



**TO EVALUATE THE EFFICACY OF BALA TAILA MATRA BASTI W.
S. R. TO RANGE OF MOTION IN PATIENTS OF ‘JANU
SANDHIGATAVATA’ VIS-À-VIS ‘OSTEOARTHRITIS-KNEE JOINT’**

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ABSTRACT

Aims and Objectives: Aim to investigate whether the procedure of *Matra Basti* with *Bala Taila* has any effect on ‘Range of motion’ in the patients of Osteoarthritis of Knee Joints. **Materials and Methods:** A total of 20 patients having Osteoarthritis of knee joints were included in the present study. Patients were administered with “*Matra Basti* using *Bala Taila*” after giving *snehan* and *svedana* to them. The time of administration of *Basti*, time of expulsion and *samyaka anuvasita*

lakshanas were noted on each day. The readings for range of motion for both knee were noted before treatment and after treatment of 7 days. **Observation:** Twenty patients of osteoarthritis of knee joint of age group 40 to 70 years irrespective of sex, religion and socioeconomic status were included for the study. Patients having systemic disorders, which might interfere with the treatment and those having traumatic conditions were not included in the study. **Results:** The study showed significant improvement in range of motion scores after administration of *Matra Basti* with *Bala Taila*. **Conclusion:** The administration of *Matra Basti* using *Bala Taila* has significant results for the improvement of ‘range of motion’ in the patients of Osteoarthritis of Knee Joints. Key words: *Bala Taila*, *Matra Basti*, *Sandhigata Vata*, *Janu*, Osteoarthritis, Knee Joint, Range of motion.

KEYWORDS: *Matra Basti*, *Bala Taila*, *amyaka anuvasita lakshanas*, *Sandhigata Vata*.

INTRODUCTION

Ayurveda propagates wholesome health. Its objectives are to preserve the health of the healthy and cure the ailment of the ailed. These objectives lead to an improved quality of life for all people. There are innumerable diseases that are barriers in attaining these objectives.

All the diseases in the body whether in *shakha*, *kostha* or *marma pradesha* are inspired mainly by *vata*.^[1] *Sandhi-gata-vata* is one such disease in which the vitiated *vata* localizes in the *asthi-sandhis* of the body. It is a condition common in the *vridhdha awastha* coinciding with the *vata* predominant phase of life. Such a condition, when affecting the knee joints, is termed as *JanuSandhigatavata*. In ayurvedic terminology, *janu* refers to the knee joint.

Sandhigata vata is correlated with Osteoarthritis. It is a degenerative joint disorder which may begin asymptotically in the second and third decades of life. Knee joint is a common site for osteoarthritis. The major risk factors associated with knee joint are old age, female sex, obesity and occupational knee-bending. Its treatment includes administration of pain killers like NSAIDS (non steroidal anti inflammatory drugs), Narcotics, Corticosteroids, Intra articular injections and other remedies, which gives only temporary relief. Surgery (Knee replacement) is the last resort. These are quite expensive, need hospitalization and often cause adverse effects.

Basti Chikitsa is considered the best management of vitiated *vata*.^[2] The panchkarma procedure of *Basti* has been hailed as '*arda chikitsa*', that is, half of the whole treatment by *acharyas*.^[3] *Anuvasana Basti* is a type of *Basti*^[4] in which *Sneha dravya* is given by *Basti*. *Matra Basti* is a type of *Anuvasana Basti*.^[5] It is explained that this type of *Basti* can be given to almost everybody, in all the seasons, without any strict regime of *ahara* and *vihara* and it is *nishpariharya*;^[6] i.e, it can be given with maximum ease and has no complication thereafter.

Janu is a *Sandhi Marma*.^[7] It is explained in *Charaka Samhita* that for the management of the diseases at *marma sthana*, *vata* *dosa* should be treated.^[8] *Basti* is considered most effective for the management of *vata*; summing the above points *Basti* might be considered most rewarding in the treatment on *Janusandhigata vata*.

