

MANAGEMENT OF SANDHIGATA-VATA (OSTEO-ARTHRITIS)**Dr. Neha Arya^{*1}, Dr. Pavesh Kumar² and Dr. Uttam Kumar Sharma³**¹MD Scholar, Gurukul Campus, Uttarakhand Ayurveda University, Haridwar.²Associate Professor, Gurukul Campus, Uttarakhand Ayurveda University, Haridwar.³Professor, Gurukul Campus, Uttarakhand Ayurveda University, Haridwar.Article Received on
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Corresponding Author*Dr. Neha Arya**MD Scholar, Gurukul
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Worldwide osteoarthritis is most common joint disorder. The disease usually affects in the fourth decade, and the occurrence increases linearly with age. In Ayurveda osteoarthritis is correlated with the disease sandhivata which is described under the chapter of vatavyadhi. The disease can be defined as a disease of sandhi with symptoms of sandhishula, sandhisotha and akunchana prasarana pravritti swedana and in the later stage hanti sandhigatah. This is the condition of osteoarthritis as per modern texts. Acharya charaka has explained so many preventive and curative modalities for the management of sandhivata in the vatavyadhi chikitsa.

KEYWORDS: Osteoarthritis, sandhivata, vatavyadhi.**INTRODUCTION**

Sandhigata-vata (SV) vis-à-vis osteoarthritis, a common disorder arthritis problem in practice ranging the age mainly between 40-70 years, more severe and more generalized in obese and older women but occupational workers such as farmers are more prone in men by the disease. Basically 'SV' is a purely 'vatic' disorder^[1] in which 'vata' promotes degenerative changes in the affected joints due to its specific properties i.e. 'ruksha', 'khar', 'laghu' etc.^[2]

RESULTING INTO

1. 'Slesak- kapha-kshaya' or degeneration in the articular cartilage and capsule, subchondral bone, changes and wasting of the adjacent muscles especially by 'ruksh' and 'khar' gunas. Slesaka kapha is said to be as synovial fluid by the most ayurvedic physicians but this correlation is not proper because if we see physiological properties of the 'sleshak

kapha' (according to Vagbhata), these are stability to the joints, lubrication of the articular surfaces and strength with proper alignment of the joint.^[3]

2. Increased hydration of the articular cartilage especially by the 'sheet guna'. It causes destruction in the articular cartilage.
3. 'Vata-prakop' especially by the 'ruksh' and 'laghu' guna which can promote 'sankoch'(musclespasm), 'stambh' (stiffness), and 'bheda'(incised type of pain) in the joint. 'Sankoch' (muscle spasm) and 'stambh'(stiffness) are also responsible for narrowing of the joint space.^[4]
4. 'Asthi-dusti' especially 'suksma' guna. By the 'suksma guna' vata enters upto the cellular level of the articular bone and creates various Pathological changes including sclerosis and osteoporosis.

All the above four major pathologies cause 'sandhi-hanti' (remodelling of the joint contour).^[5] SV is more common in weight -bearing joints like knee, hip and lumbo-sacral joints where continuous micro fractures are found.

AETIOLOGICAL FACTORS

Ayurvedic View: Because 'SV' is a purely vatic disorder, so factors responsible for the disease are common as those of 'vatic' disorders.^[6]

Aetiological factors responsible for vitiation of 'vata' (as described by Charak, Susruta and Vagbhata) are as follows-

1. Rough, Cold, little and light foods-vitiate 'vata' due to malnutrition.
2. Irregular food habits ('adhyashan' 'visamashan' etc.)-vitiate 'vata' due to disturbed metabolic /physiological activities in the body and resulting into 'doshvaisamya, obesity.
3. Abnormal postures('visamchesta')-produce abnormal and increased strain on the joints and their adjacent structures.
4. Faulty application of 'shodhana' therapy('panchkarma')-vitiate 'vata' due to disturbed autonomic nervous system and 'doshvaisamya'.
5. Suppression of urges('veg-vidharan')-disturb homeostasis(dosh-samyata) due to absorption of toxic matters.
6. Overwork ('ativyayamadi') – induces 'vata' vitiation due to fatigue and causes microfractures in the subchondral bone.
7. Altered sleep habits('nidraviparyaya')-induce vitiation of vata with altered hormonal and enzymatic secretions.

