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A COMPARATIVE CLINICAL STUDY OF MATRAVASTI AND PICHU WITH RASNA TAILA IN SANDHIGATAVATA W.S.R TO OSTEOARTHRITIS

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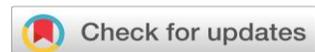**Corresponding Author**: nupurbiswas1953@gmail.com

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ABSTRACT

Sandhigata Vata (Osteoarthritis) is a type of *Vatavyadhi (degenerative disease)* that mainly occurs in *Vriddhavastha (Old age)* due to *Dhatukshaya (cellular degeneration)*. *Vagabhatta* has also considered *Vata Vyadhi* as a *Maharoga.* It appears from the point of view of modern medical sciences that *Sandhigata vata* can be simulated with Osteoarthritis in its clinical appearance. Osteoarthritis is the most common articular disorder that begins asymptomatically in the 2nd and 3rd decades and is extremely common by age 70. Almost all persons by age 40 have some pathologic change in the weight-bearing joint. 25% of females and 16% males have symptomatic OA. This disease has been described in *Ayurveda* from ancient times. The disease Arthritis causes work disability. It limits everyday activities such as walking, dressing, bathing etc, thus making individuals handicapped. No treatment is available which can prevent the disease process. In western medical science, mainly analgesics, anti-inflammatory drugs or surgery are the options for the treatment of Osteoarthritis; don't provide remarkable recovery but causes great adverse effect. Researchers are trying their level best for making drugs that can prevent or slow down or reverse joint damage. *Panchakarma* therapy is one of the important branches of *Ayurveda*, which deals mainly with the purification of the aggravated *Doshas* from the human system. This is the reason behind the selection of the topic entitled *"A COMPARATIVE CLINICAL STUDY OF MATRA VASTI AND PICHU WITH RASNA TAILA IN SANDHIGATA VATA W.S.R TO OSTEOARTHRITIS"*.

We have used *Panchakarma* treatment procedure. *Panchakarma* treatment is believed to help in the radical elimination of the disease-causing factors and maintain the equilibrium of *doshas*. The selection of *Matravasti* and *pichu* both are based on repeated recommendations of different *Acharyas* on *Sandhigatavata*. We used *Rasna taila*.

Keywords: *Sandhigata vata,* Osteoarthritis, *MatraVasti, Pichu, Rasna taila*

INTRODUCTION

Ayurveda is the science of life. It deals with the total creation with special emphasis on the biology of life. The chief objects laid down before this science is the preservation of health and prevention of disease. It envisages total welfare of the living being and so the term *Ayurveda*, the science of life is employed[1]. According to *Ayurveda*, freedom from disease is not only health. To be healthy, a person should be happy mentally, physically, socially and also spiritually[2]. The imbalance of *Doshas* is termed as *Roga(disease)*. Among *Tridosha*, *Vata* is the strongest of all *doshas* and it causes a large number of diseases. *Sandhigata Vata* is one of the most prevalent joint *diseases* in the population[3]. When *Vata is* localised in *Sandhi* (bony joint) it destroys the actions of the joints and gives rise to pain and swelling them[4]. *Sandhigata vata* is described under *Vatavyadhi*. In *Vriddhavastha*, all *Dhathus(tissues)* undergo *Kshaya(decrease)*, thus leading to *Vata prakopa(aggravate)* and making individuals prone to many diseases. Among them, *Sandhigata Vata* stands top of the list. *Acharya Charaka* was the first person who described the disease separately named "*Sandhigata Anila*" but has not included under 80 types of *Nanatmaja Vyadhi*. So, in *Sandhigata Vata,* the Major symptoms are *Shoola* (Pain), *Akunchan Prasaran janya Vedana* (Pain during knee movement), *Shotha* (Swelling), *Vata Poornadrutis Parsha* (Ch. Chi. 28/37) etc[5]. According to signs and symptoms, it is correlated with Osteoarthritis. Osteoarthritis is a degenerative joint disease involving the weight-bearing joint[6]. Osteoarthritis (OA) is by far the most common form of arthritis. It is strongly associated with ageing and is a major cause of pain and disability in older people. Osteoarthritis is characterised by focal loss of articular cartilage, subchondral osteosclerosis, osteophyte formation at the joint margin, and remodelling of joint contour with enlargement of affected joints. Inflammation can occur but is not a prominent feature. Joint involvement In OA follows a characteristic distribution, mainly targeting, the hips, knees, PIP and DIP joints of the hands, neck and lumbar spine[7]. Till to date *Sandhigata Vata* is a challenging disease and is the number one cause of disability in industrialized countries. To date, no medicine is available which prevents or reverses or blocks the disease process. Treatment that slows down or halts disease progression is critically needed. Overall, we can say that *rukshata*(dryness), *laghuta*(lightness), *kharata*(roughness) & *sheetata* (cold quality) are increased in *Sandhigata Vata,* here we need to plan a medicine which are having *Tikta rasa (bitter taste)*, *Guru(heaviness)* & *Snigdha guna(unctuousness)*, *Ushna veerya(exothermic)* & *Vata samaka* properties. In *Ayurveda*, there are multiple medicines having similar *Guna (physical property) Dharma* which cures *Sandhigata vata* & *Rasna taila* is an important medicine among them.