Charaka refers to *taila* as '*marutaghana*'. *Taila* is mentioned to reduce *vata* without increasing *kapha*. It also stabilizes the *mansa dhatu*.^[9] *Taila* is used as drug of choice in *anuvasana Basti*. Due to its *sneha* property it balances the *rooksha guna* of *vayu*, due to its

guru guna treats *laghu guna* of *vayu* and due to its *ushna guna* takes care of the *sheethala guna* of *vayu*.^[10] *Acharya Sushruta* mentions *snehana* (outer/internal) for management of *Sandhigatavata*.^[11] *Asthi dhatu* has *kharatva*^[12] which is also combated by *taila*. So we can say that *taila* can be used to treat *sandhigata vata* and bring normalcy to the *dhatu*.

In the present study *Bala Taila* is used as *sneha dravya* in *Matra Basti* for the management of *Janusandhigata Vata*. In *Sahastrayogam*, *Bala Taila* as '*Shrestha Vata Vyadi Vinashanam*' and can be used as a *Sneha* for *Matra Basti*.^[13]

METHODS

Study Design and Patients: A sample of 20 patients with *JanuSandhigatavata* were selected for the study. All the patients were given *Matra Basti* with *Bala taila*.

Inclusion criteria were as follows: Patients with *Pratyatma Laksana* of *Sandhigata Vata*; Patients of age group 40 to 70 years irrespective of sex, religion and socioeconomic status; patients who are fit for *Matra Basti* and were willing to sign the informed consent.

Exclusion criteria were: Patients having systemic disorder which might interfere with the treatment, Patients who were not fit for *Matra Basti*, Patients with infective Neoplastic and traumatic condition of Knee joint.

Procedure

The patients who fulfilled the inclusion criteria were subjected for routine Haematological examination and Antero-Posterior View & Lateral View X-ray of affected Knee joint. Before commencement of the treatment an informed consent was taken from the patients, and the patients were evaluated for both Subjective and Objective parameters and grading were noted.

Patients were subjected to whole body *snehana* for 30 minutes followed by *baspa sweda* for 10 minutes. *Bala taila* was used for *bahaya snehana*. The patients were asked to consume *laghu* and *alpa ahara*. The patient was then asked to attend natural urges and walk a few steps before reaching the *Basti* room.

The patient was advised to lie comfortably in left lateral position on a cot. The cot was of comfortable height. The patient was asked to lie with left leg stretched straight and the right

leg flexed at knee and hip joints without support of pillow. The head resting on left hand with the right hand resting on the right leg.

Bala Taila was taken in a small container. The *taila* was made lukewarm by keeping it in a vessel containing hot water.

The *taila* was taken in an enema syringe fitted with rubber catheter. The anal orifice and the tip of the catheter were lubricated with oil. After removing the air from the syringe and the catheter, the catheter was introduced into the anus gently upto 4 inches. The piston of the syringe was pressed gently and with uniform force and the *taila* was into the rectum.

The patient was asked to take deep breath and not to shake his body while introducing the catheter and drug. Small quantity of *taila* was retained in the syringe in order to avoid entrance of air into the *pakvashaya* (intestine/ rectum).

After the administration of *Basti*, the patient was advised to lie in supine position with hand and legs freely spread over the table. Thereafter both the legs of the patient were raised from the cot three times. The buttocks were gently tapped three times. Simultaneously taps were given on the soles and palms also. After sometime patient was advised to get up from the table and take rest and not to indulge in day sleep.

The time of administration of *Basti*, time of expulsion and *samyaka anuvasita lakshanas* were noted on each day. The readings for range of motion were noted before treatment and after treatment of 7 days. Goniometric Method was used to measure the range of motion.

The subjective criteria were scored in accordance with Index of severity of Osteoarthritis of the Knee by Lequesne et'al.

Parameters	Findings	In cms
Range of Movement (Goniometric Method)	Right Knee Joint Flexion Left Knee Joint Flexion	

The patients were assessed on the first day (before starting the treatment) and 7th day (after completion of treatment). As there is no strict restriction of diet and regimen for *MatraBasti*, no strict Pathya-Apathya was advised. If the patient develops urge to defecate or micturate or to pass flatus, then the *Bastinetra* should be removed, after completion of the urges the remaining medicines should be administered.

