

An Observational Clinicle Study to Assess the Combined Effect of Matra Basti and Janu Basti with Rasona Tail in Janusandhigataavata W S R Osteoarthritis of Kneejoint

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ABSTRACT

Sandhigata vata mentioned under vatavyadhi in charaka samhita chikitssthana is characterized by *vatapurna druthi sparsha, shotha, prasarana akunchanayor pravrutishacha vedana*. caused due to kshaya of asthi dhathu, kledaka kapha by vata dosha. It can be due to dhathu kshaya or avarana, sandhigata vata can be corelated to osteo arthritis, a common degenerative joint disorder, caused by degradation of the joints, articular cartilages and subchondral bone knee joints. The signs and symptoms of osteoarthritis are the pain typically in knee joint, inflammation, creptus on movement, stiffness. Osteoarthritis is a major health issue worldwide with prevalence of about 22% to 39% in India.

Acharya Sushrutha and Acharya Charaka have mentioned Snehana (Bahya, Abhyantara) as a line of treatment in Sandhigataavata

So here an attempt is made through combined effect of Janubasti and Matrabasti using Rasona Taila mentioned in Bhaishajyia ratnavali under Vata Vyadhi for treating Janusandhigataavata in specific.

KEYWORDS: Sandhigata Vata. Osteoarthritis, Snehana, Matra Basti, Janu Basti

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INTRODUCTION

Sandhigataavata is one among the Vataja nanatmaja Vyadhi. Among the Tridoshas, Vata has given prime importance both in the physiological and pathological conditions. The other two doshas being inert, their equilibrium depends on also Vata¹. The Vayu vitates by different etiological factors, spreads through different channels of the body and get settle in the particular site to manifest the disease². One such disease caused due to predominance of Vata is Sandhigataavata. This is the pathological condition manifests where Asthi and Sandhi (seat of Sleshaka kapha) are degenerated by excited vata³. The disease Sandhigataavata correlates with osteoarthritis, a degenerative joint disorder the symptoms and signs are similar to those of Sandhigataavata

This condition is similar to Osteoarthritis, a degenerative joint disease² in modern counterpart,

characterized by degeneration of joint cartilage and adherent bone that can cause joint pain and stiffness, According to WHO, Osteoarthritis is the second commonest musculoskeletal problem in the world population (30%) after backache (50%). It is chronic degenerative disorder of multifactorial etiology characterised by loss of articular cartilage and periarticular bone remodeling. Knee joint is the most common joint disorder usually seen in the elderly people and the people who do excessive physical deeds

Due to the prevalence of this disorder it has become a major problem and burden over the society, indirectly reducing the working potency resulting into dependency Charaka has clearly indicated in Vatavyadhi Chikitsa that, "*Brumhanam yascha tat sarvam prashastam vataroginam*"⁵. The brumhana

measures in different forms like bhojana, abhyanjana, snigdha sweda, seka, vasti etc are beneficial for the patient suffering from Vataroga. For the Sandhigata vata, all acharyas have given prime importance to Snehana chikitsa which can be performed both Bahya and Abyantara.

In the present study Among janu basti followed by matra basti is selected for the study which acts as snehaniya, brimhaniya and thus counteracts vata dosha.

Matra Basti and janu basti are selected in this study because of their simplicity and efficacy and rasona taila⁷ which is having the property of Vedanahara and Shothahara. Considering all these facts an observational study was conducted to analyse the combined effect of MatraBasti and janubasti with rasona taila in the management of Janusandhigata vata. Among all the treatment modalities this study was planned for An observational clinical study to assess the combined effect of matrasthi and janubasti with rasona taila in Sandhigata vata W.S.T. OA of Knee joint

MATERIALS AND METHODS

A. SAMPLE SOURCE :

Patients suffering from Janusandhigata Vata were selected from the OPD and IPD of Taranath Government Ayurvedic Hospital Ballari.

B. LITERARY SOURCE:

Literary aspect of the study is collected from Ayurveda classics and updated with recent medical journals, internet source, and contemporary texts.