Disease Review-: *Sandhigatavata* is one of the most prevalent joint diseases in the population. Basically, it is a degenerative process disease. *Ayurveda* has mentioned various regenerative 'therapeutic measures' to tackle this problem. it is being described in detail. Any disturbance in the fundamental configuration of *Dhatus(tissues)* which may lead to their malfunctioning is called *Vikara*, *Vyadhi* or disease and *Sandhigatavata* are one of the *Vata Vikara* (Ch. Su. 9/4). The term *Sandhigatavata* has its origin from a combination of three words viz '*Sandhi', 'Gata' & 'Vata*' (Siddhanta Nidan 8/513). *Sandhigatavata* is mentioned under *Vatavyadhi* by all *Acharya*, *Acharya Charaka* has said it is *Sandhigata Anil* (Ch. Chi.

28\37). *Acharya Vagbhatta* has said *Vatavyadhi* as *"Maharoga"* (A.H, Ni. S -1/11-15) *Acharya Sushruta* has described Pain (*Shula*), Swelling (*Shotha*) and Diminution of the movements at the joints involved (*Hanti Sandhigatah*) as symptoms of *Sandhigatavata* (Su. Ni. 1/28-29). It deals with *Ayurvedic* as well as modern points of view. No specific *Samprapti (story of the disease)* has been explained for S*andhigatavata*. So, it can be said that *the Samprapti of Sandhigatavata* is the same as that of the general *Samprapti* of *Vatavyadhi*. *Acharya Charaka* has mentioned that *Nidana Sevana (causative factor)* aggravates *Vata* and this *Prakupita(aggravated) Vata* gets accumulated in *Rikta Srotas* (channels)and gives rise to various generalized and localized diseases (Ch. Chi. 28/18).

Osteoarthritis is the most common articular disorder that begins asymptomatically in the 2nd and 3rd decades and is extremely common by age 70. Almost all persons by age 40 have some pathologic change in the weight-bearing joint. The disease Osteoarthritis may be regarded as a reward of longevity. It seems the man has paid price for standing on hind limbs in form of osteoarthritis of weight-bearing joints of the body.

This research topic was on *sandhigata vata*. It is a challenging disease for the physician due to its chronicity morbidity, complication periodic fluctuation and major for the loss of millions at working days, annually resulting in huge loss of national economy. So, there is a need to explore the potentiality to tackle this problem in the *Ayurvedic* way.

RASNA TAILA IN *SANDHIGATA VATA* W.S.R TO *OSTEOARTHRITIS*" is selected for the present *Khavaigunya (defect in channels)*. Also, it should have *Rasayana(rejuvenation)* property to overcome *Dhatukshaya (decrease of tissues)*. Here is "A COMPARATIVE CLINICAL STUDY OF *MATRA VASTI* AND *PICHU* WITH study which can serve above needs to treat the disease *Sandhigata Vata* (Osteoarthritis).

