

CONCEPTUAL STUDY OF SANDHIVATA (OSTEOARTHRITIS)

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ABSTRACT

Osteoarthritis is second most common musculoskeletal disorder after backache in humans leading to disability. It is a slowly progressive joint disorder that starts by the age of 30yrs. By the age of 65yrs up to 80% of people tend to develop radiological changes of osteoarthritis. It is a chronic degenerative disorder caused by several causes as mechanical, biochemical or genetic predisposition. Knee joints and joints of hands are more commonly affected in women, whereas in males hip joints are more commonly affected. Osteoarthritis is a group of overlapping distinct diseases which may have different etiologies, but with similar biologic, morphologic and clinical outcomes. The disease processes not only affect the articular cartilage, but involve the entire joint, including the subchondral bone, ligaments, capsule, synovial membrane and periarticular muscles. Ultimately the articular cartilage degenerates with fibrillation, fissures, ulceration and full thickness of the joint surface.

Sandhivata in *Ayurvedic Samhitas* has been described as a type of *vata vyadhi*, other than 80 types of *nanatmaj vata vyadhi*¹. In *Brihatrayi* and *Laghutrayi sandhivata* has been mentioned under *vata vyadhi*. *Sandhigatavata* is described under *Vatavyadhi* in all the *Samhita* and *Sangraha Grantha*. In *jaravastha*, all *dhatu*s undergo *Kshaya*, thus leading to *Vataprakopa* and making individual prone to many diseases. *Acharya Charaka* was the first person who described the disease separately named “*Sandhigata Anila*”. The trouble of *Sandhi* by *Prakupita Vata* is the main phenomena in *Samprapti* of *Sandhigatavata*. *Sandhi* come under the *madhyama roga marga*² and thus, involvement of *madhyama roga marga*, *Vata Dosha* and *dhatukshaya* figures disease *kashta Sadhya*. Any disturbance in the fundamental configuration of *Dhatu*s which may lead to their malfunctioning is called as *Vikara*³, *Vyadhi* or disease and *Sandhigatavata* is one of the *VataVikara*.

Keywords- Osteoarthritis, *sandhivata*, *vata vikara*.

INTRODUCTION

Osteoarthritis is a frequent and important cause of physical debility in individuals over 65 yrs. Characteristic features of osteo arthritis are degeneration of articular cartilage, structural changes in bone are secondary .It may also occur in joints affected by injury in past or joints which had been subjected to exces-

sive burden and usage. Osteoarthritis is also quite common in joints with previous history of infection or inflammatory disease. Osteoarthritis (O.A.) is a clinical syndrome in which low-grade inflammation causes; Pain, progressive disintegration of articular cartilage, Formation of new bone in the floor of the carti-

lage lesions (eburnation) and at the joint margins (osteophytes), it is most common form of arthritis leading to chronic disability.

Epidemiology: It is the most common type of arthritis occurring in all around the world. By the age of 70 years almost every person has one or more than one joint affected by osteoarthritis. According to some studies approximately 25% of the females and 16% of the males develop symptomatic osteoarthritis. Osteoarthritis has racial differences in its patterns as well as distribution, prevalence of the disease in hip joints is less prevalent in black Africans as well as Chinese as compared to that in whites. Although it cannot be determined whether this difference is due to lifestyle and diet pattern difference or due to genetic causes. Osteoarthritis (O.A.) is the second most common rheumatologic problem and is most frequent joint disease with prevalence of 22% to 39% in India. O.A. strikes women more often than men and it increase in prevalence, incidence and severity after menopause. Prevalence in men is slightly higher in the younger age groups (before 45 years of age), whereas women are affected more commonly at ages older than 55 years, except for disease of the hip. The prevalence of osteoarthritis increases with age.

Types of osteoarthritis: According to modern concept there are two types of osteoarthritis:

Primary - results from normal wear and tear

Secondary- results from an injury to a joint; from disease; or chronic trauma, such as obesity, postural problems, or occupational overuse

In primary osteoarthritis, the degenerative wear-and-tear process occurs after the fifth and sixth decades, with no predisposing abnormality apparent.

Secondary osteoarthritis is associated with some predisposing factor responsible for the degenerative changes.