8. Injuries to the joints ('marmaghat', 'prapatan' etc.) – causes destruction to the joints (remodelling of the joint contour) and malalignment of the articular bones (joint incongruity).
9. Occupation ('bharharan' etc.)-occupation individuals in which joints are prone to weight - bearing i.e. farm workers due to weight bearing, there is continuous destruction to the articulations.
10. Ageing ('dhatukshay') – induces vitiation of 'vata' with degenerative changes in the articular structures. 'Dhatukshay' play a major role in the prognosis and treatment.
11. Psychological disturbance ('manasik bhavas' i.e. anxiety stress etc.)- induces vitiation of 'vata' with fatigue fractures in the articular bones.

Modern View

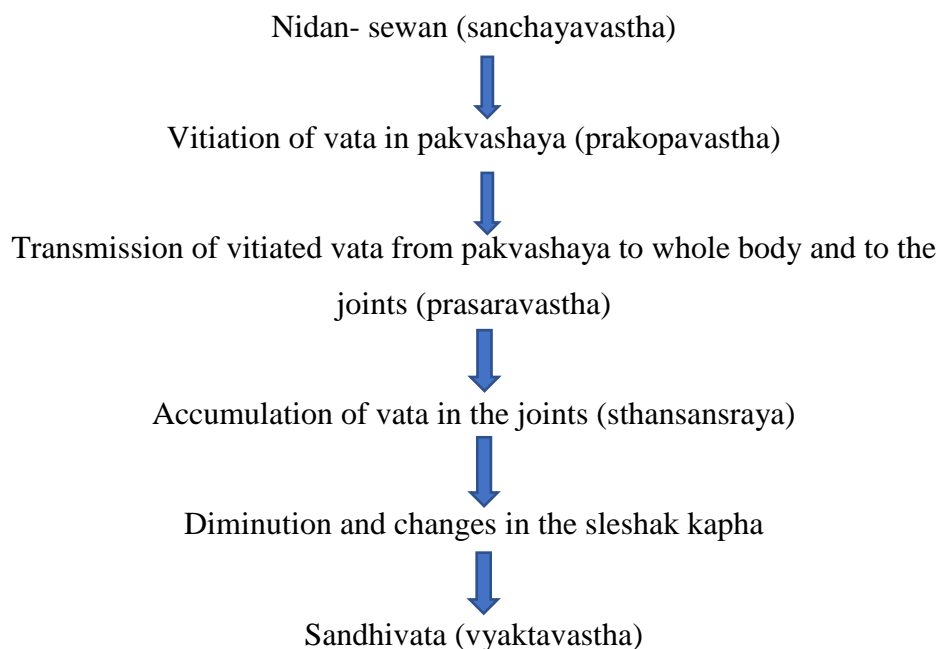
1. Developmental diseases i.e. perthe's disease, dysplasias and structural anomalies.
2. Trauma- fractures, surgery on the joints, occupation, Ehler's – Danlos syndrome, long leg arthropathy etc.
3. Metabolic disorders esp. of chemical deposition in the joints i.e. alkaptonuria, haemochromatosis, Wilson's disease, chondrocalcinosis, etc.
4. Endocrinal disease – Hypothyroidism, hyperparathyroidism, DM, obesity, acromegaly.
5. Inflammatory diseases i.e. RA, gout, septic arthritis, haemophilia, SLE and other collagen disease.
6. Drugs – Steroids etc.

Developmental diseases cause collagen defects in the articulations, trauma causes abnormal surface contacts, weight-bearing alignments and joint incongruity. Metabolic disorders are mainly responsible for cartilage degeneration while endocrine diseases are responsible for joint incongruity. In inflammatory diseases, there is inflammation of the synovial membrane which results in degeneration but drugs cause aseptic necrosis of subchondral bone resulting into degeneration of the articular cartilage.

7. Neuropathic diseases like tabes dorsalis, syringomyelia, peripheral nerve diseases.
8. Other- Gaucher's disease are responsible for mechanical stress resulting into defective cartilage while Paget's disease and Gaucher's disease cause aseptic necrosis resulting into pathological changes in the subchondral bone.

Ayurvedic hypothesis

In the ayurvedic contexts, there is no clear-cut description of the pathogenesis of ‘SV’ like other diseases regarding ‘doshas’, ‘dusyas’, ‘srotas’ and their ‘dusti’, ‘adhistan’ etc. There is much emphasis on pathogenesis of the ‘vatic disorders. But in brief following hypothesis of pathogenesis of ‘SV’ can be elaborated-



Vitiated vata is transmitted from the pakvashaya to the joints by the purishdharakala which also known as ashidharakala⁷ and accumulation of the vitiated vata in the joints is particularly due to khavaigunyaband also due to the seat of the vata.

