

“A CASE STUDY ON AGNIKARMA W.S.R. QUADRICEPS TENDON”**Dr. Vaishali E. Tayade¹, Dr. J. D. Gulhane², Dr. Jaydeo L. Borkar³**

1. Prof. & HOD, Dept. of Kayachikitsa, Smt Shalinitai Meghe Ayurved College, Bhilewada, Bhandara
2. Associate Professor and H.O.D., Department of Kayachikitsa. G.A.C., Nagpur
3. Associate Professor Forensic Medicine, Shri Vasantnao Naik Govt. Medical College, Yavatamal

ABSTRACT:

The knee joint is one of the most heavily stressed joints in the human body, exhibiting a unique combination of stability and mobility. Its stability primarily relies on the quadriceps femoris and collateral ligaments. Unfortunately, due to the rising incidents of accidents and sports-related injuries, knee tendon injuries are becoming increasingly prevalent, with quadriceps tendon injuries being particularly common.

Surgical reconstruction, often pursued for such injuries, does not always ensure a full return to previous levels of activity. The quadriceps tendon, composed of tendinous portions from the rectus femoris, vastus intermedius, vastus lateralis, and vastus medialis muscles, plays a crucial role in knee function. These muscle fibers blend with the tendinous portion approximately 3 cm proximal to the superior border of the patella.

In this single case study, an attempt was made to address a knee tendon injury using Ayurvedic treatment methods. A 38-year-old female suffering from a quadriceps tendon injury received treatment involving Agni Karma (therapeutic cauterization) and internal medicine. The treatment spanned over a period of 15 days, during which significant relief from pain was achieved, accompanied by noticeable improvement in knee joint mobility.

KEY WORDS:- Knee tendon injury, agni karma, Shamana treatment

Corresponding Details:**Dr. Vaishali Eknath Tayade**

Plot. No. 88, New Prerana Nagar, New Narsala Road, Nagpur

Mobile No. 9340525166

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INTRODUCTION

In the Ayurvedic literature, Acharya Sushruta delineates the concept of Sandhi, defining it as the junction where bones meet, and classifies it into eight types: Kora, Ulukhula, Samudhga, Pratara, Tunasevani, Vayustund, Mandala, and Shankavartha. Among these, he provides examples of Kora Sandhi, including Anguli, Manibandha, Janu, Gulpha, and Kurpura, with Janu Sandhi being correlated to the knee joint.

The term "Janu" signifies the junction point of Janga and Uru. Janu Sandhi, or the knee joint, is described as a Marma site, which serves as the convergence point of Mamsa (muscle), Asthi (bone), Sandhi (joint), Sira (vein), and Snayu (ligament). Any injury to this site can manifest severe symptoms such as Khanjata, characterized by difficulty in walking.

SPORTS INJURIES IN KNEE JOINT

1. Sprain

1. Medial and lateral collateral ligament,

2. Anterior and posterior cruciate ligament¹¹

2. Tear of meniscus-

Medial and lateral menisci may get tear.

3. Strain-

1. Quadriceps muscles

2. Hamstring muscles

3. Patellar tendon

4. Popliteal tendon

4. Inflammation -

Bursitis -Prepatellar bursitis, Infrapatellar bursitis

Tendinitis

1. Patellar tendinitis

2. Hamstring tendinitis

3. Popliteal tendinitis



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SYNDROMES

1. Patellofemoral pain, characterized by varying degrees of discomfort, often originates from the contact between the posterior surface of the patella and the femur.
2. Plica syndrome occurs when the plica, an extension of the protective synovial capsule of the knee, becomes irritated, enlarged, or inflamed.
3. Iliotibial band syndrome develops due to the repetitive rubbing of the band over the lateral femoral epicondyle, leading to inflammation in the affected area.
4. Hoffa's syndrome may occur subsequent to a forceful direct impact on the kneecap, resulting in impingement of the fat pad between the distal thigh bone and the kneecap

Fracture

Knee discomfort was plaguing a 38-year-old housewife patient from Sardarnagar, ZINGABAI TAKLI NAGPUR. She arrived at Bhandara's Smt. Shalini Tai Meghe Ayurved College. The patient arrived complaining of pain in the right knee joint and trouble walking due to pulled quadriceps. Before the fifteen days, the patient appeared to be normal. Her knee started to hurt and became inflamed after she suffered a H/O fall from the stairs. She saw several doctors in the area at the time, but her care was insufficient; she then went to her family doctor for analgesics, but this did not provide any relief; finally, she saw an orthopaedic physician. The MRI results led the doctor to recommend surgery. The patient arrived to our OPD for additional care after declining to have surgery.

O/E Prakruti- Vata-Kaphaja,

Wt. - 68kg,

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 ligament tear grade 1

Treatment Protocol

From 1-12-2023 to 15-12-2023 treatment was given to the patient at Kayachikitsa Department Smt Shalinitai Meghe Ayurved College Bhilewada Bhandara. She was given treatment of agni karma Janu Basti Karma with Murivenna Taila for 15 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 Kala Anupana Duration**

- 1)Gokshuradi gugglu bd Luke warm water 15days
- 2)Shatavari Chura, bd Luke warm water 15days
- 3)Kamdudha Rasa bd Luke warm water 15days
- 4)Janu Basti 15 min murivenna tail 15 days

5)Agni karma

ON 1 AND 7 DAY

According to Akrti : Bindu : Dot like shape

Place - Most tenderness point

Materials used for Agnikarma- Pancha Dhatu Shalakra

| Sign and Symptoms | BT | After 7 days | ON 15 days |
|--------------------------|-----|--------------|------------|
| Pain | +++ | ++ | - |
| Difficulty in Standing | +++ | ++ | + |
| Tenderness at knee joint | +++ | + | - |
| Movement | ++ | + | - |

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.

According to Ayurveda, every Dhatu (tissue) has its own Dhatvaagni (digestive fire of tissues) for its Poshan (nourishment), if there is any Dhatvaagni Vishamata (deviation in digestive fire) it may lead to Vikar of that particular Dhatu. Mamsaasthigata Pida (musculoskeletal pain) might be due to Mamsa (muscle), Meda (fat), and Asthidhatu (bone) Agnimandya. In the process of Agnikarma, local heat therapy causes Dhamaniprasaran that increases the Raktappravahan of that Sthana, which is helpful in correcting Dhatvaagnimandya.

According to modern science, the heat therapy, which is given at the local or affected area increases the blood circulation with metabolism by causing vasodilation, increase in the elasticity of connective tissue, and exudation of fluid with increase in white blood cells and antibodies. Local tissue metabolism rate is increased by warming, which helps in healing. As there is an increase in local metabolism, the waste products that are generated get excreted, which normalize the blood circulation, resulting in decreased intensity of pain. Heat may stimulate lateral spinothalamic tract, which causes stimulation of descending pain inhibitory fibers, which again causes release of endogenous opioid peptide that binds with the opioid receptors to substantia gelatinosa Rolandi, leading to inhibition of release of P-substance with blockade of transmission of pain sensation.

CONCLUSION

From the above discussion this study can be concluded that Agnikarma is one of the best method for local pain management.

The results of Agnikarma therapy and Ayurvedic drugs are very helpful for the the treatment of Quadriceps Tendon Strain and pain management.

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