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Effect of Marma Therapy on Sandhigata Vata w.s.r. to Osteoarthritis

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ABSTRACT

The principal aim of Ayurveda is to maintain and promote positive physical and mental health as well as ensure the prevention of diseases. *Sandhigata Vata* is the commonest form of articular disorder. It is a type of *Vatavyadhi* which mainly occurs in *Vriddhavastha* due to *Dhatukshaya*, which limits everyday activities such as walking, dressing, bathing etc. It occurs due to change in lifestyle like unsuitable sitting, sleeping, standing and look upwards or obliquely in various professions. Osteoarthritis (OA) is degenerative joint disorder, represents failure of the diarthrodial (movable, synovial lined) joint. OA of the joints comes under the inflammatory group which is almost identical to *Sandhigata Vata* described in Ayurveda with respect to etiology, pathology, and clinical features. *Marma* therapy is one which gives instant relief from pain by balancing local *Vata* and *Kapha Dosha* without any untoward effects. In the present research work, total 15 diagnosed case of *Sandhigata Vata* were randomly selected from OPD and IPD of department of Shalya Tantra, Rishikul Campus, Uttarakhand Ayurveda University, Haridwar (U.K.) India, all these patients were treated with the application of *Marma* therapy. Result was observed on the basis of subjective and objective parameters and analysed statistically. No complications were observed in this clinical study.

Key words: *Sandhigata Vata, Vatavyadhi, Vriddhavastha, Dhatukshaya, Vata Dosha, Marma therapy.*

INTRODUCTION

Ayurveda is the oldest treatise related to treatment and health, it is believed to be a part of *Atharvaveda*.^[1] *Sandhigata Vata* is one of the *Vatika* disorder. The vitiated *Vata* when takes shelter in the *Sandhithana*, causes *Sandhishula*, *Sandhishopha*, *Stabdhata* and *Sandhisphutan* is known as *Sandhigata Vata*. *Sandhigata Vata* is described first by

Acharya Charaka in the name of "*Sandhigata Anila*". *Acharya Charaka* has defined the disease that when provoked *Vata* locates in the *Sandhi*, it causes *Shotha* which is palpable as air filled bag and *Akunchana Prasarana janyo Vedana*^[2] is pain during flexion and extension of the joint. with symptoms of *Shotha*, and *Prasarana Ankunchanajanya Vedana*.

All the *Acharyas* mentioned that there is no *Shula* without the vitiation of *Vata*. *Sandhishula* is the main symptom in the *Sandhigata Vata*. Pain usually increases by movements like *Prasaran* and *Akunchan* (extension and flexion) because of *Vata Prakopa* in *Sandhi Sthana*. Pain is also become worst in the time of evening because of the tendency of *Vata* which naturally aggravates at evening period. *Acharya Sushruta* has described *Shula* (pain), *Shopha* (swelling) and *Hanti Sandhigata* (diminution of the movements at the joints) involved as symptoms^[3] of *Sandhigata Vata*. Ayurvedic literature does not reveal the special etiological factor for *Sandhigata Vata* however, the

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aggravative factors of *Vata Vyadhi* can be adopted for the *Nidana* of *Sandhigata Vata*. *Acharya Sushruta and Acharya Vagbhatta* have included *Vata Vyadhi* under the *Ashta Mahagad* because of its *Ashukarita* and *Upadrava*. As the disease *Sandhigata Vata* is one of the *Vata Vyadhi*, it is difficult to cure. Thus, *Sandhigata Vata* can be considered as *Kashta Sadhya Vata Vyadhi*. *Acharya Sushruta* has described *Snehana, Upanaha, Agnikarma, Bandhana, Unmardana* for the treatment of *Sandhigata Vata*.^[4]

Sandhigata Vata explained in the classical texts is similar to the condition Osteoarthritis (OA) in modern science. Osteoarthritis also called degenerative joint disorder, is the most common types of joint disorder and is one of the most disabling conditions in developed nations. It is characterized by the progressive diminution of articular cartilage.^[5]

The term Osteoarthritis implies an inflammatory condition in which all structures of the joint have under gone pathological changes. This is accompanied by increasing thickness and sclerosis of the subchondral bony plate, by outgrowth of osteophytes at the joints edges, by stretching of the articular capsule, by mild synovitis in many affected joints and by muscle weakness, which bridges the joint.^[6] OA is a long-term chronic disorder characterized by the deterioration of cartilage in joints which result in bones rubbing together and creating stiffness, pain and leading to gradual reduction in the range of motion. The disease most commonly affects the joints in the knees, hands, feet, and spine and is related to ageing. Patient with primary disease are usually asymptomatic until they are in their fifties.^[7] The aetiology of pain is multi-factorial, including inflammatory and non-inflammatory causes. The disease is managed by NSAIDs, analgesic drugs, physiotherapy and corticosteroids and finally joint replacement etc.

AIMS AND OBJECTIVES

To evaluate the effect of *Marma* Therapy in the management of *Sandhigata Vata* w.s.r to Osteoarthritis.