C. DRUG SOURCE:

Drug is collected from the natural habitat after proper identification by Dravyaguna expert and Rasona Taila is prepared as mentioned in bhaishajya ratnavali in vatavyadhi chikitsa rasashala of @ rasashala of Taranatha ayurvedic pharmacy, Ballari.

Preparation of Rasona Taila:

- Tila Taila – 4 part
- Rasona swarasa -4 parts
- Rasona Kalka- 1 part
- jala-16 parts.

Diagnostic criteria:

Individuals will be selected as per the classical lakshanas of sandhigata vata and also based on signs and symptoms of osteoarthritis of knee joint and criteria based on

American college of rheumatology classification and reporting of osteoarthritis of the knee joint:

Pain in bilateral knee joints along with any of minimum 5 following criteria's

| Clinical Criteria | Radiographic | Laboratory |
|-----------------------------------------|------------------|----------------|
| Stiffness < 30minutes | Bony enlargement | ESR <40mm/hour |
| Crepitus | Osteophytes | RF <1.40 |
| Bony tenderness | | |
| No palpable warmth | | |
| Synovial fluid signs of osteoarthritis. | | |

Individuals were selected as per the classical Lakshanas of Sandhigata Vata and also based on signs and symptoms of osteoarthritis of contemporary science.

AMERICAN COLLEGE OF RHEUMATOLOGY CRITERIA FOR THE CLASSIFICATION AND REPORTING OF OSTEOARTHRITIS OF THE KNEE JOINT:

1. Inclusion criteria:

- A. Patients having lakshanas of janusandhigata vata like *shoola, shotha and prasarana akunchanoyar pravruttscha vedana, sparsha asahatva, sandhi sputana & stamba.*
- B. Patients having signs and symptoms of osteoarthritis like stiffness, creptus, bony tenderness, nopalpable warmth, bony enlargement.
- C. Age group between 40 to 70 years of either sex with irrespective of religion and socio economic status
- D. Radiological evidence of osteoarthritis of kneeit's like reduced joint space and osteophytes.
- E. Patients fit for Matrasthi and Janubasti.

Exclusion criteria:

- A. Patients with vatarakta, amavata, koshtukashirsha, Rheumatoid arthritis, gouty arthritis, psoriatic arthritis and other diseases of knee joints.
- B. Patients with other systemic diseases which interferes with the treatment.
- C. Patients having traumatic, neoplastic, and infectious conditions. Of knee joints.

STUDY DESIGN

An open label clinical study

SAMPLE SIZE:

A minimum of 30 patients fulfilling the inclusion criteria were selected.

OBJECTIVES OF STUDY:

To assess the combined effect of Matrasthi and Janubasthi and with Rasona Taila in the management of Dhatukshayaja Janusandhigata Vata W.S.R. to osteoarthritis of knee joint.

Materials required for the study:

For Janu Basti: Gas stove, lighter, cylinder, vessels, cotton, Masha Pishti, hot water, goniometer and Rasona Taila.

For Matra Basti: Gas stove, cylinder, lighter, vessels, rubber catheter, enema syringe, Rasona Taila, Shatapushpa Churna, Saindhava Lavana, Latex hand gloves, Droni, Khalwa Yantra, measuring jar, Peshani and cotton swabs.

Methodology of the study:

The patients who fulfilled inclusion criteria were examined for both subjective and objective parameters using VAS scale and goniometer, the gradings noted. And then informed consent was taken prior to the treatment.

Method of doing Janu Basti:**5Intervention:**

Matrabasti and Janubasti were done as mentioned in classics.