Pathology: The most striking morphologic changes in osteoarthritis are usually seen in load bearing areas of the articular cartilage. In the early stages the cartilage is thicker than normal, but with progression of osteoarthritis the joint surface thins, the cartilage softens, the integrity of the surface is breached, and vertical clefts develop (fibrillation). Deep cartilage ulcers,

extending to bone may appear. Areas of fibrocartilaginous repair may develop. Later the cartilage becomes hypocellular. Remodelling and hypertrophy of bone occur. Appositional bone growth occurs in the sub-chondral region, leading to the bony sclerosis. The eroded bone under a cartilage ulcer may take on the appearance of ivory (eburnation). Growth of cartilage and bone at the joint margins leads to osteophytes (spurs), which alter the contour of the joint and may restrict movement. A patchy chronic synovitis and thickening of the joint capsule may further restrict movement. Periarticular muscle wasting is common and plays a major role in symptoms and in disability.

Symptoms:

1) Joint pain 2) Joint stiffness 3) Joint tenderness 4) Crepitus (crackling, grinding noise with movement) 5) Joint effusion (swelling) 6) Local inflammation 7) Bony enlargements and osteophytes formation.⁵

Treatment: According to modern, Osteoarthritis is often thought of as a critical and disabling condition, but this is not usually the case. The symptoms vary greatly from person to person, and between different affected joints. There can also be variation between the amount of damage to the joints and the severity of the symptoms. There is no cure for osteoarthritis, but the symptoms can be eased by using several different treatments. Mild symptoms can often be managed through exercise or by wearing suitable footwear. However, in more advanced cases of osteoarthritis other treatments may be necessary. Treatments include analgesics (painkillers), physiotherapy or surgery⁶

Goals of managing Osteoarthritis:

1) Maintain an acceptable body weight 2) Controlling pain (through drugs and other measures) 3) Improve joint care (through rest and exercise) 4) Maintaining and improving the range of movement and stability of affected joints. 5) Limiting functional impairment 6) Achieve a healthy lifestyle 7) Drug Therapy. These goals should be achieved with minimal toxicity.

Treatment List for Osteoarthritis:

1) Weight reduction 2) Regular exercise 3) Rest 4) Pain relief

Medications: 1) NSAIDS 2) COX-2 inhibitors 3) Visco-supplementation 4) Corticosteroid injection

Surgery:

1) Surgical bone resurfacing 2) Surgery to reposition bones 3) Arthrodesis 4) Arthroplasty

Sandhivata

Sandhigatavata is mentioned under *Vatavyadhi* by all *Acharya*. *Acharya Charaka* has described the disease *Sandhigatavata* under *Vatavyadhi Chikitsa* as *Sandhigata Anila*. There he has mentioned its symptoms but not the treatment. Disease *Sandhigatavata* has identified as a separate clinical entity and has been describing in the chapter of *Vatavyadhi* by the name of “*Sandhigata Anila*”. *Vatapura Dritisparshah Shothah Sandhigate Anila, Prasarana Akunchanayoho Pravrutischa Savedana*²¹. The symptoms of *Shotha*, which is palpable as air filled bag (*Vata Purna Driti Sparsha*) and pain on flexion and extension of the joints (*Akunchana Prasarane Vedana*). Moreover, a disease *Vatakhuddata* has been mentioned by *Charaka* in *Nanatmaja Vatavyadhi*, which is considered as *Gulphavata* or *Sandhigatavata* by *Acharya Chakrapani*. *Acharya Sushruta* has also described the disease *Sandhigatavata* under *Vatavyadhi* and has given its symptoms and the line of treatment. He added a new symptom *HantiSandhi* in the symptoms shown by *Acharya Charaka* previously²². *Acharya Vagbhatta* said *Vatavyadhis* as “*Maharoga*”. *Acharya Bhela* has described *Sandhi Vichyuti*. *Acharya Harita* has mentioned the line of treatment. *Acharya Madhavkara*, has mentioned the symptoms of *Sandhigatavata* as *Sandhinasha, Sandhishula, Sandhishotha*. *Yogaratanakara* mentioned as *Sandhigatavata* in the chapter of *Vatavyadhi Nidanam* also mentioned *Hanti Sandhigata*.

Classification of sandhigatavata: In the classics no, direct references are available regarding *Sandhigatavata*. But according to aetiopathology, it may categorize into four types:

1) *Mithya ahara vihara janita (SuddhaVataka)*. 2) *Kaphavrita Vyan-Vayu janita*.
3) *Kala Svabhava janita*. 4) *Medovaha Sroto dusthi janita*.

