



OSTEOARTHRITIS (SANDHIGATA-VATA) IN GERIATRIC AND ITS MANAGEMENT WITH KALABASTI: RESEARCH ARTICLE

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ABSTRACT

In geriatrics, most common reason to produce immobility is Osteoarthritis (OA) which is 8th leading cause of disability. Wear and tear of cartilages in OA causes joint pain, swelling, stiffness and reduction in range of motion. Ayurveda very effectively and scientifically describes 'Sandhigata Vata', having symptoms same as that of OA. 'Sandhigatavata' is included in *Vatavyadhi* and also the aging related. *Snehan – Swedan- Basti* is the effective treatment suggested in Ayurveda. In present study, selected 30 elderly patients of OA. were administered with 'Kala Basti' following *snehan – swedan* for 3 successive months. Then patients were assessed with regards to symptoms. It has been observed that 66.66% of patients feel relief from pain to greater extent in bigger joints whereas this percentage is 60% in smaller joints. Improvement in range of movement is found to be 70%. 63.33% of patients have reduction in swelling relief from stiffness in 66.66%. Patients also have relieved from the associated complaints.

KEYWORDS: Kala basti, Osteoarthritis, Sandhigatavata, Vatavyadhi.

INTRODUCTION

The upward growing population in India during last five decades has resulted in marked growth of persons age 60 and above. It is also supposed to project to increase dramatically over the next four decades. This is the reason why India has acquired the label of an ageing nation. The geriatric population which is the part and parcel of ageing process is becoming a major concern worldwide. In India the size of the elderly population i.e. persons above the age of 60 years is fast growing although it constituted only 7.4% of total population. Geriatric is a specialized branch designed to focus on health of elderly patients. Ageing phenomenon in geriatric gives rise to new set of medical, social and economic problems. The most common health challenges which appear in elderly people are immobility, instability, incontinence and impaired intellect and memory. In modern science, there is no specific age at which the patient is prescribed geriatric treatments, as this is generally determined by the patient's profile and the symptoms that patients suffer from. Half of the all persons aged over 65 suffer from osteoarthritis.^[1]

Ayurveda being the science of life i.e. 'Ayu'^[2] which is the perpetual phenomenon of the universe. Ayu has been

classified by *Charaka* as 0 – 16 yrs *Balyavastha*, 17- 60 yrs *Madhyavastha* and above 60 yrs *Vridhnavastha*.^[3] The elderly people which comes under the category of *vridhnavastha* are supposed to be the people of geriatric age. *Jara* or old age is considered to be natural condition in Ayurveda. In this age group, these elderly people are consistently experiencing the progressive process of ageing resulting in the loss of adaptive response to stress and increasing risk of age related disease.

Ayurveda believes that in *vridhnavastha* (old age) all *dhatus* (seven physiological elements of body) undergo *kshaya* (degeneration)^[4] leading to *vataprakopa* (vitiation of vata) which leads to number of diseases and health problems. In those, most common is *Sandhigatavata* i.e. Osteoarthritis (OA). Generally, the signs and symptoms of *sandhigatavata* begins in *madhyavastha*, but become most dominant and aggressive in *vridhnavastha*.

In present study, the elderly patients of OA have been selected. The vitiated *vata dosha* get lodged into the *kaphashaya* i.e. *sandhi* (joints) which leads to various signs and symptoms. Since *Acharya Charaka* quoted that *Basti Chikitsa* (medicated enemata) is the best treatment for any *Vatavyadhi*.^[5] *Kalaj Basti* mentioned by

Ashtangasangraha^[6] along with *snehana* and *swedana* (oilation and sudation) has been selected to treat *sandhigatavata*. The whole treatment has been given for successive 03 months and remarkable improvements have been noticed in the patients.

Osteoarthritis is a degenerative disease^[7] is associated with unstoppable, inevitable and biological phenomenon i.e. ageing, so complete recovery or improvement is highly impossible. The modern science has conservative treatments or surgical treatments in which one cannot deny the fear of side effects and complications. The therapy from Ayurveda is found to be effective in relieving the signs and symptoms to great extent without any complications or side effects.

