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Management of Sandhigatavata (Osteoarthritis) in Ayurveda – A Review

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ABSTRACT: Ancient health science, *Ayurveda*. A healthy life and longevity is always desirable from it. Today's era 21st century has its advantages but with fast and stressful life style comes disadvantages also. One disadvantage is having unhealthy diet and faulty life style, Around the world osteoarthritis, osteoporosis, obesity and cardiovascular diseases are affecting the health status. The disease osteoarthritis is a growing public health problem worldwide. Currently it is estimated that over 250 Million people worldwide suffer from this disease. In Ayurveda *Sandhivata* gets its entity in the chapter of *Vata vyadhi* which obviously are co-related with neuromuscular disorder including disease of the joints. It is a type degenerative and articular disorder affecting mainly in the weight bearing joint, in advancing age. Ayurveda recommends healthy life style through *Aahara*, *Vihara*, *Aaushadh*, different kinds of *karmas* to prevent all kind of diseases.

KEYWORDS: *Sandhivata*, Osteoarthritis, *Vatavyadhi*, prevention and management.

I. INTRODUCTION

Osteoarthritis which resembles *Sandhigatavata* is a degenerative joint disorder characterized by degeneration of joint cartilage and adjacent bone that can cause joint pain and stiffness. It begins asymptotically in the 2nd and 3rd decades and is extremely common by age of 70yrs¹. Almost all persons by age 40 have some pathologic change in weight bearing joint. 25% females and 16% males have symptomatic osteoarthritis. Till the age of 55 it occurs equally in both sexes; after 55 the incidence is higher in women². All the disease in the body whether in *shakha*, *kostha* or *marma pradesha* are influenced mainly by *vata*. *Prakupita vata* is responsible for several types of disease in body. *Sandhi-gata-vata* is one such disease in which the vitiated *vata* localizes in the *asthi sandhis* of the body. It is a condition common in the *vriddhaawastha* coinciding with the *vata* predominant phase of life. Metabolic and degenerative disease of connective tissue and joint problem are quite affluent today. During different stages of the human life disease prevalence is common due to genetic, infection, infestation, systemic, environmental age related and so on. In *Ayurveda Sandhivata* gets its entity in the chapter of *Vata vyadhi* which obviously are co-related with neuromuscular disorder including disease of the joints. This socioeconomic disease cripples the human life and has posed a challenge to medical science. *Sandhivata* is *vataja* diseases mainly occur due to *dhatukshaya* (degeneration of tissue) so generally *snehana* (oleation therapy), *swedana* (fomentation), *mridu samsodhana* (mild purification therapy), and *vasti* (enema) etc³. According to modern point of view it is called Osteoarthritis, is most common joint disease of humans and it is also erroneously called as degenerative joint disease. Incidence: - osteoarthritis has reached epidemic proportions in the 21st century, currently it is estimated that over 250 Million people worldwide suffer from this disease. Before 45 years of age it is more common in men, while after 45 years of age it is more common in women. OA is the most common form of arthritis with disease of the knee and hip affecting about 3.8% of people as of 2010. It becomes more common in both sexes as people become older⁴.

Pathogenesis:

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 joints and pain during the joint movements. 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 *abhigata* (injuries). it is situated in *marma sthana, Madhyama roga marga*. So being a *Vatavyadhi, Sandhigatavata* is *Kastasadhya, Madhyama roga marga*, situation in *Marma Asthi Sandhi, Vitiation of Asthi and Majja, Dhatukshya, Vriddavastha* also makes it *Kastasadhya*⁵

No clear pathogenesis of *Sandhigatavata* has been described in ayurvedic text but *Samprapti* of *Vatavyadhis* has been explained in *Charaka Samhita chikitsa sthana*. *Vitiated vata dosha* fills up the empty channels of the body thereby resulting in various disorders of either one part (localized) or the whole body (generalized) *Ashtang Hridaya* frames the *Samprapti* of *Vata Vyadhi* like: *Dhatukshaya* aggravates *Vata* and same is also responsible to produce *Riktata* of *srotas*. Thus the vitiated *vata* travels throughout the body and settles in *Rikta Srotas* and further vitiates the *Srotas* leading to the manifestation of *vata vyadhi Samprapti* of *Sandhigatavata* can be understood according to the cause of *vata prakopa*. Two predominant causes of *vata prakopa* have been described in texts, so *Sandhigatavata* occurs either as a result of *Dhatukshaya* or *Margaavarana*. Hence *Sandhigatavata* is classified into two types⁶.