MATERIALS AND METHODS

Diagnosed cases of *Sandhigata Vata* (Osteoarthritis) were registered by simple random sampling method from OPD and IPD of the Department of Shalya Tantra, Rishikul Campus, Ayurvedic College and Hospital, Haridwar, Uttarakhand Ayurved University, U.K., INDIA. Before conducting the clinical trial clearance from Institutional Ethics committee (IEC) was taken, vide letter no. UAU/RC/IEC/2018-19/03/17.11.18 on dated, 30/10/2018. The trial was registered in CTRI with Registration No: CTRI/2019/05/019131.

Selection of the patient

Patients age between 30-70 years having symptoms of *Sandhigata Vata* according to Ayurvedic classic and follow the diagnostic criteria of primary osteoarthritis without any anatomical deformity. Patients with secondary osteoarthritis, rheumatoid arthritis, gout, psoriasis and history of trauma, severe systemic illness like Diabetes mellitus, liver disorders, Tuberculosis, Renal disease, Cardiac disease were excluded.

All 15 patients were treated with *Marma* therapy over the related affected *Sandhi*, 15-18 times, thrice a day (single stimulus was for 0.8 sec) for 90 days. Procedure of *Marma* Therapy performed after written informed consent in three stages as *Poorva Karma, Pradhana Karma* and *Paschaata Karma*.

Poorva Karma

Patient were asked to take the breath before *Marma* point stimulation. So that the total relaxation of the body and mind was achieved. Examination of the body surface for the assessment for locating the proper *Marma* points then gentle massage with thumb and fingers over the *Marma* points was done.

Pradhana Karma

After adopting the proper posture, Patient's eyes were closed gently and asked the patient to exhale gently. Then patient was asked to inhale deeply for 5-10 times in rhythmic pattern and to keep concentrate their mind on *Marma* points then *Marma* point was

pressed on proper therapeutic manner (Every *Marma* point was stimulated 15-18 times in one sitting and three sittings were given per day).

Paschaata Karma

The patient was advice to take rest for 5-10 min, and then allowed to go back for his/her routine work.

Diet: Patient was also advice to take *Pathya Aahar Vihar* indicated in *Sandhigata Vata*.

Application of Marma Therapy

Manibandha Marma: Location is over the wrist joint. *Marma* point was pressed with the grip of index finger and thumb.

Kshipra Marma: Located at the junction of the thumb and index finger. Stretched out thumb at 90° angle and at the midpoint of the base of the thumb, *Marma* point was pressed with the help of thumb and index finger.

Kurpara Marma: Over the elbow joint. Lateral and medial aspect of the elbow was gently pressed with the thumb and index finger.

Janu Marma: Over the knee joint, patient was advised to lie down in supine position and *Marma* point was pressed.

Follow up was done for 2 months at every 15 days of interval after the completion of treatment.

Assesment criteria of the disease

Assessment of symptoms and severity was done in grading pattern;

Subjective parameters

Sandhishula (On rest), *Sandhishula* (On standing), *Sandhishopha* (swelling), *Stabdhata* (stiffness), *Sparshaashatvam* (tenderness), *Ankunchan Prsaranjanyo Vedana* (restriction of the movement), *Sandhisphutan* (crepitus), ability to climb up/down on stairs and ability to squat. Grading of the parametere were classified on the basis of nil, mild, moderate and severe.

Objective parameters : x-rays findings

No radiographic changes	0
Possible joint space narrowing and osteophytes formation	1
Definite osteophytes formation with possible joint space narrowing	2
Multiple osteophytes, definite joint space narrowing, sclerosis and possible bony deformity	3
Large osteophytes, marked joint space narrowing, severe sclerosis, definite bony deformity	4

Over all assesment scale

- Complete remission : 100% relief
- Markedly improved : 76%-99% relief
- Moderately improved : 51%-75% relief
- Mild Improved : 26%-50% relief
- Unchanged : 0%-25% relief

RESULT

Table 1: Effect of therapy on Subjective and Objective parameters in 15 patients of Sandhigata Vata.

Parameters	Median		Wilcoxon Signed Rank W	P-Value	% Effect	Result
	BT	AT				
<i>Sandhishula</i> (On Rest)	2	0	-3.508 ^a	0.000	92.86	H.S
<i>Sandhishula</i> (On Standing)	2	0	-3.448 ^a	0.001	92.31	H.S
<i>Sandhishopha</i> (Swelling)	2	0	-3.573 ^a	0.000	90.32	H.S
<i>Stabdhata</i> (Stiffness)	2	0	-3.573 ^a	0.000	90.32	H.S
<i>Sparshaasahatwam</i> (Tenderness)	2	0	-3.624 ^a	0.000	91.18	H.S
<i>Akunchana</i>	2	0	-3.416 ^a	<0.00	92.00	H.S

Prasaranjanyo Vedana (Pain during flexion and extension of the joint)				1		
Sandhi Sphutana (Crepitus)	2	0	-3.397 ^a	<0.001	91.67	H.S
Ability to Climb Up/Down on stairs	2	0	-3.557 ^a	0.000	90.91	H.S
Ability to Squat	2	0	-3.690 ^a	0.000	91.43	H.S
X-Rays Finding	2	0	-3.742 ^a	0.000	90.32	H.S

Since observations are on ordinal scale (gradations), we have used Wilcoxon Signed Rank Test to test efficacy of Marma therapy. From above table we can observe that P-Values for all parameters are less than 0.001. Hence we conclude that effect observed in Marma therapy is highly significant. The above mentioned data shows that Marma therapy has provided better relief in the disease Sandhigata Vata (Osteoarthritis) in the present study.

