



## JANU DHARA: A UNIQUE MODALITY FOR QUALITY IMPROVEMENT OF KNEE JOINT DISORDER (OSTEOARTHRITIS) –A CASE STUDY

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### ABSTRACT

Knee osteoarthritis (KOA) is a degenerative disease characterized by the deterioration of the articular cartilage, and hyperplasia of the subchondral bone. KOA is the leading cause of knee pain and dysfunction in adults. The incidence of this arthritis has increased year by year and the corresponding diagnosis and treatment have developed rapidly as well. Treatment includes NSAID'S, manipulation exercises and Knee replacement. In Ayurveda panchakarma therapies like Janu Basti and Janu Dhara have shown moderate improvement in symptoms of OA knee which improves quality of life and can prevent knee replacement. This paper reviews the clinical study of quality improvement of knee joint disorder by Janu Dhara.

**KEYWORDS :** Janu Dhara, Janu Basti, KOA(Knee Osteoarthritis) , Articular Cartilage, Manipulation , automated kaya sek (Pizichil yantra)

### INTRODUCTION

Osteoarthritis (OA) is a chronic, progressive disease with high disability in the joints. It is characterized by the disintegration of the articular cartilage, which reduces the joint space between the two bones and increases friction between them, causing inflammation and pain to be transmitted through the nerve endings in the joint space. Knee osteoarthritis (KOA) is one of the most typical manifestations of osteoarthritis.<sup>(1)</sup> The clinical manifestations are joint pain, swelling, stiffness, and other symptoms, which seriously affect the patients' quality of life and cause a huge social and economic burden<sup>(2)</sup>. In Ayurveda, OA can be co related to *SandhigataVata*, which develops as a result of *Dhatu-Kshaya* and other *Vata Prakopaka Nidana*. According to *Acharya Charaka*, the most significant symptoms of *SandhigataVata*, which are similar to OA, are *Vatapurnandritisparsha*, *Vedana*, *Sandhi Shoola*, and *Atopa*. In *PanchakarmaChikitsa*, *Dhara Karma* is one of the treatments mentioned under *MurdhniTaila Chikitsa* as *Shiro Dhara*. when it is applied on *Janu* (Knee) it is call *Janu Dhara*. In this case study *Janu Dhara* with *TilTail* was done for 15 days and showed satisfactory results.

### MATERIALS AND METHOD

*Janu Dhara* was performed in center of excellence *Panchakarma* unit of DSRRAU jodhpur with automated *kayaSek (Pizichilyantra)* in which constant temperature is set at 40 degrees Celsius. *KayaSek yantra* or *Sarvang Dhara Yantra* have 2 nozzles for *Dhara* which is moving over body from chest to ankle. this movement of nozzles is fixed over the both knees 4 angul (7 cm) above. *Droni* or *Dhara table*<sup>(3)</sup>, which is a waist-high table used for both *Abhyanga* and the *Dhara* procedure. Then patient is advised to lie or sit on *Dhara* table with extended legs and *Dhara* of Luke warm *Til tail* is started over both knee joins with circular and upward to downward gentle massage. *Taila* is considered as the best *Vatashamaka* and *Taila Dhara* can be successively adopted in *Vatavikaras*. *Tila Taila* is said to be the best *Vata Shamaka* owing to its properties such as *Madhura Kashaya Tikta Rasa*, *Guru* and *Snigdha Guna*, *Ushna Veerya*, *Madhura Vipaka*.

In this case study *JanuDhara* with *TilaTaila* was done for 15 days and showed satisfactory results.

### Case Study

A female patient aged 46 years came to *Panchakarma*

department on 13/7/22 with OPD Reg.no.16934, of **Dr. S R. Rajasthan Ayurveda University Jodhpur** with complaints of pain in B/L knee joints for 6 years, patient felt difficulty in walking, sitting in squatting position and inability to climb the stairs. On examination crepitus was found in both joints with restricted movements. X ray showed reduced joint space B/L knee joints. patient was nursing superintendent in district hospital. She was advised for knee replacement by orthopedic surgeon. Patient did not want to replace the knees. Then she visited here for alternative treatment approach which can postpone or delay knee replacement and can improve quality of life.