Matrabasti Procedure

| | Treatment | Observation period | Total study duration |
|---------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|----------------------|
| Poorva karma | Sthanika abhyanga ie kati udara pradesha with Rasona tailam followed by stanika patra pind sweda. | BT: 0 th Day AT: 10 th Day AF ₁ : 18 th Day AF ₂ : 26 th Day | 26 days |
| Pradhana karma | Administration of rasona tailam through Guda marga | | |
| | Dosage | | |
| | In palas In ml | | |
| | 1 & half palas 72ml | | |
| Paschata karma | Spik tadana Pada utkshepana, <i>daatvaa panitalena hanyat snehasya, ishat padaanguliyugmaascheduthana dehasya talou pramrujyat.</i> <i>snehena paarshnyangulipidikaashcha</i> Laghu anna bhojana | | |
| Observational parameters, Before and after Matra Basti | <ul style="list-style-type: none"> ➤ BP, Pulse rate, heart rate, ➤ Respiratory rate before & after ➤ administration of basti ➤ Basti pranidana kala ➤ Basti pratyagamana kala ➤ Basti retention kala ➤ Samyak lakshana | | |

Procedure of Janubasti

| Procedure | Treatment | Observation period | Total study duration |
|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|----------------------|
| Purva karma | Instructions to the patients | BT :0 th Day AT: 10 th Day AF ₁ : 18 th Day AF ₂ : 26 th Day | 26 days |
| Pradhana karma | In this procedure warm medicated oil is retained with in a specially formed frame over knee region. Janu basti with rasona tailam | | |
| | Times Days | | |
| | 45 mins 09 days | | |
| Paschata karma | sthanika abhyanga with rasona tailam followed by patra pinda sweda | | |

Assessment Criteria:

Subjective and Objective parameters before and after treatment were analyzed and final conclusion was drawn

Subjective Criteria Objective Criteria

| Pain – Visual Analogue Scale | Crepitus |
|------------------------------|----------------------------------------------|
| Swelling | Range of motion –measured using Gonio meter |
| Stiffness | WOMAC index for physical function assessment |
| | Walking times' |
| | Tenderness |

| Sl. No. | Assessment Criteria | | | BT | AT | AF ₁ On 18 th day | AF ₂ on 26 th day |
|---------|-------------------------------------------|---|-----------------------------------------------|----|----|-----------------------------------------|-----------------------------------------|
| 1 | Janu Sandhi Shoola | 0 | No pain | | | | |
| | | 1 | Mild pain | | | | |
| | | 2 | Moderate pain but no difficulty in walking | | | | |
| | | 3 | Severe difficulty in walking | | | | |
| 2 | Janu Sandhi Shotha | 0 | No swelling | | | | |
| | | 1 | Slight swelling | | | | |
| | | 2 | Moderate swelling | | | | |
| | | 3 | Severe swelling | | | | |
| 3 | Akunchana Prasaranajanyavedana | 0 | No pain | | | | |
| | | 1 | Pain without winching of face | | | | |
| | | 2 | Pain with winching of face | | | | |
| | | 3 | Prevents complete flexion | | | | |
| 4 | Stambha | 0 | No stiffness | | | | |
| | | 1 | Mild stiffness | | | | |
| | | 2 | Moderate stiffness | | | | |
| | | 3 | Severe difficulty in walking due to stiffness | | | | |
| 5 | Sandhisphutana | 0 | No crepitus | | | | |
| | | 1 | Mild crepitus | | | | |
| | | 2 | Moderate crepitus | | | | |
| | | 3 | Severe crepitus | | | | |
| 6 | Range of motion measured using goniometer | 0 | >130 degree | | | | |
| | | 1 | 130-120 degree | | | | |
| | | 2 | 120-110 degree | | | | |
| | | 3 | 110-100 degree | | | | |
| 7 | Pain measured using VAS scale | 0 | No pain | | | | |
| | | 1 | Mild | | | | |
| | | 2 | Moderate to sever | | | | |
| | | 3 | Worst pain | | | | |

Overall Assessment Criteria

| | | |
|--------------------------------|--|--|
| No Relief <25% | | |
| Mild Improvemen 25-50%t | | |
| Moderate Improvement :- 50-75% | | |
| Good Improvement :- >75% | | |