Table 2: Assessment of pain by VAS (Visual Analogue Scale)

	Median		Wilcoxon Signed Rank W	P-Value	% Effect	Result
	BT	AT				
VAS	9	1	-3.742 ^a	0.000	91.93	H.S.

Since observations are on ordinal scale (gradations), we have used Wilcoxon Signed Rank Test to test efficacy of Marma therapy. From above table we can observe that P-Value is less than 0.001. Hence we conclude that effect observed in Marma therapy is highly significant.

Table 3: Overall effect of the Treatment Module

Overall effect	No. of pt.	%
Complete Remission	12	80.00
Markedly Improved	2	13.33

Moderately Improved	1	6.67
Improved	0	0.00
Unchanged	0	0.00
Total	15	100.00

The above mentioned data shows that Marma Therapy has provided better relief in the disease Sandhigata Vata (Osteoarthritis) in the present study.

DISCUSSION

The prevalence of the disease between the 61-70 years of age group and then 51-60 years of age group of patients because osteoarthritis increases with the increase of age.^[8] During in *Vridhdhavastha*, due to the predominance of *Vata Dosh* and degenerative process such as cartilage thinning, weak muscle strength and lack of proper blood supply to the particular joint, make a joint to more prone for Osteoarthritis. In the present study out of 15 patients 66.66% were female and 33.33% were male. It is hypothesized that Osteoarthritis is more common in menopause women because hormonal factors play a role in the development of osteoarthritis.^[9] It was found that maximum number of patients were from lower middle class i.e. 66.66%. This pattern of distribution indicate that lower middle class and poor population are present in clinical trial area. Which indicates that they were not able to take even correct nutritious and hygienic diets. So, lack of nutritious food is also leads to *Dhatukshaya* and resulted in *Vata Prakopa*, as well as degeneration which further lead to cause *Sandhigata Vata*. In the present clinical study, it has been found that the disease is more common in housewives i.e. 46.66%. Majority of the females doing house work were suffering of this disease may be due to their dawn to dusk – continuous home activities.^[10] These are the risk factor for *Vatadushti* as well for the disease. The present clinical study shows that majority of the patients i.e. 73.33% were reported to have a chronicity of 0-1 year followed by 13.33% having more than 2 years of chronicity. Osteoarthritis is a slow

progressive disease. *Sandhigata Vata* is encountered as a *Yapya* or *Kashtasadhya* variety and all the *Vapyavikara* are chronic in nature.^[11] The chronicity is inversely proportional to the prognosis of disease i.e. if chronicity is less, prognosis is good. Maximum number of patients were having *Madhyama Kostha* i.e. 66.66% than 20% were having *Krura Kostha*. *Krura Kostha* can be considered as risk factor of *Sandhigata Vata* because it indicates dominance of *Vata Dosha*^[12] and vitiation of *Purishadhara Kala*. The present study shows that majority of the patients i.e. 40% each were having menopause menstrual history. It can be concluded that menopause plays a chief role in manifestation of *Sandhigata Vata*. It supports the findings of modern research workers. Out of 15 patients maximum number of patients were having knee joint osteoarthritis i.e. 73.33% than 13.33% patients were having cervical osteoarthritis. It supports the theory that this disease occurs mostly in weight bearing joints.^[13] Among the Chief complaints *Sandhishula* (on rest), *Sandhishula* (on standing) were found in all cases. In *Sandhigata Vata* there will be aggravation of *Vata Dosha* which is responsible for any kind of *Shula Pradhana Vedana*. *Akunchana Prasaranajanya Vedana* and *Hantisandhigati* was found more in the patients, which occurs due to aggravation of *Vata Dosha* and *Kaphakshaya*. On the basis of radiological findings, maximum patients had reduced joint space i.e. 46.66% followed by osteophyte formation in 26.66% patients. All these are related to the disease *Sandhigata Vata* (Osteoarthritis).

CONCLUSION

Certainly we can say that the disease or lesions away from the *Marmas* can be treated easily. When they get injured a lot of complication are there but when they are treated or stimulated by therapeutic manner (*Sasti Upkarma*). They achieve the normalcy of *Saptadhatu* and *Tridosha*. Stimulation of *Marma* can produce analgesia by secreting a number of Prostaglandin inhibitors, and other Opioid- like substances which are hundred times more potent than opium.^[14] Thus after full observation of treatment modules of *Marma* therapy it was found

that number of patients unchanged and improved was 0%. Whereas moderately improvement was observed in 1 patient (6.67%), Markedly improvement was observed in 2 patients (13.33%) and complete Remission was observed in 12 patients (80%).

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