



Research Article

SANDHIGATA VATA W.S.R.TO OSTEOARTHRITIS-A REVIEW

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ABSTRACT

Osteoarthritis (OA) is a persistent degenerative disorder characterized by loss of cartilage in joints. OA is accepted as a major public health problem. It is one of the major causes of impaired joint function that reduces quality of human life worldwide. In present time there is no permanent cure only focus on management of symptoms. Relieving of pain, improvement of joint function, and joint stability are the main therapeutic goals in current time. In past time OA was believed to be caused by the tearing and wearing of articular cartilage, but now a days more commonly referred to as a chronic and whole-joint disorders initiated with anatomical, biochemical and cellular alterations in the joint and synovial tissues, which leads to the histopathological and structural modifications of the joint and ends up with the whole tissue ailments. The musculoskeletal weakness and atrophy of muscles contribute to the disease process. So the rehabilitation and physical exercise on regular basis therapy were often prescribed by the physician with the intention to reduce pain and increase mobility. Therapeutically Ayurvedic medicine along with Panchakarma procedure, physical exercise either focuses on muscle strengthening and stretching exercises or on aerobic activity which can be performed in land or water. The clinical presentation of OA closely mimics with the disorder called Sandhigata vata which is the most common joint problem as described in Ayurvedic texts. This article presents an overview of the current knowledge on OA and focuses on, etiology, diagnosis procedure and management strategies, conservative treatment protocol including the panchakarma therapy and physiotherapy. This therapeutic information should assist health care provider's to treat patients with this effectively.

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INTRODUCTION

In Ayurvedic classical text Sandhigata vata is described under Vatavyadhi and it affects the people during old age<sup>1</sup>. It is mentioned to have the clinical features like swelling and pain in the joints, during the joint movements. According to text the main cause of the disease is excessive intake of vata vrudhi kara ahara like katu, tikta and kashaya rasa pradhana dravya and ativyayama (excessive strain or stress to the joints) or abhighata (injuries)<sup>2,3</sup>.

The disease Sandhivata was not mentioned as much in Vedic literature. Dev vaidya Ashwinikumaras had recorded their skill in treating joint diseases and its mention can be found in Rigveda<sup>4</sup>. Samhitagranthas and Samgrahagranthas except Sharangadharasamhita had described the disease Sandhivata with Lakshana and Chikitsa under Vatavyadhi. Many research work and detailed description of the disease are present in the contemporary science. The disease is comparable with osteoarthritis. Osteoarthritis is a degenerative joint disease due to the degradation of the cartilages and subchondral bone. There is no permanent solution in any available treatment

modalities to treat the OA and due to this the use of alternative therapies are on the rise.

The prevalence of OA is 7% world-wide. The condition affects over 500 million people globally and is one of the leading causes of disabilities. A total of about 15% of people in India suffer from arthritis<sup>5</sup>. The incidence of arthritis has increased despite the increase in life expectancy produced by improved sanitations and nutrition<sup>6</sup>. Osteoarthritis is among the commonest joint problem and its prevalence is 22% to 39% in India. The disease is more common in women than men<sup>7</sup>. This disease mostly affects the people with the age group of 40 years because this group of persons have some pathologic change in weight bearing joints. Due to the life style of Indian people, they suffer from knee OA while the western country people suffer from hip joint OA. The predisposing factors of the disease are obesity, occupational knee bending, repetitive trauma, genetic factor and physical labor which is reported by 5.78% of the rural people of India. It has become one of the major causes for the knee replacement surgery<sup>8</sup>.

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Maharshi Sushruta has described the disease in Vatavyadhi chapter under the heading of Sandhigata Vata, while Charaka has described Sandhigata vata under the Vatavyadhi as Sandhigata Anila. The diseases produced by morbid vatadosha are more common in Jaravastha (old age). The vitiated vata combines with other vitiated dosha, rakta, ama, etc and gets located in the joint to produce the disease. Being a disease related to madhyamarogamarga, Sandhigata vata is either Kastasadhya or Asadhya. On the basis of symptomatology and nature of the disease, Sandhigata vata is much similar to OA, which is the most common degenerative joint disease in older people<sup>9,10</sup>.

### Aim and Objectives

To review the various treatment modalities which is mentioned in Ayurvedic text for treatment of Sandhigata vata and to establish evidence-based guideline for its rational utility.

## MATERIAL AND METHODS

Brihatrayi, Laghutrayi, other Sangrah classical text and relevant modern books, published articles on Sandhigata vata or Osteo-arthritis and internet sources were used to review the treatment approaches mentioned to manage osteoarthritis or Sandhigata vata.

### Observations

**Etiology of Sandhigata vata:** Ruksha, Laghu, Sheeta, Katu ahara and vihara like Ati Vyayama, Langhana, Abhighata. In Manasika like Chinta, Shoka, Bhaya are the causative factors of the disease. In Kalaja factors, Shishira and Greeshma hritu are the major seasons where the patients get affected or have the increased incidence of the disease. Other factors like weakness during diseased state called Rogatkarshana and injury to the marma sthanas (Marmaghata), emaciation (Dhatu Kshaya) etc. are considered as the causative factors for osteoarthritis while Margavorodha are comes under Vishesh Nidana<sup>11,12,13,14</sup>.

