

A review on Sandhigatavata and its Management Principles

Review Article

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Abstract

In the *Ayurvedic* classics the aetiopathogenesis and symptomatology of *Sandhigata vata* is described in concise form. Clinically the description of *Sandhigata vata* explained in the classical texts is similar to the condition osteoarthritis in modern science. *Sandhigatavata* is described under *Vatavyadhi* in all the *Samhitas* and *Sangraha Granthas*. In *Vridhdhavastha*, all *Dhatus* undergo *Kshaya*, Thus leading to *Vataprakopa* and making individual prone to many diseases. Among them *Sandhigatavata* stands top in the list. Having the symptoms like pain, swelling, crepitus, and restricted joint movements. *Ayurveda* highlighted degenerative diseases under the concepts like “*Dhatu saithilyam*” and “*Dhatu kshayam*”. *Sandhigata Vata* is one of such disease, which needs a specific target of therapeutic intervention to check or slow down the process of “*Dhatu kshaya*” and to pacify *Vata*. *Sandhigatavata* may be correlated with degenerative joint disease or Osteoarthritis, which in turn cripples the patient to the maximum, extends and reduces the total working capacity of the person. It limits everyday activities such as walking, dressing, bathing etc., thus making individual handicapped.

Key words: *Ayurveda* drugs, *Jaanusandhigata vata*, Osteoarthritis, *Vatavyadhi*

Introduction

In *Ayurveda*, the disease *Sandhigatavata* is described under *Vatavyadhi* in all the *Samhitas* and *Sangraha Granthas*. It is mentioned to have the clinical features like swelling in the joints and pain during the joint movements. (3-Anonymous, Caraka Samhita e-book, CCRAS, New Delhi, 2010, Cikitsa sthana, *Vatavyadhi* Prakarana). It is said to be caused by the

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)*.

The disease is comparable with osteoarthritis. Osteoarthritis is a degenerative joint disease due to the degradation of the joints, the articular cartilages and subchondral bone. It is caused by the mechanical stress to the joints and produces the symptoms like joint pain, swelling, stiffness etc. Eventhough the disease effects any joint in the body, most commonly involved joints are major joints and weight bearing joints of the body like hip and knee joint. Due to the life style, Indians suffers from knee

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joint osteoarthritis where as western country suffers from hip joint osteoarthritis commonly.

The incidence of this disease increases with the age and the prevalence is more in females (25%) when compared to the males (16%). (1-<http://en.wikipedia.org/wiki/Osteoarthritis>) . Almost all persons by Age 40 have some pathologic change in weight bearing joint. The reported prevalence of Osteoarthritis from a study in rural India is 5.78%. Obesity, Occupational knee bending, Physical labour etc., are some of the predisposing factors for the disease. (2) It has become one of the major causes for the knee replacement surgeries.

Hence an attempt has been made to critically analyze the aetio-pathogenesis of the disease and the drugs that are useful for the management of the disease osteoarthritis.

Aims and objectives:

To analyze the panchalakshana nidana of the sandhigata vata and the aetio-pathogenesis of the osteoarthritis.

To analyze the drugs useful for the management of the disease.

Materials and methods:

As the study is a review study, the available literature like the samhitas and other books are searched for the disease and all the relevant content is considered and analyzed to get a comprehensive concept in the management of the osteoarthritis.

Observations:

Etiology:

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 ritu are the major seasons where the patients get affected or have the increased incidence of the disease.

Other factors like weakness during diseased state (Rogatikarshana) and injury to the marma sthanas (Marmaghata), emaciation (Dhatu Kshaya) etc are considered as the causative factors for osteoarthritis, Margavorodha are comes under Vishsha Nidana

Clinical features:

The disease may not show any *poorvaroopa*. 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 pravruithi savedana*), *crakling sounds (Atopa) and degeneration of the joint (Hanti sandhi)*.