RESULTS**OVERALL RESULT**

| BT Mean \pm SE | Follow up | AT Mean \pm SE | t-value | % | p – value | Remarks |
|------------------|-----------|------------------|---------|------|-----------|---------|
| 13.20 \pm 0.36 | AT | 4.53 \pm 0.40 | 16.2238 | 65.5 | <0.0001 | HS |
| | AF1 | 3.60 \pm 0.44 | 17.0442 | 72.8 | <0.0001 | HS |
| | AF2 | 3.57 \pm 0.45 | 16.8558 | 72.9 | <0.0001 | HS |

HS- Highly significant

RESULT ON JANUSANDHI SHOOLA

| Sl. No. | Parameters | BT Mean \pm SE | Follow up | AT Mean \pm SE | df | t-value | % | p – value | Remarks |
|---------|--------------------|------------------|-----------|------------------|----|---------|------|-----------|---------|
| 1. | Janu sandhi shoola | 2.80 \pm 0.07 | AT | 0.67 \pm 0.10 | 29 | 23.0279 | 76.2 | <0.0001 | HS |
| | | | AF1 | 0.47 \pm 0.10 | | 21.0728 | 83.4 | <0.0001 | HS |
| | | | AF2 | 0.53 \pm 0.10 | | 23.8370 | 80.9 | <0.0001 | HS |

Effect on JanusandhiShotha:

| Sl. No. | Parameters | BT Mean \pm SE | Follow up | AT Mean \pm SE | df | t-value | % | p – value | Remarks |
|---------|--------------------|------------------|-----------|------------------|----|---------|------|-----------|---------|
| 1. | Janu sandhi shotha | 1.13 \pm 0.15 | AT | 0.07 \pm 0.05 | 29 | 7.4433 | 94.2 | <0.0001 | HS |
| | | | AF1 | 0.07 \pm 0.05 | | 7.4433 | 94.2 | <0.0001 | HS |
| | | | AF2 | 0.07 \pm 0.05 | | 7.4433 | 94.2 | <0.0001 | HS |

Effect on PrasaranaAkunchanaVedana

| Sl. No. | Parameters | BT Mean \pm SE | Follow up | AT Mean \pm SE | df | t-value | % | p – value | Remarks |
|---------|---------------------------------|------------------|-----------|---------------------------------|----|----------------|-------------|-------------------|-----------|
| 1. | Prasaranaa kunchanajanya vedana | 1.80 \pm 0.12 | AT | 0.13 \pm 0.06 | 29 | 13.8127 | 95.6 | <0.0001 | HS |
| | | | AF1 | 0.03 \pm 0.03 | | 14.2529 | 98.2 | <0.0001 | HS |
| | | | AF2 | 0.10\pm0.06 | | 14.2974 | 94.5 | <0.0001 | HS |

Effect on Sthambha

| Sl. No. | Parameters | BT Mean \pm SE | Follow up | AT Mean \pm SE | df | t-value | % | p – value | Remarks |
|---------|------------|------------------|-----------|------------------|----|---------|------|-----------|---------|
| 1. | Stambha | 0.57 \pm 0.13 | AT | 0.07 \pm 0.05 | 29 | 4.0139 | 88.3 | =0.304 | HS |
| | | | AF1 | 0.07 \pm 0.05 | | 4.0139 | 88.3 | =0.304 | HS |
| | | | AF2 | 0.07 \pm 0.05 | | 4.0139 | 88.3 | =0.304 | HS |

Effect on Sandhi Sputana

| Sl. No. | Parameters | BT Mean \pm SE | Follow up | AT Mean \pm SE | Df | t-value | % | p – value | Remarks |
|---------|----------------|------------------|-----------|------------------|----|---------|------|-----------|---------|
| 5. | Sandhi Sputana | 2.17 \pm 0.12 | AT | 1.07 \pm 0.07 | 29 | 11.0000 | 50.8 | <0.0001 | HS |
| | | | AF1 | 1.03 \pm 0.06 | | 10.8647 | 49.3 | <0.0001 | HS |
| | | | AF2 | 1.03 \pm 0.06 | | 10.8647 | 49.3 | <0.0001 | HS |