### Samprapti Ghatakas

Nidana: Vata Prakopaka Nidana  
Dosha: Vata specially Vyanavayu, Shleshaka Kapha  
Dushya: Asthi, Majja, Meda  
Srotas: Asthivaha, Majjavaha and Medovaha  
Srotodusti: Sanga  
Agni: Mandagni  
Dosha Marga: Marmasthi Sandhi  
Roga Marga: Madhyam  
Udbhavasthana: Pakvashaya  
Vyaktasthana: Asthi – Sandhi

### Samprapti

From the onset of Dosha Dushya Dushti till the evolution of the Vyadhi there occur various pathological stages which is explained by Samprapti.

- Dhatukshaya janya-Vata Dosha is predominant in geriatric age and Kapha is decreased also the Agni gets impaired due to which the Dhatus produced are not at their best which ultimately leads to the degenerative changes in the body. As Kapha is decreased the Shleshaka kapha in joints also depletes resulting in Kshaya of Asthisandhi. Due to this if a person further

continues indulging in Vata aggravating factors the Sthanasamshraya of Prakupita Vata takes place in the Khavaigunayayukta in the sandhi. This localized Vayu due to its personal Ruksha, Laghu, Kharaadi Guna results in Sandhigatavata.

- Aavarana janya- In obese people usually Sandhigatavata occurs in the weight bearing joints. Meda dhatu is produced in excess amount it will cause obstruction and does not nourishes the Uttrotar dhatus leading to Dhatu Kshaya. The excessive fat will cause Aavarana of Vata and caused Sandhigata Vata
- This vitiated Vata when settle down in joints will produce Sandhivata<sup>15,16</sup>.

### Clinical features

Like other vata vyadhi this disease may not show any prodromal symptoms or poorvarooopa. But the clinical signs and symptoms include joint pain (Sandhi vedana, Sandhi Shotha), Vatapoorna druti sparsha, pain and tenderness during the movements of the joints (Prasarana akunchana pravrutthi savedana), crakling sounds (Atopa) and degeneration of the joint (Hanti sandhi) appear time to time<sup>17</sup>.

### Types of Sandhigata vata

The type of Sandhigata vata are not described in classical texts however it can be understood on the basis of the following features-

1. According to Samprapti
  - Dhatukshayajanyasandhivata as degeneration occurs most commonly.
  - Avaranajanyasandhivata: The primary cause is Avarana of Kapha by Vayu.
  - Both Kshaya as well Avarana
2. In the line of Nija and Agantuja it can be classified in two varieties-
  - Nija- Due to vitiation of Vata by Dhatukshaya, Avarana etc.
  - Agantuja- Due to trauma.

### Differential Diagnosis

It can be differentiated with Factors Jaanu Sandhigata vata, Amavata, Vatarakta and Koshtrukashirsha.

### Management of Sandhigata vata

As in Ayurveda the first line of treatment is Nidanaparivarjana so the first aim should be lifestyle modification which can be achieved through change in dietary habits, Yoga and regular exercise. The management of sandhigatavata is aimed at reducing the Vata dosha and to increase the Sandhistha shleshaka kapha so that the joint spaces are adequately lubricated for the free movement of the joints. For this purpose, many procedures have been mentioned classics like snehana, swedana, mridu samshodhana, Basti and Vatahara Aushadha, Ahara and Vihara. In some special cases practice like upanaha, agnikarma, bandhana karma, mardhana karma etc. are also described. Sandhigata Vata may be correlated with degenerative joint disease or OA, which in turn cripples the patient to the maximum, extends and reduces the total working capacity of the affected person. In the modern medical science, the treatment adopted for the OA includes administration of anti-inflammatory drugs and many grade analgesics for the pain relief. In much extreme condition some

surgical procedures like joint replacements are also adopted<sup>18,19</sup>.

### **Dietary Management**

Vatahara, Madhura, Amla, Lavana and Snigdha diet should be given to the patients<sup>19</sup>. Shunthi is described under Vatanashakgana so it must be included in our daily routine diet. Ghritpan is advised to alleviate Vata. Rasayana enhances and restores the process of conservation, so they must be taken regularly. Some rasayana is very useful in sandhivata are- Lashuna, Methika, Kshira- ghritaabhyasa etc<sup>20</sup>.

### **Yoga and Physical Activities**

Yoga has proven physical activity effect on both physiological and mental status in treatment of chronic conditions. In many research studies have shown that effect of Yoga in the patients of OA is higher in patients than one doing physical therapy alone. The results have shown remarkable decrease in pain, morning stiffness, and anxiety in the patients of the experimental group. As per American college of rheumatology, strong recommendations were made for exercise in patients with knee and/or hip OA especially who are overweight or obese. Many Balance exercises, yoga, cognitive behavioral therapy etc. were conditionally recommended to OA patients<sup>21</sup>.