Aim & Objectives of this work

- To observe the effect of *Rasna Taila* with *Matra Vasti* in *Sandhigata Vata*.
- To observe the effect of *Rasna Taila* with *Pichu* in *Sandhigata Vata*.
- To observe the effect of *Rasna Taila* with *Matra Vasti* & *Pichu* in *Sandhigata Vata*.
- To compare the Difference of Results in the above Treatment Groups.

Materials and Methods

Selection of Patients- Complete 90 cases of '*Sandhigatavata* (Osteoarthritis) were selected irrespective of gender, religion, habitat, economic status, occupation etc. from the OPD and IPD of the Institute of Post Graduate Ayurvedic Education & Research at SVSP Hospital in Kolkata, West Bengal. All the participants were registered at the Institute of Post Graduate Ayurvedic Education & Research at SVSP Hospital in Kolkata, West Bengal for final evaluation. The study started in Nov 2018 and was completed in Sept 2020.

To assess the effect of therapy objectively, all the signs and symptoms were given scoring depending upon their severity.

Inclusion Criteria:

- Patients should be between age Group 40-70 years
- Patients are willing to participate in the study.
- Patients without any Anatomical Deformity should be included.
- Patients with the symptoms of *Shoola*, *Akunchan PrasaranjanyaVedana, Shotha*, *Vata Poornadrutis Parsha* etc.

Exclusion Criteria:

- Age below 40 years and above 70 years.
- Pregnancy & Lactation
- Diabetes mellitus & Hypertension
- Heart disease & Renal pathology
- Past history of Koch's
- Carcinoma & Gout

Sampling Design

This study was performed in three treatment groups as follows–

Treatment group	No. of Participants	Treatment Schedule
Group A	30 Participants	*Matra Vasti* along with *Rasna taila.*
Group B	30 Participants	*Pichu* along with *Rasna Taila.*
Group C	30 Participants	*Matra Vasti* and *Pichu* along with *Rasna Taila.*

Objective Parameters:

Following objectives & laboratory parameters were taken in the present research programme–
a. Blood for TC, DC, ESR, Hb%
b. Blood for FBS & PPBS
c. X-ray of affected Joint
d. Serum Creatinine & Blood Urea All Laboratory investigations were done before & after treatment.

Statistical Analysis:

Data was presented as mean, ± Standard Deviation (SD), ± Standard Error (SE). The Student Paired "t" test was used independent Groups for Parametric Variables.

Drug Review:

Here the research drug *Rasna Taila* was taken (C. Chi/28/165-166)

The trial drug *Rasna taila* dominant of *Tikta Rasa*, *UshnaVirya* which facilitates increase *Dhatvagni* (metabolic stage), and nutrition and stableness of all the *Dhatus*, specially *Asthi(bone)* and *Majja (bone marrow) Dhatu*. The drug is having *Dipana(appetizing)*, *Pachana(digestive)*, *Rochana (improves teste)*, *Jvaraghna* (Anti-Pyretic) and Daha-prashamana (reduce burning sensation) properties which help in the improvement of general condition, it is Balavardhaka (Increase strength), *Varna Vardhak* (Increase Complexion), & *AyuVardhak* (Increase life span)[8]. In this present study, *Rasnataila* contains 12 ingredients that have various types of actions in the body. Most of these ingredients are having *Tikta Rasa*, *UshnaVirya* and *Madhura(sweet)* and *Katu(pungent)Vipaka (post-digestive effect)*. *Virya* is the most important part of *Rasnataila*. It is the potency by which the drug acts in the body.

Rasnataila contains *Tikta Rasa* which increases the *Dhatvagni* (metabolic stage). As *Dhatvagni* increase, the nutrition of all the *Dhatus* will be increased. As a result, *Asthi Dhatu*, *Majja Dhatu* may get stable and *Asthi Dhatu* and *Majja Dhatu Kshaya* will be decreased. So, degeneration in the *Asthi Dhatu* may not occur rapidly. It can be said, it slows down the degeneration processes.