Effect on Range of Movements:

| Sl. No. | Parameters | BT Mean \pm SE | Follow up | AT Mean \pm SE | df | t-value | % | p – value | Remarks |
|---------|----------------------|------------------|-----------|------------------|----|---------|------|-----------|---------|
| 1. | ROM using goniometer | 4.73 \pm 0.20 | AT | 1.70 \pm 0.24 | 29 | 16.6238 | 64.1 | <0.0001 | HS |
| | | | AF1 | 1.23 \pm 0.23 | | 16.8582 | 73.9 | <0.0001 | HS |
| | | | AF2 | 1.10 \pm 0.22 | | 16.7436 | 76.8 | <0.0001 | HS |

Effect on Pain

| Sl. No. | Parameters | BT Mean \pm SE | Follow up | AT Mean \pm SE | df | t-value | % | p – value | Remarks |
|---------|-------------------------------|------------------|-----------|------------------|----|---------|------|-----------|---------|
| 1. | Pain measured using VAS Scale | 2.57 \pm 0.09 | AT | 0.83 \pm 0.12 | 29 | 13.7295 | 67.6 | <0.0001 | HS |
| | | | AF1 | 0.70 \pm 0.13 | | 14.0000 | 72.8 | <0.0001 | HS |
| | | | AF2 | 0.67 \pm 0.12 | | 14.6169 | 74.1 | <0.0001 | HS |

DISCUSSION

In the present study, more number of patients that is 11(36.66%) having bilateral OA followed by right OA and patients were having continuous and throbbing pain.

The bilateral involvement may be because of lack of treatment in the initial stage and as it is told that long

standing OA leads to bilateral involvement which is unilateral initially.

Distributions of patients i.e., 85% presented with Bilateral Osteoarthritis of Knee Joint and 15% patients presented with Unilateral Osteoarthritis of Knee Joint. In maximum number of patients, bilateral

presentation of all the features of Janu Sandhigata vata were present such as Sandhi Shoola 23 (76.66%) having sever shoola, Sandhi Shotha 22 pts (73.33%), Sandhi Atopa 29 (96.66%), Prasarana Akunchana Vedana (85%) and Sandhi Sthabhta 14 pts (46%) were noticed.

In this present study maximum number of patients i.e. 22pts (73.33%), were having chronicity more than one year and 10% were having less than one year, so the percentage of bilateral presentation of OA of knee joint were naturally more. Thus the study justifies maximum incidence of Bilateral Osteoarthritis of knee joint.

In the present clinical study, maximum retention time for matra Basti was observed 17 hours and minimum retention time was observed 2 hours. Retention time was seen more in 4th and 5th day of Matra Basti. Retention time was more observed in male than female and in between age group of 40-50 years than above 50 years of age. This observation supports women experience bowel incontinence more often than men and it increase with age and according to Acharya Charaka, Pratyagamana kala decreases in persons with alpa bala of guda.

In this present study, the Samyak matra Basti lakshanas like Pratyeti asaktam sashakrut cha taila and Visrushta vega were seen from 1st day of Matra Basti. This is supported by concept of Sushruta samhita that 1st Anuvasana Basti having snehana effect on Basti, Vankshana and Adha kaya. Other lakshanas like Swapna anuvriti, Laghuta, Balam were appreciated on successive days of matrasthi Basti.

Assessment was done before the treatment, after the treatment and after the follow up on 18th day first follow up and on second follow up on 26th day. The effect of the treatment is as follows;

Effect of Treatment on Sandhi Shoola (Knee Joint Pain)

On **Sandhi Shoola** before treatment and after treatment, before treatment and at follow up, revealed statistically highly significant with p value (< 0.001).

On comparing the results there is statistically difference after treatment and at first follow up and second follow up on Sandhi Shoola with p value < 0.0001

In the present study matra basti is taken for treatment here shoola is the main characteristic feature of vata dosha, To combat vata dosha matra basti is adopted which does snehana, brihmana, shoola nashana. The janu basti adopted in this study that creates snehana locally

The rasona taila used in both janu basti and matrasthi having snigdha, ushna guru, sara guna are opposite to that of vata gunas. So it is having vatashamaka and vedanasthapaka effect.