- (1) *Dhatukshaya Janya Sandhigatavata*
- (2) *Marga Avarana Janya Sandhigatavata*

(1) *Dhatukshaya Janya Sandhigatavata* In old age *vata dosha* dominates in the body. This lead to *Kapha abhava, Also Jathragni and Dhatvagni* gets impaired by which *dhatu* formed is not of good quality². Reduction of *Kapha in Sandhis* makes *Sandhi Bandhana Shithilata*. *Ashraya ashrayi sambandha* also leads to *Asthidhatu kshaya*. *Asthi* being the main participant of the joint, its *kshaya* leads to *Khavaigunya* in the joints. In this condition if *Nidana Sevana* is done it further produces *Vata Prakopa*. *Vata Prakopa* is not corrected by appropriate means at two stage and simultaneously if the person indulges in *Asthivaha and Majjavaha strotos dushtikara nidana*, the *prakupita vata* spreads all over the body through these *srotas*. In the meantime *sthanasamshraya of prakupita vata* take place in the *Khavaigunya yukta Janu Sandhi*. This localized *vayu* due to its *Ruksha, Laghu, Kharadi Guna* over power and undo all properties of *Shleshmaka Kapha* producing disease *Sandhigatavata*⁷.

(2) *Aavarana Janya Sandhigatavata* Usually *Sandhigatavata* occurs in weight bearing joints in *Sthoola* individuals. *Medodhatu* is produced in excess due to *Atisnehamsha of Amarasa* in such individuals. The excessive *Medas* produce obstruction for the flow of nutritive materials to the future *Dhatu* i.e. *Asthi, Majja* and *Shukra* leading to their *kshaya*. The excessive fat deposited all over the body produces *margavarana* of *vata*. *Prakupita vata* due to *margavarana* starts to circulate in the body. While travelling, it settles in the joint where *khavaigunya* already exists. After *Sthanasamshraya* it produces the disease *Sandhigata vata*⁸.

The disease is comparable with osteoarthritis. It is a degenerative joint disease due to the degradation of the joints, the articular cartilages and subchondral bone. It involves the entire joint including the nearby muscles, underlying bone, ligament, synovium and capsule. OA is joint failure, a disease in which all structures of the joints have undergone pathologic change, often in convert joint failure. This is accompanied by- increasing thickness and sclerosis of the subchondral bony plate. By outgrowth of osteophytes at the joint margins, by stretching of the articular capsule, by mild synovitis in many affected joint, by weakness of muscles bridging the joint. Commonly affected joint include cervical, lumbo-sacral spine, Hip, Knee, First metatarsal /phalangeal joint (MTP).⁹

II. CLASSIFICATIONS OF OSTEOARTHRITIS

- **Primary OA:** Wear and tear with repeated minor trauma, obesity, aging perse, all contribute of focal degenerative changes in the articular cartilage of joints. Genetic factors, Metabolic disorders, Age-it is a disease of old age, Endocrinal factors, Idiopathic avascular necrosis- it is occasionally seen in alcoholic middle aged men with high serum lipid and altered blood coagulability.

- **Secondary OA:** May appear at any age and is the result of any previous wear and tear phenomena involving the joint, previous injury dislocation of the Hip, Trauma, Mal- alignments, Inadequate blood supply, Infections of the joint – e.g. pyogenic, tuberculosis, etc. Diseases interfering with the nerve supply of joint, Inflammatory Diseases, Nutritional bone disease-e.g. Rickets in infancy, Osteomalacia in adults. Loading factors: - Obesity, Repeated use of joint-occupational¹⁰.

Ayurvedic Management

treatment is “*Vighatana* of Samprapati”, so the treatment of *Sandhigatavata* aim are: Agnisamata – mandagni is responsible for the production of all the disease, *Vatashamana*, *Kaphavridhi* – Increase *Snigdha guna & khavaigunya* is corrected, *Rasayana* – it is nourishes *Dhatu*s and overcomes *Dhatukshaya*. 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 OA should be like that, which makes tissue strong. In Ayurveda, *Sandhishula* is one of the symptoms of *Mamsakshaya* and *Sandhiphutana*. Provide materials which are required for healthy bone structure: - weak bone can't bear even normal load must be healthy. *Samprapti Vighatana Anusara*: As earlier drugs are having *Vata shaman* properties. So it decreases the aggravated vata and prevents the affliction of *sandhi*. *Basti*, *Vatahara Aushadha*, *Ahara & Vihara Mridu samshodhana*, 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 joints. The drugs mentioned in the Ayurveda 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. Charaka refers to *taila* as ‘*marutagana*’ *Taila* is mentioned to reduce *vata* without increasing *kapha*. It also stabilizes the *mamsa dhatu*. *Taila* is used as drug of choice in *anuvasana Basti*. Due to its *sneha* property it balances the *rooksha guna* of *vayu*, due to its *ushna guna* takes care of the *sheethala guna* of *vaya*. *Acharya Sushruta* mentions *snehana* (outer/ internal) for management of *Sandhigata vata*. *Asthi dhatu* has *kharatva* which is also combated by *taila*. *Basti Chikitsa* is considered the best management of vitiated vata. The *panchkarma* procedure of *Basti* has been hailed as ‘*ardha chikitsa*’ by *acharyas* that is, half of the whole treatment. *Anuvasana Basti* is a type of *Basti* in which *Sneha dravya* is given by *Basti*. *Matra Basti* is type of *Basti*. It is explained that this type of *Basti* can be given to almost everybody, in all the seasons, without any strict regime of *ahara* and *vihara* and it is *nishpariharya* i.e. it can be given with maximum ease and has no complication thereafter¹¹.

