹. Patient may present with pain , local tenderness and swelling over knee joints strain(muscle and tendon injury) ,sprain(ligament injury).

KNEE JOINT EFFUSION- A condition in which fluid accumulates arounds the knee joints, “water on the knee” is common term for knee effusion. However an injury or illness can cause extra fluid to build up around the joints. It can be result of injury, infection or a medical condition. The results are swelling, pain and restricted range of motion.

SPRAIN- A sprain also known as a torn ligament, it is a damage to one or more

ligaments in a joint often caused by trauma are the joints being taken beyond its functional range of motion, falling ,twisting or getting hit can all cause sprain. A knee sprain occurs when one or more knee ligaments² is stretched or torn-often from bending, twisting, a sudden jolt, or direct impact.

CURRENT TREATMENT PLAN-

These injuries are treated with surgical repair to restore knee function. However surgical repair does not guarantee the previous level of normal activities and normal knee functions. Early medical treatment for ligament injury may include

RICE

RICE means-

1. Rest
2. Ice application (to reduce swelling and pain)
- 3 .Compression (knee brace or elastic bandage)
4. Elevation
5. Analgesic (NSAIDs)

For knee effusion knee tapping and if fluid is less in quantity no need of tapping.

Knee ligament care may be treated with the following-

1. Activity limitations
2. Musculo-skeletal exercises
3. Protective knee brace
4. Surgical line of treatment



An Ayurvedic approach- An effort has been made to manage knee ligament injuries in cost effective manner based on treatment of *sandhigata vata* and *shotha* (aaghataj). The *pradeshi Rasnadi ruksha upnaha* and internal medicine along with *mahamasha taila* application.

Case presentation

A 29 year old male patient (student) living at Pimpri , Pune (Maharashtra) was suffering from knee joint pain and swelling since 2 months . He came to Dr. D. Y. PATIL AYU. HOSPITAL. Patient came with complaint of pain and swelling in right knee joint with difficulty in walking. Patient was apparently normal before two months, he had history of fall from motorbike and after that his knee became painful and inflamed. At that time he took treatment from local doctor but did not get satisfactory results. After that he took analgesics and other medicine from orthopaedic doctor. On the basis of MRI findings doctor suggested for surgery but patient refused to go for surgery and came to our OPD for further management.

O/E- *Prakurti Vatapradhan Kaphaja anubandha*

Weight- 78kg

Height - 5.9 ft.

BP - 130/80 mm of hg

Pulse – 78/minute

Mild tenderness and swelling over right knee

Joint temperature over knee joint normal

Mild redness present

MRI report of right knee joint suggested anterior cruciate ligament tear and complex tear in body and posterior horn of medial meniscus

Treatment Protocol

22/08/2017 to 23/09/2017

Treatment was given to the patient at Dr. D Y Patil Ayurved Hospital, Pimpri (Table 1). He was given treatment of *Rasnadi Ruksha Upna* for 10 days daily for 4 hours in morning and Lukeworm *Mahamasha tail*⁵ for local application before upnaha for 10 min three times in day along with internal medicine. Pathya ahar-vihar was advised to patient and over exertion was asked to be avoided. The results are given in Table 2.

Table 1 Treatment protocol

Drug/treatment	Dose	Kala	Anupana	Duration
<i>Lakshadiguggul</i>	250 (mg)	BD	Water (<i>Koshna</i>)	30 days
<i>Punarnavadiguggul</i>	250(mg)	BD	Water (<i>koshna</i>)	30 days
<i>Rasnadi ruksha Upnaha</i>	As per requirement	OD	-	10 days
<i>Mahamasha tail massage</i>	As per requirement	TDS	-	Massage 30 days



Table 2 Results

Sign & symptoms	Before treatment	After 10 days	After 20 days	After 30 days
Pain & swelling	+++	+++	++	-
Difficulty in walking	+++	++	+++	-
Restricted movement of right knee	+++	++	+	+
Tenderness over right knee	++	++	-	-

DISCUSSION

Ligament tear can be symptomatic correlated with *sandhigat vata*. Ayurvedic point of view pathogenesis of *Sandhigat vata* is as follows:

Due to *Abhighata* (trauma) there will be *rasa-rakta dhatu dushti* and *vata prakopa* which leads to *vikruti* in *asthisandhi snayu* and causes *sandhigat vata*. *Mahamasha tail* is indicated in ancient text for fracture and dislocation. It is well known in reducing pain and help in faster healing.

Therefore, local application of *Mahamasha tail* is very useful in knee injury .



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