### **Panchakarma Procedure**

In ayurvedic line of treatment panchakarma therapy is very effective to manage the pain, Basti Chikitsa which is considered as half treatment and is best for Vatavyadhis and are also effective in OA. Snehanbasti will not only help in decreasing pain but it will also promote strength. Many Studies done with Ksheer balataila basti were found significant to highly significant result in reducing the symptoms of Sandhigata vata. Rajayapana basti has important role to reducing the symptoms of OA due to its Rasayana and Bhrimghana effect This type of karma stopped further deterioration of Dhatus and increased the quality of life. There is a tremendous therapy said in Ayurveda classics known as Leech therapy is very effective in giving symptomatic relief in OA patients. The active anticoagulant compounds in leech saliva named as hirudin and their local release (that is, in the synovial fluid) has anti-inflammatory properties<sup>22,23,24,25</sup>.

### **Drug therapy for OA**

There are a lot of herbal medicine described in classical texts, such of them Guggulu preparations like Vatariguggulu, Yograj guggul, Trayodashangm guggulu are very beneficial for treating in OA. Single herbs like Ashwagandha, Nirgundi , Bala, Rasna, Sallaki, Eranda and Shunthi have proven results in Sandhivata. Kwath preparations like Maharasnadikwath, Rasnasaptakkwath, Nirgundi kwath and Dasmool kwath are helpful<sup>26,27,28</sup>.

### **Agnikarma in OA**

Agnikarma Therapy Patients of OAs having severed joint pain can be treated effectively by Agnikarma on affected joint with the use of Pancha Dhatu Shalaka. Few research work conducted in OA and agnikarma which indicates significant results to reduce pain instantly. Nilesh Jethava *et al* entitled 'Role of Agnikarma in Sandhigata Vata (osteoarthritis of knee joint)' concluded that Agnikarma (therapeutic heat burn) provides instant<sup>29</sup>.

### **Modern Medicine**

Non-steroidal anti-inflammatory drugs NSAIDs are widely used to treat OA by Modern medicine physicians but although inflammation may be a feature of OA (Altman & Gray, 1985; Huskisson *et al.*, 1979), Evidence proved that NSAIDs are acting other than as analgesics. A recent large, double-blind, placebo-controlled study of paracetamol vs ibuprofen at either analgesic or anti-inflammatory doses, failed to demonstrate any increased benefit from the NSAID<sup>30</sup>.

### **DISCUSSION**

OA of knee is a chronic and painful degenerative disorder and it is one of the most common types of arthritis. The major cardinal symptoms are Joint pain, stiffness, crepitation and tenderness etc. The modern medical science is more materialistic and has high dependence on the pathological and pharmacological interventions. Ayurvedic treatment modalities gives equal importance to physical, mental and spiritual well-being. The prevention of the disease is given utmost importance in the ayurveda which is described as nidhanparivarjanam. Good dietary patterns, exercise can be followed for healthy life. OA is a chronic degenerative disease where the normal joint structure changes into pathological changes. In Modern medical system, analgesics NSAIDs, anti-inflammatory drugs, corticosteroids and intra articular injections are used for the management of OA which gives temporary relief. At last, knee replacement surgery is done which is quite expensive and may have adverse effect<sup>31</sup>. In Ayurvedic literature a lot of medication and therapeutic procedure have mentioned which could subside all signs and symptoms and patient could perform daily chores.

The treatment modalities of OA can be designed based on the various measures mentioned in textuales like – snehana, upanaha, agnikarma, bandhana, unmardhana etc. The general Vata vyadhi chikitsa can be adopted by the ayurvedic physician to treat the Janu Sandhigata Vata based on the lakshana and the sthana of the disease - virechana and basti karma are very useful. If knee joint is considered as Sandhigata vata then the therapeutic procedure asthivaha srotho dusti, asthi majjagata vata chikitsa, bahya and abhyantara sneha is adopted. In this condition panchakarma chikitsa especially basti with ksheera and sarpi processed with tikta dravyas are useful. Sandhigata Vata is a disease of geriatric people that's why Rasayana chikitsa is adopted which will not only cure the disease but will also help in leading a healthy adulthood.

### **CONCLUSION**

Sandhigata vata is age related disorder and when it appear in person body it may present for rest of the life. The treatment of Sandhigata vata is mainly done by reducing the alleviated Vata dosha and increase the Shleshaka kapha in joints so that movement of joints can be increased due to increasing lubricancy and friction free condition of articular joint. By the use of Ayurvedic dincharya, hritucharya, ahar-vihara, aushadha upakrama a man can spend their healthy and disease-free life. Ayurvedic healthy life style procedure like yoga, panchkarma, sadvidha upakrama and use of pathya-apathya can prevent the degenerative disease.

## Footnotes

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