Otherwise as per occurrence, it may be two types 1) *Nija Sandhigata vata* 2) *Agantuja Sandhigata vata*
Sandhigatavata is a *Vatavyadhi*, due to *Vata prakopa*, Therefore, it may be classified as follows:

1) *Dhatukshyajanya* 2) *Vataprakopaka Nidana Sevajananya* 3) *Avaranjanya*

Sandhigatavata can be classified according to *Nidana*:
1) *Nija* 2) *Agantuja*

Though it has also same etiological factors but in present context, it may be described according to classification, these *Nidana* can be further classified as:

1) *Mithya Ahara- Vihara karana Janita* 2) *Kaphavrita Vyan Vayu Janita*, 3) *Kalavabhava Janita*
4) *Medovrita Vata Janita*

Common *Hetus* of *Vatavyadhi*, which are mentioned by *Acharya Charaka*, are as below:

- **Aharaja:** *Atiruksha, Atisheeta, Atialpa, Atilaghu, Abhojana.*
- **Viharaja:** *Atiprajagan, Diwaswapna, Ativyavaya, Vegasandharana, Plavana.*
- **Manas:** *Atichinta, Atishoka, Atikrodha, Atibhaya.*
- **Agantuja:** *Abhighata, Marmabhighata, Prapatana, Prapedana,.*
- **Kalataha:** *Greeshma Pravrit Varsha Shishira Ratri-ante bhuktante Aprahana Aharaparinamante.*
- **Anyahetutaha (Others):** *Langhan, amad, Vishamad Upacharad, Dhatunam Sankshyad, Doshashruk Sravanad, Rogatikarshanad, Marmaghata and Dhatu kshaya.*

Purvarupa of sandhigatavata: There are no specific descriptions about the *purvarupa* of *Sandhigatavata*. Since *Sandhigatavata* is considered as a *vata vyadhi*, the descriptions of *purvarupa* of *vata vyadhi*

Rupa of Sandhigatavata:

1. *Sandhi shula*²³ 2. *Sandhi Shotha* 3. *Sandhisphutana*²⁴ 4. *Hanti sandhi Gatah* 5. *Stambha* 6. *Akunchan Prasaranayoh Vedana*

Samprapti Ghataka:

- **Nidana** - *Vata Prakopaka Nidana*²⁵
- **Dosha** - *Vata esp. Vyanavayu, Shleshaka Kapha*
- **Dushya** - *Asthi, Majja, Meda*
- **Srotas** - *Asthivaha, Majjavaha and / or Medovaha*
- **Srotodusti** - *Sanga*

- **Agni** – Jatharagni, Dhatvagni
- **Dosha Marga** - Marmasthi Sandhi
- **Roga Marga** - Madhyam
- **Udbhavasthana** – Ama-pakvashaya
- **Vyaktisthana** - Asthi –Sandhi.

Upashaya:

- **Ahara:** Ahara with madhur, amla & lavna Rasa, ushna virya, Guru
- **Snigdha Gunas:** Tail, Ghrit, Majja, Vasa, Vrishya Balya Ahara, Mamsa. Madira, Mams rasa, dugdha, dadhi etc.
- **Vihara:** Atapa seven, Nidra, Stay in Nivata Sthana and to wear worm clothes etc.
- **Karma:** Abhyanga, Parishek, Basti. Udvartanam, Sneha, Sweda, Niruha basti Nasya, Upnaha etc. karma.

Anupshya: All drugs, diet and regimen which exaggerate the disease are taken *Anupashaya* for that disease. *Hetus* of that disease can also be taken as *Anupashaya*. The diet having *Laghu, Ruksha, Sheeta Gunas, Anasana, Alpasana, Sheeta Ritu*, evening time can be considered as *Anupashaya* as they increase symptoms.

Sapeksha Nidana:

Sandhi shula pradhan vyadhis, which differential diagnosis is required from *sandhigata vata* are as follows:

- 1) *Amavata*
- 2) *Vatarakta*
- 3) *Koshhtuka Sheersha*
- 4) *Asthi – Majjagata Vata*.