So in total, by the combined effect of procedures and drugs both janu basti and matra basti proved to be effective on shoola parameter.

Effect of Treatment on Sandhi Shotha (Swelling)

On Sandhi Shotha before treatment and after treatment, before treatment and at follow up first and second follow up, follow up, revealed statistically highly significant with p value (< 0.001).

In the present study mild to moderate degree of sandhishotha is in more number of patients.

swelling in OA tend to be usually present initially due to soft tissue oedema and as disease progresses, swelling is often related to bony enlargement, remodelling or fibrotic changes in the joint capsule.

The rasona taila which was used in this study contains katu and teekshana guna, so it acts as kapha shamaka and shothahara, kaphanissraka properties.

The drugs used for murchana purpose of rasona taila ie Brihat panchamula, Manjista, Triphala, Lodhara, Nimba, Devadaru etc Were having shothagna properties which helped to reduce swelling in the patients.

Effect of Treatment on Sandhi Stambha (Stiffness)

On Sandhi Stambha before treatment and after treatment, before treatment and at first follow up and second follow up, revealed statistically significant with p value (< 0.05).

However, t -value is 4.0139 (88.3%) after treatment, after first follow up and after second follow up, So the t -value remains same after treatment, after first follow up and after second follow up.

Stabdghata is one of the indication of anuvasana basti according to charaka which holds good for matra basti also. In Sandhigata vata, according to Madhavakara, Hanti Sandhigata is one of the lakshana has been mentioned and according to Madhukosha, it means Sandhi vishleha or stambha. Snehaniya and Vatahara effect of matra basti helps to maintain the Shleshka kapha by reducing Ruksha guna of Vatadosha and by this relieves the Stambha in Sandhigata vata

Effect of Treatment on Prasarana Akunchana Vedana (Restricted movement)

On **Prasarana Akunchana Vedana** before treatment and after treatment, before treatment and on first follow up and second follow up, revealed statistically highly significant with p value (< 0.001).

On comparing the results there is statistically difference after treatment and at first follow up and second follow up on **Prasarana Akunchana Vedana** with p value <0.0001

According to Dalhana, Akunchana prasarana abhava is one of the lakshana in Sandhigata vata and Nayachandrika mentioned it as Prasarana akunchana asamarthatha. In Sandhigata vata mainly due to vitiation of Vata dosha, movement of knee joint is impaired and restricted. Both janu basti and matra basti snehaniya and Vata shamana which helps to correct the Vata dosha and hence improve the movement of knee joint.

Since, Restricted movement was observed due to pain, swelling and stiffness in OA, Rasana taila used in the treatment is having shulahara vedanasthapaka, shothahara, stambhahara, snehaniya katrmas helped to get rid of vedana in Prasarana Akunchana.

Effect of Treatment on Sandhi Atopa (Crepitation)

On **Sandhi Atopa** before treatment and after treatment, before treatment and on first follow up and second follow up, revealed statistically highly significant with p value (< 0.001).

Crepitation is grating sound, caused by bone rubbing against bone or roughened cartilage. Sandhisputana is due to absence of sneha dravya in between two bones which is seen in the knee joint.

Mainly janubasti is snigdha sweda and act locally to create snigdha in the joint and matra basti also have the properties of snehana, Brihmana and vatahara. So it subsides vatadosha in the joint and creates snehana in the between the joints thus reduces sandhi atopa.

Effect of Treatment on range of motion using goniometer.

On range of motion, before treatment and after treatment, before treatment and at first follow up and second follow up, revealed statistically highly significant with p value (< 0.001).

Basti is considered as best to improve Gati" and also helps to overcome Vata by which reduces pain and stiffness in turn helps in improving flexion and extension of the knee joint.

Since, the nine days of matra basti and janu basti showed better results on Pain and Stiffness parameters, it self-implies that showed better results on range of motion of knee joint.