Before Treatment



After Treatment



X ray before treatment

**Observations:**

Subjective criteria - KOOS (knee osteoarthritis outcome score) score.

Objective criteria – walking distance, standing time, ROM, X-rays

**Koos Score**

The Knee Injury and Osteoarthritis Outcome Score (KOOS) is a questionnaire designed to assess short and long-term patient-relevant outcomes following knee injury. The KOOS is self-administered and assesses five outcomes: pain, symptoms, activities of daily living, sport and recreation function, and knee-related quality of life. The KOOS meets basic criteria of outcome measures and can be used to evaluate the course of knee injury and treatment outcome. KOOS is patient-administered, the format is user-friendly and it takes about 10 minutes to fill out.

**Scoring Instructions**

The KOOS's five patient-relevant dimensions are scored separately: Pain (nine items); Symptoms (seven items); ADL(Active daily life Function) (17 items); Sport and Recreation Function (five items); Quality of Life (four items). A Likert scale is used and all items have five possible answer options scored from 0 (No problems) to 4 (Extreme problems) and each of the five scores is calculated as the sum of the items included.(5)

**Interpretation of Scores**

Scores are transformed to a 0–100 scale, with zero representing extreme knee problems and 100 representing no knee problems as common in orthopedic scales and generic measures.

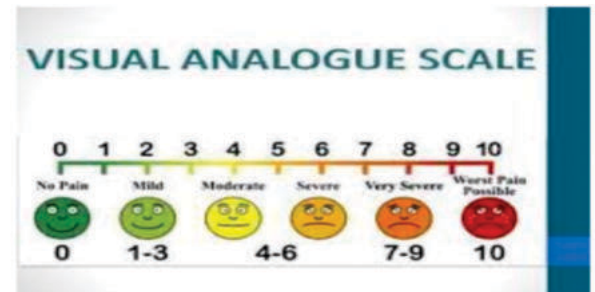
Scores Between 0 and 100 represent the percentage of total possible score achieved.

PARAMETER	B. T	A. T	DIFFERENCE (B.T- A.T)	% IMPROVMENT
Pain	31	16	15	48.38 %
Symptoms	24	11	13	54.16 %
ADL Function (Active daily life)	54	32	22	40.74 %
Sport and Recreation Function	20	19	1	5 %
quality of life	15	8	7	46.66 %
Total	132	86	46	34.84 %

Walking distance improved from 100 steps to 1000 steps without pain.

Standing time improved from 5 minutes to 15 minutes without any discomfort.

Range of motion also improved. Changes in post treatment x ray remained same without any significant change.



VAS Score before treatment was 7

VAS Score after treatment is 3.

Xray of Knee joint radiological change was not seen.

KL Grading AT =3, BT =3

**DISCUSSION**

Acharya Sushrut mentioned in Sandhigata Vata chikitsa that "Sneha upnahaagnikarmabandhanaunmardananani cha". (6). Hence snehana and swedana in the form of Janu Dhara would be promising to relieve the symptoms which will increase quality of life. The actions of Swedana can be understood as Stambhaghna. Swedana relieves Stambha (stiffness). Stambha is mainly caused by Vyana Vayu, Sleshmka Kapha, Amarasa, Mamsa, Meda and Vasa. Vayu by Rooksha Guna absorbs Snigdhatva so causes Stambha. Swedana by its Snigdha and Ushna Guna does Sroto-suddhi (cleansing of micro channels) and Ama Pachana, thereby relieving stiffness.

**Modern View**

Swedana works as the body's metabolism speeds up. Capillaries are widened and circulation is boosted by Swedana Ushna Guna. Increasing circulation improves waste removal and boosts the skin's ability to absorb medicines or Sneha. Additionally, heat control encourages muscle recovery and may have hypo analgesic benefits.

**CONCLUSION:-**

On the basis of this single case study, it can be concluded that Panchakarma treatment like Janu Dhara is effective to improve quality of life in knee joint related disorders like osteoarthritis.

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