



## TREATMENT MODALITIES OF PANCHAKARMA IN THE MANAGEMENT OF ACL LIGAMENT TEAR- A CASE STUDY

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### ABSTRACT

Knee problem can occur to anyone right from old age to young dancers without any age limitations. The knee joint is a complex structure which absorbs a significant amount of force on standing, walking, running etc. Acute knee injuries includes pain, swelling, difficulty in movements which may suggestive of ligament tear or fracture. Its severity depends on the cause and the structures involved. Some of them will be less severe yet still painful and functionally limiting. Most of the ortho cases are not cost effective and also very difficult to manage if surgery is adopted, so the treatment modalities of Panchakarma such as Sandhaneeya upanaha, Janu seka, Tikta ksheera Basti with some shamana aushadhis shown a symptomatic relief with significant improvement in functioning of affected knee.

### KEYWORDS :

#### Introduction

Now a day millions of people visit orthopaedic surgeons for knee problem specially when the problem is related with knee injury. Usually knee injury have a background of accident, fall, blow, twist, improper landing after a jump or from running too hard. Because of its complex structure and weight bearing capacity, the knee is most common injured joint. Even Housewives, Dancers, Sports persons, Workers, old age peoples suffer from it. Each part of the anatomy needs to function properly for the knee to work which consists of articular surfaces, ligaments, meniscus, articular cartilage. In this our study is related to ligament and menisci problem which can be well managed within the limitations by Sandhaneeya Upanaha, Janu pariseka and Tikta ksheera basti.

#### Case Report:-

A 33 year old male patient with a history of fall on the ground, presenting complaints was admitted in our hospital

Sudden onset of moderate pain over right knee joint since 38 days
Difficulty in walking and standing properly
Mild Swelling around the right knee
Restricted Range of movements of right knee joint associated with pain

Based on the above complaints, clinical examinations and radiological reports patient was diagnosed as partial Right knee ACL tear with meniscus tear (Abhigata Janu Sandhigata Vata).

#### Clinical Examinations

All the vitals and blood routine tests were said to be in limitations.

- Drawers sign for ACL injury. - Positive at RT knee
- Lachmans test – Positive at RT knee
- Apley's Grind test – Positive at RT knee
- Mc Murrays test- Positive at RT knee

#### MRI Report of Right knee joint

- Near full thickness tear of Anterior Cruciate Ligament with horizontal orientation of ligament fibres in the intra condylar fossa.
- Longitudinal tear involving posterior horn of Lateral menisci.
- Horizontal tear involving posterior horn and body of medial menisci.

Before Ayurvedic treatment there is a treatment history of NSAIDS and conservative therapies were adopted with absolute restriction of movement. But after some days pain got aggravated on doing very minimal movements and was disturbed with daily basic activities for which patient had been advised to undergo with ligament reconstructive surgery. By keeping an option patient came to our

hospital.

#### Treatment

Treatment Plan was adopted in 4 steps by making out the difference after each step.

Sandhaneeya upanaha sweda for 15 days
Janu pariseka with Pinda Taila and Balashwagandhadi Taila -10 days
Panchatikta Ksheera Basti (6 niruha and 9 anuvasana)-in 8 days
Complete bed rest only with basic minimal activities

#### Step 1. Sandhaneeya Upanaha sweda for 15 days

Ingredients	Kukkutanda -3
Godhooma Choorna -250gm	Kumari pulp- 50gm
Yava choorna-50gm	Pinda taila- 25ml
Sandhaneeya lepa choorna 100gm	Saindhava lavana 10 gms
Haridra -20 gm	Vinegar – QS
Asthishrunkala raw- 50gm	

#### Methods of upanaha sweda

1. Affected knee joint is cleaned and sthanika abhyanga was done to entire knee joint with kottamchukkadi taila.
2. With all the above ingredients a thick dough is prepared and heated evenly in a sauce pan upto the bearable temperature.
3. This hot dough was placed on affected knee joint with considerable thickness of 1-2 inches covering the knee joint anteriorly.
4. And this is covered with mild heated Eranda Patra after this knee was bandaged with a clean cotton cloth which was not too tight nor too loose and left for 8 hours.
5. Later the cloth and dough was removed from the area and washed with warm water and patted dry.

#### Step 2- Janu pariseka sweda

Januseka was done with Pinda taila and Bala ashwagandhadi taila for 10 days.

#### Step 3- Tikta Ksheera Basti

Madhu (honey)	60ml
Saindhava(rocksalt)	12gm
Guggulu tiktaka ghrita	120ml
Shatapushpa kalka	16gm
Panchatikta ksheera paka	280ml

Anuvasana basti- was given with Guggulu tiktaka ghrita 80ml This basti was administered in kala basti pattern (8 days).