SandhigataVata is *MadhyamaRoga* Margagata *Vatika* disorder in which vitiated *Vata* gets lodged in *Sandhi*. Hence to treat *SandhigataVata* drugs acting on both *Vata* and *Asthi* should be selected. According to Charaka, in *Vatika* disease, the treatment should be given by *Rasna taila*[9]. In *Rasna taila* predominance of *Tikta Rasa* is there.

Rasana taila is having *Lekhana property* (scraping out the cholesterol), so it helps in the weight reduction of the patients and helps in the management of Osteoarthritis. *Rasna taila* is also having *Jwaraghna* and *DahaPrashamana* (reduce burning sensation) properties that may act as an anti-inflammatory agent and can reduce the pain and swelling of the joints.

Rasnataila is *Vata-pittashamaka, Balya (increase strength), Agnivardhaka (increase digestive capacity), Madhura*, *Saumya*, Sheeta Virya(*endothermic*), *Shula*(pain), *Jwarahara* (reduce fever), *Vrishya* (increases sexual desire) and *Vayasthapaka* (prevent ageing) also. Thus, it specifies *Vata*, improves the general condition of the body and acts as a rejuvenator of the body. Thus, helps in the *Samprapti Vighatana (evolution of diseases)* of the Sandhigata Vata.

Taila is having a property like *Yogavahi* which helps increase the bioavailability of other drugs without losing its property. *Taila* also contains many vitamins like thiamin, niacin, vitamin A, Folic acid[10] which plays an important role to utilize calcium and phosphorous in blood and bone building.

Due to the *Ushna property* of *Rasnataila,* it is one of the major *Vatashamaka Dravya*. Due to its *Ruksha*

and *Vishada Guna(clearness)*, it acts as a *Medohara* (fat loss). According to *Sushruta Guduchi* have *Lekhana* property which helps in reducing body weight. Due to its *Kasaya Rasa*(astringent), it acts as a *Deepana.* Thus, help in the improvement of the general condition of the patient. *Guduchi* also acts as *Rasayana* properties which may help to prevent any degenerative changes in the body.

Pharmacologically *Guduchi, Devadaru, Rasna, Aswagandha, Sarala, Tiltaila, kundru, Tagara* have the properties of anti-inflammatory, immuno-modulatory and anti-lipidaemic action.

In clinical use, this drug does not show any kind of adverse effect. In the present study, therapeutic values obtained clinically and statistically are acceptable. Its production cost is very less, and it is affordable to the entire category of people in the society. So, this drug can be considered under a preventive and curative measure in *Sandhigata Vata.*

Criteria for Assessment:
- To assess the effect of therapy objectively, all the signs and symptoms were given scoring depending upon their severity.

Sign &Symptoms

❖ *Sandhi Shula:*   **Score**
- No pain   - 0
- Mild pain   - 1
- Moderate pain but no difficulty in walking   - 2
- Slight difficulty in walking due to pain   - 3
- Severe difficulty in walking   - 4

❖ *Sandhishotha:*
- No swelling   - 0
- Slight swelling   - 1
- Moderate swelling   - 2
- Severe Swelling   - 3

❖ *Sandhigraha:*
- No Stiffness   - 0
- Mild stiffness   - 1
- Moderate stiffness   - 2
- Severe difficulty due to stiffness   - 3
- Severe stiffness more than 15 minutes   - 4

❖ *Akunchana Prasaranjanya Vedana:*
- No pain   - 0
- Pain without winching of face   - 1
- Pain with winching of face   - 2
- Prevent complete flexion   - 3
- Does not allow passive movement   - 4

❖ *Sparshashayata:*
- No tenderness   - 0
- Patient says tenderness   - 1
- Winching of face on touch   - 2
- Does not allow to touch the joint   - 3

❖ *Sandhisphutana:*
- No crepitus   - 0
- Palpable crepitus   - 1
- Audible crepitus   -2

❖ *Dosha and Dushya Dushti:*
- Presence of symptoms before treatment   - 2
- Improvement in symptoms   - 1
- Absence of symptoms after treatment   - 0
- No change after treatment   - 2

TOTALEFFECTOFTHERAPY:
- Complete Remission :100%
- Maximum Improvement:>75to<100%
- Moderate improvement:>50 to75%
- Mild improvement:>25 to50%
- No improvement : 0 –25%

GENERAL OBSERVATIONS
- Hence, the **total** number of patients registered in the present study was **127**, so **observation of 90** Patients and **results of 90** patients' statistical analysis are given below.
- It was found that a maximum number of patients i.e., 60.00% belonged to the age group of 61 – 70years, followed by 25.55% patients to 51 – 60 years, and lastly 14.44 % patients belonged to 40 –50 years of age group.

