

Ayurveda Management of Janu Sandhi Marma Kshatha wsr to Traumatic Knee Injury- A Case Report

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ABSTRACT:

Pain, an unpleasant sensation, drives individuals to seek medical attention and hinders daily activities, particularly when it affects mobile joints like the knee. Injuries to knee joints often result from indirect forces, causing pain, swelling, and impacting quality of life. Modern treatments include analgesics and, in severe cases, surgery. *Ayurveda* offers holistic approaches to managing joint disorders, providing relief, and promoting overall well-being. A case study involving 58-year-old female with a history of a fall, experiencing pain, and swelling, in the right knee joint with limping. The probable diagnosis based on clinical presentation is *Janu Sandhi Marma Kshatha*. In this case, *Ayurvedic* treatment includes the administration of Classical medications like *Mahayogaraja guggulu* and proprietary medications like Flex eaze having the extracts of *Rasna Panchaka* formulation, Digestea brew dip tea [*Shunti, Amalaki, Musta, and Guduchi*] for 45 days twice daily with warm water as *Anupana*. *Bahya Chikitsa* includes *Abhyanga* using *Dhanwantara taila* followed by *Swedana* starting from the 3rd day to 45th day. Assessment, using KOOS questionnaires, Walking distance parameters, and Visual analog scale [VAS] revealed significant improvements in symptoms, emphasizing the delay of osteoarthritis onset. This case highlights *Ayurveda's* role in effectively addressing knee joint issues, providing a comprehensive alternative to conventional treatments.

KEYWORDS: *Agantuja, Analgesics, Janu Sandhi Marma Kshata, Osteoarthritis, Rasayana*

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INTRODUCTION:

The knee joint is a vital and strongest joint in the human body, enabling movement and supporting the body's weight. It is a compound synovial joint comprising the tibiofemoral and patellofemoral joints, primarily functioning as a hinge joint for flexion, extension, and other movements. [1] The functionality and stability of the knee rely on specific muscles, ligaments, cartilage, synovial, and other connective tissues. [2] The

synovial membrane, a fluid-filled sac, lubricates and protects the joint by lining the space between the bones. Ligaments are tough elastic tissues around a joint, that provide support and restrict movement. [3] A knee injury significantly impacts an individual's quality of life, regardless of age, gender, or occupation. In *Ayurveda*, the Knee joint is considered a "*Janu Sandhi*" and "*Sandhi Marma*". It is a critical anatomical site supported by two types of *Snayu* or

ligaments i.e., *Pratanavati Snayu* and *Vritta Snayu*⁴. *Sushruta Samhita* explains that *Marma viddha lakshana* is caused by *Aghata* (trauma).^[5] The clinical features of ligamentous injuries in the knee joint can be compared to various *Ayurvedic* descriptions such as "*Janu Marmabhighata Lakshanam*," "*Snayu Viddha Lakshanam*,"^[6] "*Janu Sandhi Mukta Lakshanam*."^[7] The presentation will be in the form of *Khanjatha*, *Shoola*, *Shopha*, etc and *Ayurveda* principles of management include *Pachana*, *Vatahara*, and *Rasayana* are effective in relieving pain and other symptoms.

CASE STUDY:

A 58-year-old female was consulted through an online consultation with symptoms of pain, heaviness, and swelling in the right knee joint for 7 days post-trauma and associated with a change in gait. The patient had a history of a fall two years ago and had

an injury to the right knee joint with a ligament tear and no osteoarthritic changes. She had taken *Ayurveda* medications for the same for about 2 months and found relief. But the patient had trauma to the same joint, did not take any medications for 7 days, and had been sitting on the floor for extended periods to perform traditional rituals. The patient had not undergone any radiological investigations and had sought consultation for further assessment. The patient has been prediabetic for the past 2 years and is on *Ayurvedic* medications. Based on the clinical presentation, the condition was diagnosed on *Janu Sandhi Marma Kshatha* with H/o trauma, manifestation in the knee joint, and acute onset.

THERAPEUTIC INTERVENTIONS:

1. **Nidana Parivarjana:** To avoid heavy exercises or exertion
2. **Shamana Chikitsa-** *Vatahara* and *Rasayana* as mentioned in Table 2.