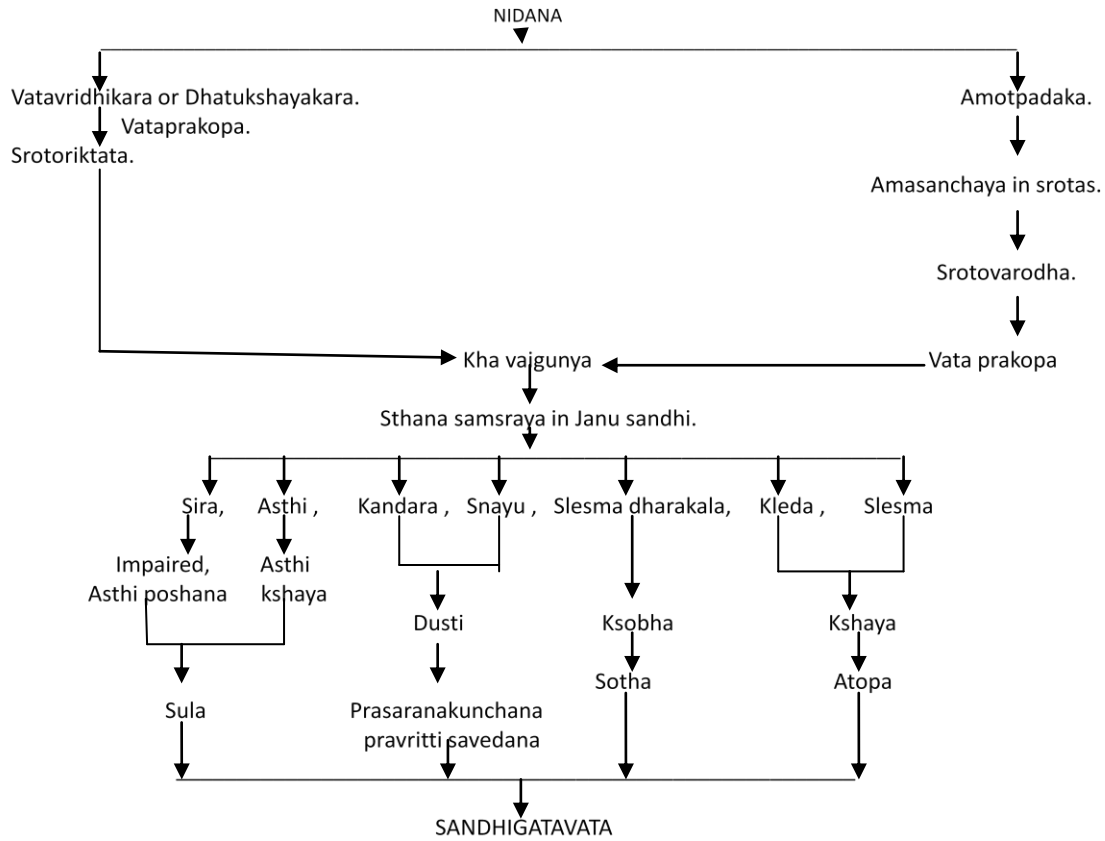
Samprapti Ghatakas:

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

Prognosis:

Sandhigatavata is one of the Vatavyadhi, therefore it is Kastasadhya because it occurs in aged people and is situated in Marma sthana, It is Madhyama roga marga, And it is Asthi, and Majja Dhatu Ashrita.

Probable Pathogenesis:



Differential Diagnosis:

Factors	<i>Jaanu Sandhigata vata</i>	<i>Amavata</i>	<i>Vatarakta</i>	<i>Koshtrukashirsha</i>
<i>Amapradhanya</i>	Absent	Present	Absent	Absent
<i>Jvara</i>	Absent	Present	Absent	Absent
<i>Hridgaurava</i>	Absent	Present	Absent	Absent
Prone age	Old Age	Any age	-	-
<i>Vedana</i>	<i>At Prasarana Akunchana Pravritti</i>	<i>Vrischik Dansha Vata and Sanchari</i>	<i>Mushika Damshavat Vedana</i>	<i>Tivra</i>
<i>Shotha</i>	<i>Vatapurna Driti sparsha</i>	<i>Sarvang and Sandhigata</i>	<i>Mandala yukta</i>	<i>Koshtruks Shirshvat</i>
<i>Sandhi</i>	Weight bearing Joint (Knee Jt.)	Starts from small Jt.later effects big <i>Sandhi</i>	Small <i>Sandhi</i>	Only <i>Jaanu</i>
<i>Upashaya</i>	<i>Abyanga</i>	<i>Ruksha Svedana</i>	<i>Rakta Shodhana</i>	<i>Rakta Shodhana</i>