EFFECT OF THERAPY
The study was mainly based on the clinical assessment of the aforesaid sign and symptoms that are mentioned in the material and methods. Effect of therapy was assessed based on scoring, blood routine examination mainly ESR, Hb%, joint examination, walking and climbing stair time, before and after the treatment.

Group A: Effect of chief complaints in the patients of *Sandhigata Vata*

Symptoms	Mean Score		%Of Relief	S.D.	S.E.	'df'	't'	P
	B.T.	A.T.						
Sandhishula	2.38	0.54	77.41	0.54	0.11	25	16.82	<0.001
Sandhishotha	1.50	0.17	88.89	0.48	0.11	17	12.09	<0.001
Akunchana Prasarana Vedana	1.80	0.40	77.78	0.58	0.11	24	12.73	<0.001
Sandhisphutana	1.91	0.65	65.90	0.45	0.09	22	14.00	<0.001
Sandhisparsasahatva	1.44	0.12	91.30	0.60	0.15	15	08.73	<0.001
Sandhigraha	1.44	0.11	92.30	0.50	0.17	08	07.82	<0.001

In this group Effect of therapy on *Sandhishula* was found at 77.41% & the Percentage of relief of *Sandhishotha* i.e., 88.89%, *Akunchana Prasaranajanya Vedana* 77.78%, *Sandhisphutana* 65.90% and *Sandhisparsha Sahyata* 91.30%, *Sandhigraha* was 92.30% of relief. The above results are statistically highly significant at the level of P<0.001.

Group B: Effect of chief complaints in the patients of *Sandhigata Vata*

Symptoms	Mean Score		%Of Relief	S.D.	S.E.	'df'	't'	P
	B.T.	A.T.						
Sandhishula	2.29	0.71	68.75	0.65	0.17	13	09.23	<0.001
Sandhishotha	1.90	0.30	84.21	0.52	0.16	09	10.00	<0.001
Akunchana Prasarana Vedana	1.64	0.45	72.22	0.40	0.12	10	9.83	<0.001
Sandhisphutana	1.67	0.83	50.00	0.39	0.11	11	7.54	<0.001
Sandhisparsasahatva	1.50	0.25	83.33	00.50	0.25	03	5.00	>0.05
Sandhigraha	1.83	0.17	90.90	0.52	0.21	05	7.95	<0.001

In this group percentage of relief of Sandhishula 68.75%, *Sandhishotha* 84.21%, *Akunchana Prasaranajanya Vedana* 72.22%, *Sandhisphutana* 50.00%, *Sandhigraha* 90.90% was found highly significant at the level of P<0.001. A significant result was found in *Sparshasahyata* i.e., 83.33% at the level of P<0.05.

Group C: Effect of chief complaints in the patients of *Sandhigata Vata*

Symptoms	Mean Score		%Of Relief	S.D.	S.E.	'df'	't'	P
	B.T.	A.T.						
Sandhishula	2.37	0.55	77.40	0.54	0.11	25	16.82	<0.001
Sandhishotha	1.49	0.18	88.89	0.48	0.11	17	12.09	<0.001
Akunchana Prasarana Vedana	1.79	0.41	77.79	0.58	0.11	24	12.73	<0.001
Sandhisphutana	1.90	0.66	65.91	0.45	0.09	22	14.00	<0.001
Sandhisparsasahatva	1.43	0.13	91.30	0.60	0.15	15	08.73	<0.001
Sandhigraha	1.43	0.12	92.31	0.50	0.17	08	07.82	<0.001

In this group percentage of relief in *Sandhishula* 77.40%, Sandhishotha 88.89%, Akunchana Prasaranajanya Vedana 77.79%, Sandhisphutana 65.91%, *Sandhigraha* 92.31% was found highly significant at the level of P<0.001. A significant result was found in *Sparshasahyata* i.e., 91.30% at the level of P<0.05.