AIM AND OBJECTIVES

1. To find out the effect of *Kalaja Basti* on *Sandhigatavata* i.e.OA.
2. To find out the *hetu* (causative factors) of OA in elderly people apart from ageing.

MATERIAL AND METHODS

Selection of Patients

In present study we have selected 30 elderly patients after well being diagnosed or already diagnosed with classical signs and symptoms of *sandhigatavata* i.e. *Sandhishula* (pain in joints), *Shotha* (swelling over joints), *Akunchana prasarana vedana* (difficulty in movements), *Sthabdhatata* (stiffness)^[8] etc. All these patients have registered from Kayachikitsa and Panchakarma OPD of PMT'S Ayurved College, Shevgaon, Dist Ahmednagar.

Inclusive Criteria

1. Patients of the age of 60 and above.
2. Irrespective of sex, occupation, religion.

Exclusion Criteria

1. Patients having anatomical deformity in joints.
2. Dumb and deaf patients.
3. Unconscious patients.
4. Patients having DM, Cardiovascular disease.

After selection, all these patients were administered for *Panchakarma* therapy for successive three months as follows:

1. *Sarvanga Snehana* – 15 min- *Tila Taila*

2. *Nadi swedana* – 15min
3. *Kalaja Basti* – 15min

Protocol of Kalaj basti

1. 1st day and last 03 days – *Anuvasana Basti* – 100ml *Tila Taila*
2. From 2nd day to 12th day – Alternative *Anuvasana* & *Niruha Basti*
3. *Niruha Basti* – 600ml – *Dashamula Kwatha*

A special research case paper (CRF) has been prepared to assess all day to day clinical findings in patients. Mainly all these patients were assessed on the basis of signs & symptoms of OA before and after treatment i.e. after 03 months.

During the whole period of treatment a special dietetic chart has been made available to every patient.

Assessment Criteria

1. *Shula* in *sandhi* (Pain in joints)
2. *Shotha* over *sandhi* (Swelling over joint)
3. *Stambha* (Stiffness)
4. *Akunchana Prasarana Vedana* (Pain in Movements)
5. *Sparshaasahatwa* (Tenderness)

Gradation of Parameters

1. + - Mild
2. ++ - Moderate
3. +++ - Severe

OBSERVATIONS AND RESULTS

Table 1: Showing Improvement in pain of *Sthula Sandhi* (Big joints) after treatment.

Pain	Before T/t	After T/t	Improvement (%)
Mild	03	20	66.66%
Moderate	11	06	20%
Severe	16	04	13.13%

Table 2: Showing Improvement in pain of *Kshudra Sandhi* (Small joints) after treatment.

Pain	Before T/t	After T/t	Improvement (%)
Mild	02	18	66%
Moderate	09	10	33.33%
Severe	19	02	6.66%

Table 3: Showing Improvement in pain of swelling (*Shotha*) on all joints.

Swelling	Before T/t		After T/t		Improvement (%)	
	Small joints	Big Joints	Small joints	Big joints	Small joints	Big joints
Mild	06	07	19	21	63.33%	70%
Moderate	12	13	08	08	26.66%	26.66%
Severe	12	10	03	03	10%	10%

Table 4: Showing Improvement in overall stiffness (Stabdhatta).

Stiffness	BT	AT	Improvement (%)
Mild	02	20	66.66%
Moderate	06	06	20%
Severe	18	04	13.33%

Table 5: Showing Improvement in difficulty in movements (Akunchana Prasarana Kashtata).

Difficulty in movements	BT	AT	Improvements (%)
Mild	03	21	70%
Moderate	07	07	23.33%
Severe	20	02	6.66%

Statistical analysis

For the statistical analysis of various parameters, paired 't' test applied.

For pain in big joints:

$$t_{29} = 6.18$$

As $p < 0.0001$, t/t is highly effective for pain.

For swelling in all joints:

$$t_{19} = 6.25$$

As $p < 0.001$, t/t is highly effective.

For stiffness in joints:

$$t_{29} = 8.38$$

As $p < 0.001$, test is highly significant.

For difficulty in movement:

$$t_{29} = 8.93$$

As $p < 0.001$, treatment proved to be highly effective.