To get the clear idea regarding the disease *Sandhigatavata*, a comparative study of cardinal symptoms of similar diseases entities are given below:

Factors	<i>Sandhigatavata</i>	<i>Amavata</i>	<i>Vatarakta</i>	<i>Koshtruka- shirsha</i>
Amapradhanya	Absent	Present	Absent	Absent
Jvara	Absent	Present	Absent	Absent
Hridgaurava	Absent	Present	Absent	Absent
Prone age	Old Age	Any age	-	-
Shotha	<i>Vatapurna Driti sparsha</i>	<i>Sarvanga and Sandhigata</i>	<i>Mandal Yukta</i>	<i>Koshtruka Shirshvat</i>
Vedana	At <i>Prasarana Akunchana Pravritti</i>	<i>Vrischik DanshaVata and Sanchari</i>	<i>Mushika Damshavat Vedana</i>	<i>Tivra</i>
Sandhi	Weight bearing joint	Big <i>Sandhi</i>	Small <i>Sandhi</i>	Only <i>Janu</i>
Upashaya	<i>Abhyanga</i>	<i>Ruksha Swedana</i>	<i>Rakta Shodhana</i>	<i>Rakta Shodhana</i>

Sadhya-asadhyata: *Sandhigatavata* is one of the *Vatavyadhi* described in all *Samhita* and *Sangraha Grantha*. *Acharya Vagbhatta* and *Sushruta* have considered *Vatavyadhi* as *Mahagada*. It is so called since the treatment is time consuming and prognosis is uncertain. Further *Dhatukshya* is the chief cause of *Vatavyadhi*. *Dhatukshya* is difficult to treat as *Acharya Vagbhatta* has elaborated that since body is accustomed to *Mala, Dhatukshya* is more troublesome than *Dhatu Vriddhi*²⁶. *Sandhigatavata* is one of the *Vatavyadhi*, therefore it is *Kastasadhya*.

Chikitsa: *Chikitsa* is mentioned as “*Vighatana of Samprapti*”. *Charaka* believes on the two factors or causes for all types of *Vatavyadhis* i.e *Srotorodha* and *Dhatu Kshaya* so the aim of *Chikitsa* is to remove

causative factor as well as restoration of the *Doshika* equilibrium. So, the main objective of treatment should to improve the metabolic activities in *dhatu* level can takes place and to provide nourishment to the wasting *dhatu*s. The elimination of the disease can be achieved by

- 1) *Nidana Parivarjanam*,
- 2) *Samshaman*,
- 3) *Samshodhana*

Pathya – Apathya:

Specific *pathya* and *apathya* of *Sandhigatavata* are not mentioned. But, as being a *Vatavyadhi*, we should adopt the same of general *Vatavyadhi*. The list of some *pathya-apathya* is as below.

Pathya Ahara: *Godhuma, Masha, Gau-Aja Dugdha, Ghrita Draksha, Badara, Amra, Ushna Jala, Sura,*

Madira, Surasava, Jalachara Mamsa, Patola, Shigru Taila, Vasa, Majja, Ghrita

Pathya Vihara: *Atapa Sevana, Mridushayya, Ushnodaka Snana* etc.

Pathya Aushadha: *Rasna, Sunthi, Bilva, Gokshura, Agnimantha, Rasona, Palandu* etc. *Brimhana, Samshamana, Abhyanga, Mardana, Avagahana, Upanaha, Nasya, Basti, Agni karma* etc.

Apathya Ahara: *Yava, Kodrava, Gadarbha Dugdha Madhu Nadi-samudra, Tadagasya jalam Navamadya, Shushka Mamsa Ajamutram, Jambu, Kramuka Katu, Tikta, Kasaya Rasa*

Apathya Vihara: *Chinta, Jagarana, Vega Sandharana, Shrama, Anashana, Vyavaya, Vyayama, Pravata, Chankramana, Kathin Shayya, Yana Gamana* etc.

Apathya Aushadha: *Vamana and Raktamokshana.*

CONCLUSION

Sandhivata is a non-mortal but severely debilitating disease-causing limited day to day activities in old age. Although it's non-contagious, non-mortal still it makes quality of life compromised, leading to social and emotional burden for the person. Thus, efforts should be focussed on preventive measures related to its occurrence. From above discussion we can also conclude that patient suffering from *sandhivata* (osteoarthritis) can be given a better life, if not completely cured by holistic treatment.