Table- 1: Examination of the locomotor system:

Inspection	Right knee <ul style="list-style-type: none"> • Difficulty and Pain while walking even for a short distance and sitting down • Swelling • Flexion deformity • No Scar • No varicosities seen Left knee <ul style="list-style-type: none"> • No structural deformity
Palpation	Right knee <ul style="list-style-type: none"> • Tenderness present over the medial side • Affected flexion and extension • No Crepitus in the knee joints
Range of movements	<ul style="list-style-type: none"> • Right knee- The degree of flexion and extension is reduced • Left knee- No deformity noted
Reflexes	<ul style="list-style-type: none"> • Normal on both the knees

Table- 2: Internal Medications given for 45 days with 3 Months Follow-up Period:

Date	Name of the Medicine	Dose	Kala	Frequency	Anupana	Changes Observed
12/04/2023 to 26/04/2023	Rasna , Guduchi, Eranda, Devadaru and Shunti extract – Flex Eaze capsule	1000 mg in two divided doses	Apana Kala, (before food)	Twice daily	Lukewarm water	<ul style="list-style-type: none"> Swelling and heaviness in the knee joint reduced within 3 days. Pain in the right knee joint improved gradually Appetite was improved
	Mahayogaraja Guggulu	500mg	Apana Kala, (before food)	Twice daily	Lukewarm water	
	Dhanwantara Taila Abhyanga to the right Knee joint followed by Swedana [From the third day of treatment, once the inflammation subsides]		Morning	Once daily		
	Shunti, Amalaki, Musta, and Guduchi - Organic Digestea Brew Herbal tea	1 tea bag- 1.75g	Evening around 5 pm, as a tea replacement	Once daily	-	
27/04/2023 to 11/05/2023	Rasna , Guduchi, Eranda, Devadaru and Shunti extract – Flex Eaze capsule	1000 mg in two divided dose	Apana Kala, (before food)	Twice daily	Lukewarm water	<ul style="list-style-type: none"> Reduced Pain in the right knee joint, flexion and extension improved Improvement in the Gait No pain while walking
	Mahayogaraja Guggulu	500 mg	Night (before food)	Once daily	Lukewarm water	
	Dhanwantara Taila Abhyanga to		Morning	Once daily		

	the right Knee joint followed by <i>Swedana</i>					
	<i>Shunti</i> , <i>Amalaki</i> , <i>Musta</i> , and <i>Guduchi</i> - Organic Digestea Brew Herbal tea	1 tea bag- 1.75g	Evening around 5 pm, as a tea replacement	Once daily	-	
12/05/2023 to 26/05/2023	<i>Rasna</i> , <i>Guduchi</i> , <i>Eranda</i> , <i>Devadaru</i> and <i>Shunti</i> extract - Flex Eaze capsule	1000 mg in two divided dose	<i>Apana Kala</i> , (before food)	Twice daily	Lukewarm water	• No pain or discomfort in the right knee

Table 3: Efficacy of treatment on KOOS:

Time of assessment	Pre-treatment	Post-treatment
Pain	11.11	94.44
Other Symptoms	35.71	85.71
Function in daily activity	13.24	94.12
Function in sports and recreation	5.00	85.00
QOL Knee related	6.25	87.50

OBSERVATION AND RESULTS:

Assessment questionnaires to observe the changes before and after treatment: [8]

The patient underwent two assessments: one before the commencement of treatment and another after 45 days of treatment. The "Knee Injury and Osteoarthritis Outcome Score (KOOS)" questionnaire was employed to evaluate the effectiveness of the treatment. It covers five key domains: pain, symptoms, activities of daily living, sports and recreation function, and knee-related quality of life. The scores obtained from KOOS are converted to a scale ranging from 0 to 100, where zero represents the most severe knee problems, and a hundred signifies the absence of any knee problems. The results are described in Table 3, which

shows improvement in parameters like Pain, other symptoms like swelling, ability to flexion, and extension, function in daily activity, function in sports and recreation, and improved quality of life after 45 days of treatment.