Treatment:

In *Ayurveda*, the treatment of *sandhigatavata* is aimed at reducing the *Vata dosha* and to increase the *shleshaka kapha* so that the joint spaces are adequately lubricated for the free movement of the joints. For this many procedures have been mentioned like *snehana*, *swedana*, *Mridu Samshodhana*, *Basti* and *Vatahara Aushadha*, *Ahara* and *Vihara*.

In some case practices like *upanaha*, *agnikarma*, *bandhana*, *mardhana* etc are also described.

Sandhigata Vata may be correlated with degenerative joint disease or Osteoarthritis, which in turn cripples the patient to the maximum, extends and reduces the total working capacity of the person.

In the modern system of medicine, the treatment adopted for the osteoarthritis includes administration of anti-inflammatory drugs, analgesics for the pain relief. In much extreme cases some surgical procedures like joint replacements are also adopted.

Drugs that proved clinically effective in osteoarthritis:

There are so many drugs are mentioned in *Ayurveda* which are said to be having *vata hara* property and are useful for the treatment of the all types of the *Vata* disorders. But a few drugs are typically useful for the treatment of the joint disorders. They are as follows:

1. Nirgundi (*Vitex negundo* L. - Verbenaceae):

Vishnu dharmasutra quotes *Nirgundi*. The term *Shephalika* and *Nirgundi* for most of the times. *Karma* is *VataKapha hara*, *Caksushya*, *Keshya*, *Krimigna*, *Vrunaropana*. *Upayokta* are *Gandamala*, *Kasa Swasa*, *Vatavyadhi*. Researches are Anticancer, Antimicrobial, Anti-inflammatory, Antifungal, Hepatoprotectivity. (22)

2. Eranda (*Ricinus communis* L. - Euphorbiaceae)

In *guna* it is *Snigdha*, *Tiksna*, *Suksma*, *karma* are *Rechana*, *Vrishya*. *Upayokta* are *Pliharoga*, *Udavarta*, *Vastishoola*, *Gulma*, *Antravruddhi*, *Katishoola*, *Vatarakta*. *Kasa*. Researches are Anti-inflammatory, Hepatoprotective, Anticholestatic activity. (22,23)

3. Koranta (*Barleria prionitis* L. - Acanthaceae)

Rasa is *Tikta*, *Madhura*, *Guna* is *Laghu*, *Virya* is *Ushna*, *Vipaka* is *Madhura*. *Doshagnata* is *Kapha*, *Vata hara*, *Karma* is *Keshyaranjaniya*, *Vedanashamaka*. Chemical constituents are *Barlerin*, *Acetylene barlerin*, *Scutellarein*, *Neophesperidoside*. Research work said CNS depressant activity in mice. (24)

4. Bala (*Sida cordifolia* L. - Malvaceae)

Bhavamishra mentioned four varieties those are *Bala*, *Atibala*, *Nagabala*, *Mahabala*. Researches are its effects as Sedative. *Rasa* is *Madhura*, *Gunas* are *Laghu*, *Snigdha*, *Pischila*. *Virya* is *Sheeta*, *Vipaka* is *Madhura*, *Doshagnata* are *VataPittahara*, *Karma* are *Balya*, *Brumhana*, etc. Chemical constituents are *Ephedrine*, *hypaphorine*, *vasicinone*, *vasicine*, *vasicinol*, *choline*, *betaine*, *phytosterol* etc. Research works are sedative effect and Significant potentiating of phenobarbitone sleeping time in mice. (22)