Effect of therapy on walking and climbing stair:

Symptoms	Group A			Group B			Group C		
	Mean Score		%Of Relief	Mean Score		%Of Relief	Mean Score		%Of Relief
	B.T.	A.T.		B.T.	A.T.		B.T.	A.T.	
Walking time in sec. (30meters)	43.11	38.23	11.15	40.07	37.93	05.34	43.10	38.24	11.16
Climbing up and down-stairs in sec.(22stairs)	46.92	41.35	11.88	44.78	40.71	09.09	46.91	41.36	11.89

In the case of walking time in group A, the percentage of improvement was found 11.15% that shows a highly significant result. In group B percentage of improvement i.e., 05.34% and in group C percentage of improvement i.e., 11.16%.

In the case of climbing time in group A, the percentage of relief was 11.88%. In the case of group B percentage of improvement was 09.09% and in group C percentage of improvement was 11.89%.

Effect of therapy on Joint Examination: Knee Joint Flexion in degree

Joint Examination	Group A			Group B			Group C		
	Mean Score		%Of Relief	Mean Score		%Of Relief	Mean Score		%Of Relief
	B.T.	A.T.		B.T.	A.T.		B.T.	A.T.	
Left	74.58	101.67	36.31	79.61	101.15	27.05	74.57	101.69	36.31
Right	66.14	97.50	47.42	83.75	100.62	20.15	66.13	97.51	47.43

In group A, the left knee joint flexion percentage of relief was 36.31%, while the right knee joint flexion was 47.42%.

In the case of group B, left knee joint flexion, the percentage of relief was found 27.05% and Right knee joint flexion, improvement was found 20.15%.

In group C, the left knee joint flexion percentage of relief was 36.31%, while the right knee joint flexion was 47.43%.

Effect of Therapy on Laboratory Investigation:

In group A, the percentage of increased haemoglobin 06.38% and percentage of decreased ESR 28.28% of studied patients was found statistically highly significant result at the level of $P<0.001$.

In group B, the Percentage of increased haemoglobin was found 07.68% and ESR decreased by 07.93 %. both the above data shows highly significance at the level of $P<0.001$.

In group C, the Percentage of increased haemoglobin was found at 06.38% and ESR decreased 28.29%. Both the above data shows highly significance at the level of $P<0.001$.

TOTAL EFFECT OF THERAPY (In all Groups)

Gradation	Group A		Group B		Group C	
	No. of Pts.	%	No. of Pts.	%	No. of Pts.	%
Complete Remission (100%)	04	13.33	00	00.00	05	16.67
Maximum Improvement (>75to 99%)	16	53.33	06	20.00	21	70.00
Moderate Improvement (>50–75%)	10	33.33	22	73.33	04	13.33
Mild Improvement (>25–50%)	00	00.00	02	06.67	00	00.00
No Improvement (0– 25%)	00	00.00	00	00.00	00	00.00

In group A, 13.33% of patients achieved complete remission, while 53.33% of patients obtained maximum improvement, whereas 33.33% moderate improvement was also reported. No patient was observed under mild improvement in the present clinical study.

In group B 20.00% of patients had maximum improvement, while moderate improvement was found in 73.33% patients and 06.67% patients got mild improvement.

In group C 16.67% of patients achieved complete remission whereas 70.00% of patients had maximum improvement, while moderate improvement was found in 13.33% of patients.

In the present clinical research work, no patient was observed in an unchanged condition.

The above-mentioned data shows that patients treated with both *Matra Vasti & Pichu* with *Rasna Taila* for 15days i.e., group C has provided better relief in the disease Sandhigata *Vata* (Osteoarthritis).