Walking Distance Parameter:

Before treatment walking distance was 300 meters which changed to 1000 meters (1 kilometer) after completion of treatment.

Visual Analog Scale (VAS):

The Visual Analogue Scale (VAS) measures pain intensity. The VAS consists of a 10cm line, with two endpoints representing 0 ('no pain') and 10 ('pain as bad as it could be'). Before treatment, VAS was 9/10 which changed to 0/10 after treatment. It means the patient was pain-free after treatment

DISCUSSION:

The knee is a predominant hinge joint that enables a range of movements and contributes to a flexible life. It is referred to as "*Janu Sandhi*" in *Ayurveda*. Trauma-causing knee joint pain can be considered as *Janu-Sandhi Marma Kshata*. According to *Acharya Susruta*, *Janu Sandhi* is a *Vaikalyakara Marma* and injury to this *Marma* causes *Khanjatha*. *Khanjatha* can be generalized from a visible limping to any weakness interfering with the joint's return to its functional rigor. So, considering the fall history as *Agantuja nidana*, *Pachana*, *Vatahara* and *Rasayana* line of management has been carried out.

The primary symptoms like pain, heaviness, and swelling in the right knee joint were subsided by the administration of *Flex Eaze* and *Digestea* brew. These mainly have *Deepana- Pachana Karma* which helps relieve the symptoms of *Ama*. *Flex Eaze* is an *Ayurveda*-based formulation having ingredients of *Rasna Panchaka kwatha* that helps restore the flexibility of joints by enhancing the lubrication in the joints and reducing toxin accumulation in the joints and bones. It helps to pacify vitiated *Vata dosha* and does *Ama pachana* which takes *Sthana samshraya* in *Sandhi*, *Asthi*, and *Majja*⁹. Its *Amapachana* actions help dispel stiffness and improve mobility of the joints by rejuvenating the fluids around the joints. Thereby relieving all signs of *Ama* such as inflammation, swelling, rise in temperature, general lassitude, etc.^[10]

Organic *Digestea Brew* has the ingredients of *Shunti*, *Musta*, *Guduchi*, and *Amalaki*. It is an *Ayurveda*-based infusion that rejuvenates the digestive system and detoxifies the body naturally due to its *Deepana* and *Pachana* actions.^[11] *Mahayogaraja guggulu* is a Herbo-mineral *Rasayana* formulation specially made for bone and joint disorders. It reduces the aggravated *Vata dosha* and

promotes lubrication in the joints.^[12] *Bahya chikitsa* of *Abhyanga* using *Dhanwantara taila* is employed as it is mentioned as "*Sarva Vatavikarajit*" and "*Marma-Asthi Ksthata Ksheenesu Pujitham*".^[13] When applied to the body in the form of *Abhyanga*, the oil penetrates deep into the tissues, offering a wide range of benefits, aiding in the management of inflammation, numbness, and nerve-related pain. The *Rasayana* effect of *Mahayogaraja guggulu* along with *Abhyanga* and *Swedana* had helped in managing limping.

CONCLUSION:

The initial analysis of this observatory report suggests that the proposed *Ayurvedic* treatment protocol is effective for knee joint injuries. It enhances joint stability, alleviates symptoms such as pain, swelling, and heaviness, and aids in the individual's rehabilitation for both strenuous and non-strenuous daily activities. Furthermore, the observed effectiveness of this treatment persists during the three-month follow-up period. Hence, *Ayurvedic* treatment can be adopted for effective and non-invasive rehabilitation of Knee injuries and to reduce the risk of manifestation of osteoarthritis. This medication reduces the chances of surgical interventions and better long-term improvement in terms of pain and mobilization when compared to other analgesics.

Limitation of study:

Further studies could involve analyzing the radiological changes before and after treatment, and expanding the sample size to encompass a larger number of similar cases. This comprehensive approach allows for a detailed examination of the pre-and post-treatment radiological alterations, contributing to a better understanding of treatment effectiveness and potentially

refining protocols for a broader range of cases.

Patient consent:

Written informed consent for the publication of her clinical details was obtained from the patient.

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