5. Vishwa (*Zingiber officinale* Roscoe. - Zingiberaceae)

It is observed that *Shunti* is considered as *Vibandhahara* (alleviates constipation) but at the same time it is also indicated for *Atisara*. Here it is important to identify that the former indication is for *Shunti* when it is given in the powder form without *Anupana*, the later property is exhibited when administered along with

Takra. Rasa is Katu, Guna are Guru, Ruksha, Teekshna, Virya is Ushna, Vipaka is Madhura, Doshaghnata are Kapha Shamaka, Karma are Vata Kapha hara, Deepana and Bhedana. Chemical constituents are Gingirol, Alpha and Beta Zingiberenes, Zingirone, Alpha curcumene, citronellol, etc. Research work said that Anti-inflammatory and anti-arthritic activity. It has shown marked anti-inflammatory activity in rats which is comparable to prednisolone. (22, 25)

Discussion:

Sandhigatavata causative factors like Aharaja, Viharaj, Manasa and other *Vata Prakopaka Nidanas* are mentioned in detailed for the occurrence of *Vatavyadhi*. Though *Sandhigatavata* specially occurs in *Vriddhavastha* which is *Pariharanikala* in which *Dhatukshaya* takes place which leads *Vataprakopa*. *Vata* and *Asthi* have *Ashraya-Ashrayi Sambandha*. That means *Vata* is Situated in *Asthi*. In *Vridhdha kala* increased *Vata* diminishes *Sneha* from *Asthidhatu* by its opposite qualities to *Sneha*. Due to diminution of *Sneha*, *Khavaigunya (Rikta Srotas)* occurs in *Asthi* which is responsible for the production of *Sandhigatavata*.

In the *Samprapti* of *Sandhigatavata*, *Prakupita Vata* gets situated in *Asthi Sandhi* where *Khavaigunya - Rikta Srotas* is already present. Then *Dosha Dushya Sammucchana* takes place in *Asthi Sandhi* and further in *Samprapti*, the disease *Sandhigatavata* appears with its symptoms. *Sandhigatavata* is *Kastasadhya vyadhi* because all the *Vatavyadhis* are difficult to cure and they are said as *Mahagada*. So being a *Vatavyadhi*, *Sandhigatavata* is *Kastasadhya*. *Madhyama Rogamarga*, Situation in *Marma Asthi Sandhi*, Vitiation of *Asthi* and *Majja*, *Dhatukshya*, *Vriddhavastha* also makes it *Kastasadhya*.

Symptoms of *Sandhigatavata* are *Sandhishula*, *Sandhishotha*, *Akunchana*

Prasarana Janya Vedana and *Hanti Sandhi Gati* described by various *Acharya*. Here *Sandhishula* and *Sandhishotha* occur due to *Vataprakopa*. A special type of *Shotha* i.e. *Vatapurna driti Sparsha* or *Atopa* is mentioned which indicates *Vata* dominancy of *Shotha*. *Akunchana Prasaranjanya Vedana* and *Hanti Sandhi Gati* occur due to *Kaphakshaya* and *Vata Prakopa*.

Symptoms of Osteoarthritis are similar as of *Sandhigatavata* i.e. Joint pain, Swelling, Stiffness Disability and Crepitations over joint. Osteoarthritis is the most common form of arthritis. It is a degenerative type of arthritis which mainly occurs in old age. Degeneration takes place in the joint which makes the individual disabled or handicapped. Degeneration occurs continuously in most of the patients which makes the person disabled for the lifelong. It is a chronic degenerative disorder of multifactorial etiology characterized by loss of articular cartilage and periarticular bone remodeling. It involves the entire joint including the nearby muscles, underlying bone, ligament, synovium and capsule. The risk factors for osteoarthritis are old age, obesity, female sex, major joint trauma, repetitive stress, genetic factors, prior inflammatory joint diseases and metabolic or endocrine disorders.

In Allopathic science, the scientists believe that once the disease Osteoarthritis has taken place, then it is very difficult to reverse or block that disease process. Till date, no treatment is available that can reverse or slow or block the disease process. Allopathy science has only palliative treatment for Osteoarthritis. The following group of drugs help in reducing the pain and swelling.