	N	N	N	N	N	N	N	N
A	A	A	A	A	A	A	A	A

**Shamana Aushadhis**

- Caps Gandha taila 2-0-2 with milk
- Tab Mahayogaraja guggulu 1-1-1
- Panchatikta ksheerapaka 20ml-0- 20ml (B/f)

**Results**

Assessment of Symptoms were done before and after treatment and during the follow up. Total number of days for treatment were 42 days. The pain reduction were assessed based on the Visual Analogue Scale (VAS), there was significant reduction in pain and swelling. Along with this range of movements were improved without any pain patient was able to stand, walk, and climb stairs which was not before.

Assessment Criteria	Before treatment	After treatment	During follow up
Pain	Continuous , aggravates on doing minimal activities	Able to do basic activities without any pain	Was able to climb the steps, run, walk and all normal activities
Swelling	Moderate at Infra patellar region medial side	Reduced to mild swelling at medial side	Absent
Range of movements	60-90 degree	100-120 degree	Normal movements
Tenderness	Wincing of face on pressure	Very mild pain	No any tenderness
Standing and walking	Unable to stand on affected leg independently Pain on walking less distance(15-20 feet)	Able to stand ,walk for short distances without any difficulty(100-200 meters)	Pain occasionally on long walking and playing.

**Discussion**

- The guidelines in our classics for treatment of Asthija vikaras is ksheera ghrita Tikta samyukta Basti 1, 2 . But apart from these some other modalities are also helpful in treating the Asthi and sandhi vikaras. As in any Abhigata janya vikara the doshas mainly derranged is Vata and rakta representing in the form of Inflammation (Pitta and rakta prakopa). On pertaining to this if specific structure is injured there some other factors are to be considered which are involved in it.
- Expected mode of action Upanaha sweda- is due to local rise of temperature there will be increase blood flow which inturn causes dilatation of channels, increases the metabolic activity from this metabolic wastes are removed and rate of drug absorption will be increased helps in repairing the affected meniscus and strengthens the collagen fibres of the injured ligament with the compactness of the knee joint<sup>3</sup>. Most of the drugs used in this are having Sandhaneeya property<sup>4</sup> and vata hara and pitta hara, All the above Acharya Bhavaprakash has mentioned upanaha in siragata vata and snayugata vata chikitsa expected to bring its effect in this condition helps in reduction of swelling and produces some sort of irritation thus increases the blood supply from which helps in making the collagen fibres to get mature with this ligaments also get strengthen. Here upanaha sweda helped in reducing the pain and inflammation after doing it for 15 days.
- Janu pariseka serves as a lipoidal medium for penetration of drug molecules by exerting an immediate anti-inflammatory effect through diffusion. The medicaments are released and is absorbed via subcutaneous capillaries into systemic circulation acts upon the deeper tissues expecting to reconstruct the damaged structures, meniscus regeneration is an unsolved clinical challenge, despite this treatment interpretation can be helpful in causing the proper functioning and long lasting of these fibrocartilagenous structure, preventing the further damage from it. Lack of Blood supply without nutrients won't heal the meniscal tear<sup>5</sup>, besides this the maximal ligament strength will occur after six weeks, when the collagen fibres have matured<sup>6</sup>.As in sushruta samhita it has mentioned that pariseka sweda does the bhagna sandhi prasadana<sup>7</sup>. Here medicaments used for pariseka are pinda taila which is indicated in vatarakta<sup>8</sup> condition as here because of abhigata vata and rakta are vitiated. Although the Drava sweda in indicated in pitta vikaras, Sira and khandara are considered as upadhatu of rakta, hence pitta and rakta are inter-related to each other so in this might be helpful to prove its effect.

- Panchatikta ksheera basti containing the medicines which are helpful in nourishing the asthi dhatu as it contains ksheera and Guggulu tiktaka ghrita from which the natural supplements of calcium is absorbed in large intestine expected to help the proper growth and rejuvenation of osseous tissues. Guggulu tiktaka ghrita is indicated in asthi-sandhi vikaras<sup>9</sup> which has its effect on bones, joints, articular and periarticular structures. The decoction made in ksheera having madhura and snigdha property controls vata and pitta dosha indirectly does rakta prasadana and increases the nutrition to the asthidhatu. Usually the ghrita contains vitamin-D plays an important role to utilise calcium and phosphorous from blood and helps in formation of articular structures. Overall expectation from treatment is multidimensional effect which not only helps in correcting the injured structures but also helps in improving the bone metabolism helps to prevent further damage.

**Conclusion**

Many a times an Ayurvedic approach helps to helpless society. So these treatment modalities of Panchakarma such as Sandhaneeya upanaha, Janu pariseka and Tikta Ksheera Basti with rest and some shamana aushadhis had shown a good results in symptomatic relief with significant improvement in functioning of affected knee joint. There is a effective role of Panchakarma in treating such conditions, So some of the Panchakarma procedures has left an option in treating knee injury for orthopaedic surgeons. Same modality of treatment can be adopted in good number of cases, it may be a subject for further clinical trials and may provide a room for discussion in future.

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