The results in all three groups proved to be highly effective and also statistically highly significant in different subjective and objective parameters. The result of group C was better. It may be due to the following causes-

- Here patients were treated with both *MatraVasti & Pichu* with *Rasna Taila* for 15 days.
- Patients were treated with both *Vasti* and Local application of the drugs.
- Local application of *Abhyanga(massage)* and *Nadi-Sweda (tube sudation)* leads to vasodilatation of the local area Which facilitates increased blood supply. As a result, joints get more nourishment and their primary and accessory structure become strong and help in early recovery. At the same time, increased circulation provides discarding of the local tissue metabolic waste products helps in tissue rejuvenation and thus promote early recovery.
- Local application of *Rasna Taila Snehana* facilitates absorption of the medicine through the skin, helps in the improvement of joint condition. The increased local blood supply also facilitates the *Matra Vasti* to reach the site of action

easily.
- So, when the trial drug was added along with *Abhyanga* and *Nadi Sweda* the result proved to be more significant.

SUMMARY

Any disturbance in the fundamental configuration of *Dhatus* which may lead to their malfunctioning is called *Vikara(disease)*. *Sandhigata Vata* is one of the *VataVikara*. *SandhigataVata* is *Asadhya Vyadhi*(incurable). Usually, it happens from *Madhya Vaya* (middle age).

In the present study, an attempt has been made to *SandhigataVata* with Osteoarthritis due to the presence of several similar types of signs and symptoms of both cases.

Considering the importance of the disease the present study has been carried out with the entitled "A COMPARATIVE CLINICAL STUDY OF *MATRA VASTI* AND *PICHU* WITH *RASNA TAILA* IN *SANDHIGATA VATA* W.S.R TO OSTEOARTHRITIS."

DISCUSSION

The logical interpretation of the results obtained in the clinical study, based on *Ayurvedic and* modern principles. The conclusion drawn from the observations and results is presented hereunder.

- In the present study, the majority of the patients belonged to the age group 61-70 years (60.00%). The majority of the patients were female (74.44%), 82.22% patients were Hindu, 83.33% were married, 45.55% patients were having education up to the primary level. 61.11% of patients were housewives. 78.88% of patients were belonging to a lower-middle-class, 58.88 % of patients were residing in rural areas. All the patients were belonging to *Anup Desha*, 95.55% of patients were mixed vegetarian.
- In cardinal symptoms *Sandhishula* was found in all the patients, *Sandhisphutana* was found in 26.67%, *Akunchana Prasaranajanya Vedana* was found in 47.78% of patients. *Sandhishotha* was present in 72.22% of patients and *Sparsha Asahyata* in 38.88% of patients, *Vata Purana Druti Sparsha* 32.22%. Associated symptoms obtained were

Vibandha(constipation) (32.22), Adhamana (bloating of abdomen) (31.11%), Nidralpata (insomnia) (25.55%), *Daurbalya* (weakness) (40.00%).

▪ In *Dosha Dusti,* each *Vataprakopa (aggravation of Vata)* and Vatavriddhi (an increase of Vata) was found in 100% of patients. *Pittavriddhi (*(an increase of pitta) was found in 42.22% and *Pittaprakopa (aggravation of pitta)* in 35.56%. *Asthivaha* and *Majjavaha Srotodushti (vitiated channel)* were found in all the patients. *Mamsavaha* Srotodushti in 42.22*%, Medovaha Srotodushti* in 48.89%, *Raktavaha Srotodushti* in 57.78%.

Effect of therapy on *Sandhishula* was found 77.41% of relief in group A Percentage of relief of *Sandhishotha* i.e., 88.89%, *Akunchana Prasaranajanya Vedana* 77.78%, *Sandhisphutana* 65.90% and *Sandhisparsha Sahyata* 91.30%, *Sandhigraha* was 92.30% of relief. The above results are highly significant at the level of P<0.001.

In group B percentage of relief of *Sandhishula* 68.75%, *Sandhishotha* 84.21%, *Akunchana Prasaranajanya Vedana* 72.22%, *Sandhisphutana* 50.00%, *Sandhigraha* 90.90% was found highly significant at the level of P<0.001. A significant result was found in *Sparsha Asahyata* i.e., 83.33% at the level of P<0.05.