- **Analgesics** – to provide relief in pain.
- **Anti inflammatory drugs** – to get relief in swelling.
- **Anti oxidants** e.g. vitamin A,B,C,E, etc. – to prevent the joint from

oxidative damage. Antioxidants nourish all the tissues.

- **Weight reduction** – Osteoarthritis mainly occurs in weight bearing joints. Obesity is a risk factor for Osteoarthritis. Excess weight gives burden to the joint and that leads joint damage. 11 pound weight reduction cuts 50% risk for Osteoarthritis. 5% weight loss in over weight patients gives 18% gain in overall function. So weight reduction is very essential for the treatment of Osteoarthritis.

Acharya *Charaka* has mentioned repeated use of *Snehana*, *Svedana Basti* and *Mrudu Virechana* for the treatment of *Vatavyadhi*. He has not mentioned the Treatment of *Sandhigatavata* separately. *Acharya Sushruta* has described specific treatment for the *Sandhigatavata* first time i.e. *Snehana*, *Upanaha*, *Agnikarma*, *Bandhana* and *Unmardana*,

According to *Ayurveda*, treatment is '*Vighatana of Samprapti*', so the treatment of *Sandhigatavata* aims are:

- **Agnisamata** – Because *Ayurveda* believes *Mandagni* is responsible for the production of all the diseases. In *Sandhigatavata Vriddhavasta* leads *Agnivaishamyia* and same *Agnivaishamyia* leads *Vataprakopa*. So to achieve *Agnisamata* is very essential for the *Shamana* of the diseases.
- **Vatashamana** – As like *Agni*, *Vayu* is responsible for the production of any disease. *Sandhigatavata* is a type of *Vatavyadhi* which occurs due to *Vataprakopa*. So for the *Shamana* of *Sandhigatavata*, treatment should be like that which can do *Vatashamana*.
- **Kaphavridhi (Increase Snigdha guna)** – In *Sandhigatavata*, *Rikta srotas* is in *Asthi Sandhi*. That means diminution of *Snehadi Guna* in *Asthi-Sandhi* occurs which provides place to *Vata* to get situated there and so the disease *Sandhigatavata* produces. By treatment *Rikta srotas* is filled by

Sneha. Thus *Khavaigunya* is corrected and so *Shamana* of *Sandhigatavata* is achieved. Here *Vatashamana* and correction of *Khavaigunya* is achieved by treatment.

- **Rasayana** – *Sandhigatavata* specially occurs in *Vriddhavastha* due to *Dhatukshya*. A *Rasayana* drug nourishes *Dhatu* and overcomes *Dhatukshya*. So it should be in for the treatment of *Sandhigatavata*.

Make surrounding tissue strong –

Muscles, ligaments and tendons are responsible for the joint stability. So surrounding tissue of the joint must be strong to prevent or cure the Osteoarthritis. If they are weak, joint damage will occur soon even with the minimal load. Treatment of osteoarthritis should be like that, which makes tissue strong. In *Ayurveda*, *Sandhishula* is one of the symptom of *Mamsakshaya* and *Sandhisphutana* is a symptom of *Majjakshaya*.

Provide materials which are required for healthy bone structure

Weak bone can't bear even normal load and it immediately gets damaged. So bone must be healthy and treatment should be like that only.

Samprapti Vighatana Anusara

Here, due to causitive factors *Vata* gets aggravated that locates and afflicts

The jaanu sandhi. As earlier drugs are having *Vata shaman* properties. So it decreases the aggravated *vata* and prevents the affliction of jaanu sandhi.

The drugs mentioned in the article like *Nirgundi*, *Eranda*, *Bala*, etc are having excellent *vatahara* property and they act as *rasayana*, *balya* and *kapha vardhaka* and help to reduce the *vata*. Thus the drugs can be effectively used for the treatment of the disease.

Conclusion

Thus from the above it can be concluded that sandhigatavata is one of the disease which causes crippling to the patients and the drugs like Nirgundi, ect help in the management of the disease.

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