Ethics

The procedures in the present study were in accordance with the ethical standards of the responsible committee. Patients were given information saying that participation was voluntary and that they could choose not to participate at any time without having to give a reason

Data analysis

A pre-test, post-test experimental group design was used for the study. Data was tabulated on master chart. Statistical analysis was performed using SPSS 16.0 version software. Independent T test was used for the analysis of pre treatment and post treatment finding. Significance level was set at $P < 0.05$.

RESULTS

A Statistically significant difference was observed within pre and post reading of range of motion. Pre and post analysis was done by Independent T test.

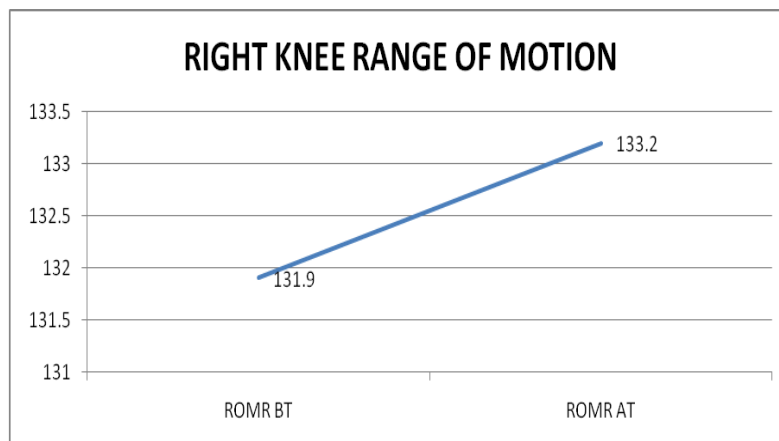


Figure 1: showing pre-post analysis range of motion in right knee joint

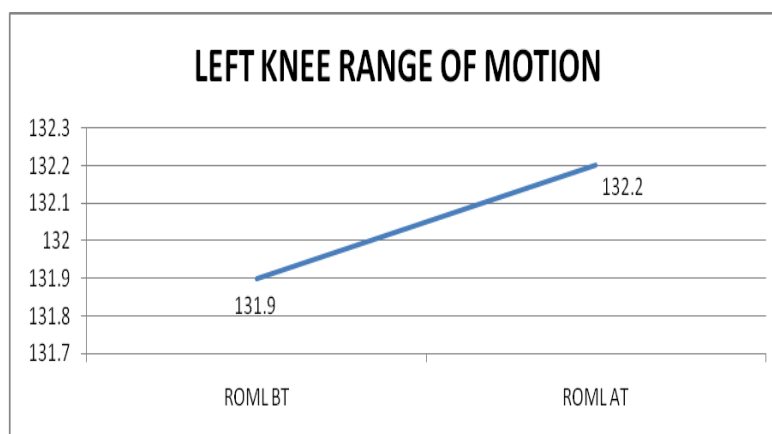


Figure 2: showing pre-post analysis range of motion in right knee joint

DISCUSSION

Sandhigatavata is described in all *Samhita* and *Sangrahagrantha* under *Vatavyadhi*.

Various *Aharaja*, *Viharaj*, *Manasa* and other *Vata* *Prakopaka* *Nidanas* are mentioned in *detaila* for the occurrence of *Vatavyadhi*. Though, *Sandhigatavata* usually occurs in *Vriddhavastha* which is *parihanikala* in which *Dhatukshya* takes place which leads *Vataprakopa*.

Vata and *Asthi* have *Ashraya-Ashrayi Sambandha*, this means that *Vata* is Situated in *Asthi*. *Vriddha*- Increased *Vata* diminishes *Sneha* from *Asthidhatu* due to its opposite qualities to *Sneha*. Due to diminution of *Sneha*, *Khavaigunya* (*Rikta Srotas*) occurs in *Asthi* which is responsible for the production of *Sandhigatavata*.