REFERENCES

1. Charaka Samhita with "Ayurved Dipika" sanskrita commentary, sutra sthana, 20/11, by vaidya Jadavaji Trikamji Acharya, 2009, Chaukhamba Prakashana, Varanasi-221001, pp-113.
2. Charaka Samhita with "Ayurved Dipika" sanskrita commentary, sutra sthana, 11/48, by vaidya Jadavaji Trikamji Acharya, 2009, Chaukhamba Prakashana, Varanasi-221001, pp-77.
3. Charaka Samhita with "Ayurved Dipika" sanskrita commentary, sutra sthana, 9/4, by vaidya Jadavaji Trikamji Acharya, 2009, Chaukhamba Prakashana, Varanasi-221001, pp-62.
4. Retrieved from <http://www.healthcentral.com/osteoarthritis/introduction-22-115.html> on 26-03-10.
5. Retrieved from http://osteoarthritis.about.com/od/osteoarthritis_symptoms_a/signs_and_symptoms_symptoms.htm 24-03-10.
6. Retrieved from <http://www.nhs.uk/Conditions/Osteoarthritis/Pages/Introduction.aspx>, on 27-03-2010.
7. Retrieved from <http://osteoarthritis.about.com/od/osteoarthritisdiagnosis/a/xray.htm> on 01.12.2010.
8. Retrieved from http://osteoarthritis.about.com/od/osteoarthritis_symptoms_u/OA_Symptoms_diagnosis.htm on 01.12.2010.
9. Retrieved from http://osteoarthritis.about.com/od/osteoarthritis_symptoms_a/osteoarthritis_warning_signs.htm on 01.12.2010.
10. Retrieved from http://arthritis.about.com/od/arthritis-signssymptoms/f/joint_stiffness.htm on 01.12.2010.
11. Retrieved from http://osteoarthritis.about.com/od/osteoarthritis_symptoms/osteoarthritis_warning_signs.htm on 01.12.2010.
12. Retrieved from <http://arthritis.about.com/od/arthritislearnthebasics/g/carpitis.htm> on 1.12.2010.
13. Retrieved from <http://osteoarthritis.about.com/od/osteoarthritis101/a/cartilage.htm> on 1.12.2010.
14. Retrieved from <http://arthritis.about.com/od/arthritis-signssymptoms/f/osteophytes.htm> on 1.12.2010.
15. Mankin, HJ, Dorfman, HD, Lippiello, L, et al. Biochemical and metabolic abnormalities in articular cartilage from osteoarthritic human hips. II. Correlation of morphology with metabolic data. *J Bone Joint Surg* 1971;53A:523. Retrieved from <http://www.uptodate.com/patients/content/abstract.do?topicKey=-42sNmWEy1wdyP&reftNum=1%2C2> on 01.12.2010.
16. Jasin H E, Dingle J T, 1981, Human mononuclear cell factors mediate cartilage matrix degradation through chondrocyte activation, *J Clin Invest*; 68(3): pp-571-81.
17. Deshmukh-Phadke K, Lawrence M, Nanda S, 1978, Synthesis of collagenase and neutral proteases by articular chondrocytes: Stimulation by a macrophage derived factor, *Biochem Biophys Res Commun*; 85: pp-490.
18. Received from <http://arthritis-research.com/content/3/SA/L020> Dated 23-03-10 time 9:00pm.

19. Retrieved from <http://www.nhs.uk/Conditions/Osteoarthritis/Pages/Introduction.aspx>, on 27-03-2010.
20. Retrieved from <http://www.ayurlifestyle.com/blog/prashuti-tantragnaeology/> 20-03-
21. Charaka Samhita with "Charak Chandrika"-hindi commentary, Chikitsa sthana, 28/37, by Dr. Brahmanand Tripathi, 2008, vol-2, Chaukhamba Surbharati Prakashan, Varanasi-221001, pp-942.
22. Sushruta Samhita, nidana sthana, with ayurveda tatva sandipani by Ambikadutt Shastri, Chaukhambha Sanskrit sansthana, varansi-221001, 1/2829, purvardha, pp-230. Reprint edition-2006
23. Charaka Samhita with ayurved dipika sanskrita commentary, sutra sthana, 18/49, by vaidya Jadavaji Trikamji Acharya, 2009, Chaukhamba Prakashana, Varanasi-221001, pp-109.
24. Ashtang Hridya, Sutra sthana, 12/7, Kaviraj Atrideva gupta, 2000, Chaukhamba Sanskrit Bhawan sansthan Varanasi-221001. pp-90.
25. Charaka Samhita with Charak Chandrika-hindi commentary, Chikitsa sthana 28/15-18, by Dr. Brahmanand Tripathi, 2008, vol-2, Chaukhamba Surbharati Prakashan, Varanasi-221001, pp-937.
26. Ashtang Hridya, Sutra sthana, 11/25, Kaviraj Atrideva gupta, 2000, Chaukhamba Sanskrit Bhawan sansthan Varanasi-221001. pp-88.

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