In group C percentage of relief of *Sandhishula* 77.40%, *Sandhishotha* 88.89%, *Akunchana Prasaranajanya Vedana* 77.79%, *Sandhisphutana* 65.91%, *Sandhigraha* 92.31% was found highly significant at the level of P<0.001. A significant result was found in *Sparsha Asahyata* i.e., 91.30 % at the level of P<0.05.

Improvement on climbing stairs:
In the case of climbing time in group a, percentage of relief was 11.88%. Improvement was insignificant at the level of P>0.05. In group B percentage of improvement was 9.09%. This result shows statistical significance at the level of P<0.01. In group C percentage of improvement was 11.89%. This result shows statistical significance at the level of P<0.01.

Improvement on Joint Examination:
In group A, the left knee joint flexion percentage of relief was 36.31%, while the right knee joint flexion

was 47.42% which is highly significant at the level of P<0.001.

Hip Joint flexion (left), the percentage of relief was found 38.51% and hip joint flexion (right) percentage of relief was found 36.82%, which is statistically highly significant at the level of P<0.001.

In group B, left knee joint flexion, the percentage of relief was found 27.05%. The improvement was highly significant at the level of P<0.001. Right knee joint flexion, improvement was found 20.15%. It shows a significant result at the level of P<0.01.

Hip joint flexion (left), percentage of relief was found 18.85% which shows a highly significant result at the level of P<0.001. Hip joint flexion (right), percentage of relief was found 14.58%.

In group C, left knee joint flexion, the percentage of relief was found 36.31%. The improvement was highly significant at the level of P<0.001. Right knee joint flexion, improvement was found 47.43%. It shows a significant result at the level of P<0.01.

Hip joint flexion (left), percentage of relief was found 38.52% which shows a highly significant result at the level of P<0.001. Hip joint flexion (right), percentage of relief was found 36.83%, improvement.

Improvement on Laboratory Investigation:
In group A, the percentage of increased haemoglobin 6.38% and percentage of decreased ESR 28.28% of studied patients was found statistically highly significant result at the level of P<0.001.

In group B, the percentage of increased haemoglobin was found 7.68% and ESR decreased 21.10%. Both the above data shows highly significance at the level of P<0.001.

In group C, the percentage of increased haemoglobin was found 06.38% and ESR decreased 28.29%. Both the above data shows highly significance at the level of P<0.001.

Total Effect of Therapy
In group A, 13.33% of patients achieved complete remission, while 53.33% of patients obtained maximum improvement, whereas 33.33% moderate improvement was also reported.

In group B, 0.00% of patients had complete remission, 20.00% had maximum improvement, while

moderate improvement was 73.33% and 06.67% of patients were a mild improvement.

In group C, 16.67% of patients had complete remission, 70.00% had maximum improvement, while moderate improvement was 13.33%.

The above-mentioned data shows that *Rasna Taila Pichu* along with *Matra vasti*, local *Abhyanga* and *Nadi Swedana* i.e., group C has provided better relief in the disease *Sandhigata Vata* (Osteoarthritis) in the present study.

CONCLUSION

Sandhigata Vata vis-à-vis Osteoarthritis is multifactorial, non-inflammatory degenerative joint disorder. There was no apparent change was observed in the x-ray before and after treatment. According to the literary profile, this disease is *Asadhya* or incurable in nature, this is also supported by the recurrence of the same type of complaint in the patient included in the present clinical study. The medication can give only symptomatic relief for a certain period. Though the trial drug of the present clinical study that is *Rasna-taila* proves to be an effective remedy for *Sandhigata Vata*. It shows better efficacy when applied with local *Pichu, Matra Vasti, Abhyanga* and *Nadi Sweda*. In the present study, the size of the sample was 90 patients and the period of study was limited. Hence it is difficult to draw a definite conclusion regarding this study. In this context, it is suggested that the study should be continued with a large sample and treatment for a longer duration. It is expected that the present study will disclose some definite clues to future researchers.

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