Management Osteoarthritis: - Lifestyle changes- weight loss & exercise, Physical measures- moderate exercise is beneficial with respect to pain and function, these exercises should occur at least three times per week, Pain Rx Heat can be used to relieve stiffness & cold can be relieve muscle spasms and pain. Non pharmacotherapy: - avoiding activities that overload the joint as evidenced by their causing pain, improving the strength and conditioning of muscles that bridge the joint, so as to physiotherapy is of some help to keep joint moving and build up muscular strength, Middle aged pt's demanding form of weight bearing activity may alleviate all symptoms, Older person: - whose daily constitutionals up & down hills bring on knee joint Correction of misalignment. Anti-oxidants Vit. A, B, C, D, E, K2 etc. to prevent the joint from oxidative damage antioxidants nourish all the tissues. Pharmacotherapy: - 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. Intra articular injection: - glucocorticoids and hyaluronic acid Surgery: - osteotomy (the operation through cutting of the bone) Arthrodesis (fusion of two joint) Exercise of the joint (cutting away/ taking out joint) Manipulation of the joint under anesthesia with Hydrocortisone injection¹²

III. DISCUSSION

Sandhigatavata vis-à-vis Osteoarthritis is a degenerative joint disorder. It is grouped under the *Nanatmaja Vatavikara* in *Charak Samhita*. It has been explained under the name of *Sandhigata Anila*, *Sandhivata*, *Gulphavata* or *Khuddavata* by different authors. Various *Aharaja*, *Viharaja*, *Manasa* and other *Vata prakopaka nidana* are mentioned in detail as aetiological factors of *Vatavyadhi*. *Sandhigatavata* specially occurs in *Vriddhavastha* which is *Parihanikala* in which *Dhatukshya* takes place which in turn leads to *Vataprakopa*. *Vata* and *Asthi* have *Ashrayaashrayi sambandha*, which means *Vata* is situated in *Asthi*. *Vridhdha* or increased *Vata* diminishes *Sneha* from *Asthidhatu* by its opposite qualities to *Sneha*, by which *Khavaigunya (Rikta-Srotas)* occurs in *Asthi* which is responsible for the pathogenesis of *Sandhigatavata*. Symptoms of *Sandhigatavata* are *Sandhishula*, *Sandhishotha*, *Akunchana* *prasarana janya vedana*, *Hanti sandhi gati*, *Stambha* and *Atopa* described by various authors specially by *acharya Charaka* in *chikitsasthan*. Here, *Sandhishula*, *Sandhishotha* are due to *Vata prakopa* and special type of *Shotha* i.e. *vatapurna driti sparsha* or *Atopa* indicate *Vata* dominancy. *Akunchana prasaranjanya vedana* and *Hanti sandhi gati* occur due to *Kaphakshya* and *Vataprakopa*. Symptoms of *Sandhigatavata* are similar to that of Osteoarthritis i.e. joint pain, swelling, stiffness, disability and crepitation over joint.



IV. CONCLUSION

It is an age related disease and may persist for rest of the life of the patients. However, as compared to side effects and contraindication of the modern medicines so can use *Ayurvedic* drugs of *sandhigatavata* for long period no side effects. Effects of rasayana considering the Ayurvedic concepts of Physiology rasayana agent promotes nutrition following modes by direct enrichment of the Nutritional quality of rasa (nutritional plasma)-satavari, milk and ghee and by promoting nutrition. Through improving *Agni* (digestion and metabolism) as *bhallataka, pippali* promoting the Competence of *srotas* (microcirculatory channels in the body) as *guggulu* etc. *Rasayanas* are helpful in maintaining general, promoting longevity, increasing memory, mental Faculties and provide preventive measures for maintaining health as well as strengthening Resistance and immunity against disease.

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