Osteoarthritis is the most common form of arthritis. It is a degenerative type of arthritis which mainly occurs in old age. Degeneration takes place in the joint which makes the individual disabled or handicapped. Degeneration occurs continuously in most of the patients which makes the person disabled for life long. It is a chronic degenerative disorder of multi-factorial etiology characterized by loss of articular cartilage and periarticular bone remodeling. It involves the entire joint including the nearby muscles, underlying bone, ligament, synonium and capsule. The risk factors for osteoarthritis are old age, obesity, female sex, major joint trauma, repetitive stress, genetic factors, prior inflammatory joint diseases and metabolic or endocrine disorders.

Symptoms of *Sandhigatavata* are *Sandhishula*, *Sandhishotha*, *Akunchana Prasarana Janya Vedana* and *Hanti Sandhi Gati* described by various *Acharya*. Here, *Sandhishula* and *Sandhishotha* occurs due to *Vataprakopa*. A special type of *Shotha* i.e. *Vatapurna-driti-sparsha* or *Atopa* is mentioned which indicates *Vata* dominance of *Shotha*. *Akunchana-prasaranjanya-vedana* and *Hanti-sandhi-gati* occurs due to *Kaphakshya* and *Vata* *Prakopa*. Symptoms of Osteoarthritis are similar as of *Sandhigatavata* i.e. Joint pain, Swelling, Stiffness, Disability and Crepitations over joint.

In the *Samprapti* of *Sandhigatavata*, *Prakupita Vata* gets situated in *Asthi Sandhi* where *Khavaigunya* - *Rikta Srotas* is already present. Then *Dosha Dushya Sammucchana* takes place in *Asthi Sandhi* and further in *Samprapti*, the disease *Sandhigatavata* appears with its symptoms.

Sandhigatavata is *Kastasadhya vyadhi* because all the *Vatavyadhis* are difficult to cure and they are said as Mahagada. So being a *Vatavyadhi*, *Sandhigatavata* is *Kastasadhya*. Madhyama Rogamarga, Situation in Marma *Asthi Sandhi*, Vitiation of *Asthi* and Majja, Dhatukshya, Vriddhavastha also makes it *Kastasadhya*. In Allopathy science, the scientists believe that once the disease Osteoarthritis has taken place, then it is very difficult to reverse or block that disease process. Till date, no treatment is available that can reverse or slow or block the disease process. Allopathy science has only palliative treatment for Osteoarthritis.

Acharya Charakaa has mentioned repeated use of Snehana, Svedana, *Basti* and Mrudu Virechana for the treatment of *Vatavyadhi*. He has not mentioned the treatment of *Sandhigatavata* separately. *Acharya Sushruta* has described specific treatment for the *Sandhigatavata* first time i.e. Snehana, Upanaha, Agnikarma, Bandhana and Unmardana.

Range of motion right knee: There was a significant improvement in the range of motion observed before treatment and after treatment ($p < 0.05$) in the right knee joint.

Range of motion left knee: There was a significant improvement in the range of motion observed before treatment and after treatment ($p < 0.05$) in the left knee joint.

Scope of Future Research

- Larger number of sample size should be included to confirm our results and generalize the results to population outside this sample population.
- Other parameters like pain, stiffness, difficulty in walking etc. should also be assessed for the patients.
- Same procedure using other *taila* should be studied to compare the relative efficacy of different *tailas*.

CONCLUSION

The present study is an attempt to explore the efficacy of *Matra Basti* in the management of *Sandhigata vata*. *Bala taila* has been used and its effects compared based on various parameters. *Matra Basti* can be used effectively and with ease in management of *Sandhigata vata*. Since it is one of the simplest forms of *Basti* and involves no complications it can be administered without much hassles or prolonged preparations. The ease of the procedure can be an encouraging factor for the physician to employ Panchakarma to provide relief to the patient.

The administration of *Matra Basti* using *Bala Taila* has significant results for the improvement of 'range of motion' in the patients of Osteoarthritis of Knee Joints.

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