Effect of Treatment on Vas scale Osteoarthritis index

On Vas scale, before treatment and after treatment, before treatment and at first follow up and second follow up, revealed statistically highly significant with p value (<0.001)

According to National institute of Arthritis & Musculoskeleton & Skin disorder, OA of knee joint include stiffness and pain which make it hard to walk, climb, get in and out chair, which can lead to disability. All these parameters are considered under WOMAC Osteoarthritis index. The results were seen highly significant on these parameters.

CONCLUSION

- The overall observation in the present study revealed that the maximum of patients i.e., 63.3% were in vrudha avastha, Predominance of females (70%) Hindus (93.3%) and House wives (60%), belonged to Vatapitta Prakriti (33.3%), Madhyama Satwa (53.3%) along with asthi Sara (63.3%) Madhyama Samhanana (63.3%) and Madhyama Satmya (56.6%) were found. By analysing Samyak lakshanas of Anuvastana Basti i.e. Pratyeti asaktam sa shakrut tailam, vata anulomana, agni deepthi were seen in all the patients.
- The effect of the treatment has shown statistically highly significant i.e., p value is <0.001 , in following parameters i.e., Sandhi Shoola, sandhi shotha, Sandhi Sparsha Asahtwa, prasarana Akunchana Vedana and Sandhi Stabdhata, range of movement, WOMAC osteoarthritis index.
- The effect of the treatment has shown statistically significant i.e., p value is <0.05 on Sandhi Atopa parameter.

From the present study following conclusion can be drawn:

- The action of Basti depends upon the dravyas used in Basti, number of Basti, Basti pratyagamana kala, temperature, quantity of Basti dravya.
- janu basti has its effect locally creates sthanika snehana and brimhana effect to the knee joint and reduces friction over the movement of the joint.
- Matra basti – a type of sneha basti as basti spreads in minute channels has its action throughout the body like *mule nishikto hi yatha drumam, syath neelacchada komala pallavaagrya* and effects in shula, stabdhata and sankuchita avastha and pacifies the prakupita vata dosha.
- The drug rasana taila used in both janu basti and matra basti contains pancha rasa, ushna veerya, katu vipaka, vedana sthapana effect and guru, snigdha gunas of taila combinedly effective in combating vata dosha and helps to overcome dhatu kshaya avastha.
- So in total janu basti and matra basti combinedly has very effective action on dhatu kshaya janu sandhi gata vata.

The treatment of Sandhigata vata include Snehana, Upanaha, Agnikarma, Bandhana, and Unmardhana. Since it is a Vata Vikara and Dhatukshaya Janya Vikara, Snehana and Swedana etc. would be an ideal line of treatment.

As Acharya Charaka Mentioned repeated use of Snehana and Swedana in nirupasthambita vata vyadhi so present study is taken entitled “An obseravational clinical study to assess the combined effect of Janubasthi and Matra Basthi with rasona taila in Janusandhigata vata w.s.r to osteoarthritis of knee joint”. Both Bahya and Abhyantara Snehana method used combinedly to attain the results in shorter duration.

Rasona taila contains Amlarahita pancha rasa (Madhura, Lavana, Katu, Tikta, Kashaya), Snigda, Teekshna, Picchila, Guru, Sara gunas, ushna veerya and katu vipaka, Kapha vata shamaka.

- By its Katu and Teekshna Guna it is Kapha shamaka.
- By its Snigdha, picchila, guru and ushna guna it is Vatashamaka.
- Due to its ushna guna it increases Raktha and Pitta.

In the present study rasona is selected which is balya, asthisandhanaka, agni deepana, pachana, shotha hara, vedana sthapaka, anulomaka, shula prashamaka karma which are proved to be effective in janu sandhigata vata which is caused due to dhatu kshaya.

According to bhaishajya ratnavali rasona taila is said to be given in anila amaya and it is quoted to be ashu nasha of vata vyadhi which is proved in the present study.

Rasona has the anti-inflammatory, anti-arthritis, anti-ageing properties helped to increase the effectiveness of the treatment.