DISCUSSION

According to Ayurveda, *sandhigataavata* occurs due to aggregation of *vata dosha*. *Vata* is an Ayurvedic humor that symbolize air and wind. It governs all the movements of the body as well as mind. When the activities of *vata* increases inside *sandhi* or joint, then the symptoms of *sandhigataavata* occurs. As *vata* is *shushka* (dry) in nature, it absorbs fluidity over there. *Vata* is also destructive and catabolic in nature. In *sandhigataavata* it disturbs the cartilages and reduces the *shlemaka kapha* (synovial fluid) in joints. *Vriddhavastha* i.e. age above 60 years is the period of *dhatukshaya* as per Ayurveda which also leads to *vata dosha* aggravation.

In modern science, the similar disease having similar type of sign & symptoms has been described as osteoarthritis. Its patho-physiology suggests that there is cartilage loss and damage of joint tissue and also the underlying bone^[7].

Acharya Charaka has included *sandhigataavata* in *vatavyadhi*^[8] on the basis of *vata* dominant signs and symptoms. According to him, *Basti chikitsa* is one of the best treatment to overcome *vatavyadhi*. *Ashtangahridayakar* also quoted and advocated 'Kalaj Basti' to treat *vatavyadhi* because of its *vatanashaka* qualities.

Kalaja Basti includes two types of therapies:

1. Anuvasana Basti – Tila Taila
2. Niruha Basti – Dashamula Kadha

Tila taila itself is the best *vatanashaka*^[9] and very effective in balancing the vitiated *vata dosha*. The *Dashamula* contains *Laghumula* and *Bruhatamula*. Both these drugs are also having *vatanashak*^[10] properties. The internal action of *kalaja basti* on the site of *vata dosha* (*Pakwashaya*) would definitely bring vitiated *vata dosha* at its original place from joints. *Dashamula kadha* has been used in *niruha basti*. The drugs of *dashamula* are of *ushna virya*. *Ushna virya* increases *dhatwagni* which in turn increases nutrition of all *dhatu*s. As a result *asthi dhatu* (bone tissue) remains stable and stop degeneration. *Tikta rasa* is *deepana*, *pachana*, *rochana*, activity which improves the general condition and strengthens the whole body.

Prior to every *Kalaja Basti* treatment, every patient is administered with *sarvanga snehana* and *nadi swedana* for 15 minutes each. The local action of *snehana* helps to relieve from the chief complaints like *shula* and *shotha*. The *snehana* pacifies *vata*, softens the body and eliminates *malas*. *Swedana* relieves stiffness, hardness and coldness. In the process of *swedana* the local circulation of blood increases because of dilatation of blood vessels.

It has been crystal clear that *vata* and to some extent *kapha* are causative factors for onset of *sandhigataavata*. *Vata* vitiation along with degenerative changes are at peak in geriatric age, hence in *vriddhavastha* OA is very common. But apart from this scenario, in the present study it has been observed that *sandhigataavata* is very common in females. The females selected in this study were in menopausal state. Modern science also believes that imbalance of hormones in this state of which directly affects bones and joints.

66.66% of patients shown improvement in the symptoms of pain over joints as it has reduced to mild in bigger joints.

In smaller joints, 66.66% of patients have got relief from pain after treatment.

63.63% of patients have shown improvement in swelling over smaller joints whereas 70% of patients have relieved from swelling over bigger joints after treatment.

The overall stiffness of the body has been reduced in 66.66% of patients after treatment.

The difficulty in movements of joints has shown improvement in 70% of patients after treatment.

It has also observed that signs and symptoms are more aggressive in those who have lack of routine exercise, sitting job nature, sedentary life style and *diwaswapa*.

All these factors are responsible to increases *meda* and *kapha* which leads to weight gain. Excessive amount of weight exerts pressure on joints, also leads to *sandhigatavata*.

CONCLUSION

Osteoarthritis (*sandhigata vata*) in geriatric age when treated with *Kala Basti* for three successive months showed the dramatic improvements in major complaints such as pain at joints, swelling over joints, stiffness and difficulty in movements. The treatment proved to be very effective in osteoarthritis which ultimately improves geriatric quality of life.

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