Diminution of sleshak kapha is responsible for decrease of stability (sthiratva) of the joints, malalignment and remodeling of the joint contour due to sandhibandhan-vikrati and improper lubrication (snigdghata) as described by Vagbhata⁸. All the above pathology is the end result of degenerative changes in the articular cartilage and changes in the subchondral bone.

Participating components of the pathogenesis (samprapti ghatak)

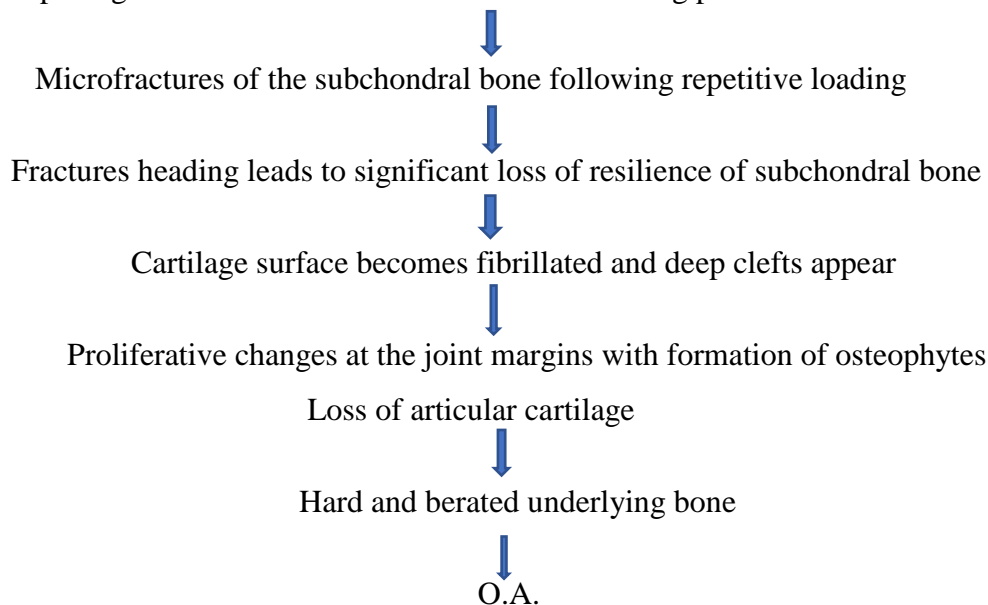
- (a) Dosha – vata(vyan), kapha(sleshak)
- (b) Dushya – asthi (bone including subchondral bone and cartilage), kandara(tendons), and snayu(ligaments)
- (c) Srotas – asthivaha
- (d) Sroto-dushti- sang (accumulation)
- (e) Adhistan- asthi and sandhi(bone including subchondral bone and cartilage) and joints (including

adjacent structures).

(f) Pakvashaya-samuttha-vyadhi(disease of specific pathology due to large intestine and rectum).

Modern hypothesis

The exact pathogenesis of OA is still unknown but following points can be elaborated-



Distribution of OA

1. Joints of the knee, hip, MTP, CPC, Cervical, dorsal and lumber
2. Generalized OA may occur

Most common joints affected by OA are weight bearing joints or those which are prone to repeated fractures i.e. knee, hip, MTP or CPC joints wherevata accumulates easily (due to khavaigunya).

Clinical features

1. Non nodal OA

Symptoms due to vitiated vata in the bones and joints (early OA) charak chiktsa28/20

- a. -sankoch (muscle spasm)
- b. - stambh (stiffness)
- c. -bhed (pain of incised type)
- d. -vyadhi-swaroop (established OA)
- e. - vata-poorna-dratisparsh or shoph (soft Swelling)
- f. -shoth (inflammation)
- g. -prasaranakunchanyoh pravratishch savedna/shool (pain on movement of the joints)

- h. -asthi-shosh (osteoporosis or subchondral bone changes)
- i. -sandhi-shabd (crepitus)
- j. -mansa-kshaya (muscle wasting around/supporting the joint)

Pain is esp. during and after and it may be localized or spread to the adjacent muscle or structures or may be referred through nerve root to the other body places. Pain is provoked by use of the joint and relieved by the rest. Stiffness in the affected joints mainly occurs after rest or when first getting out of bed. It is usually less than 15-20 minutes but more period of stiffness may occur. Crepitus typically of scrunching and grating type which are audible by the stethoscope or may be felt by the palm of the hand. There is wasted and hypotonic muscles due to their disuse whereas true myopathy is absent. Deformity in the joint due to malalignment of the articular bones and also due to weakness of the muscles and ligaments.

2. Nodal OA

- a. Heberden's nodes- these are gelatinous cysts or bony outgrowths on the dorsal aspects of the fingers affect terminal interphalangeal joints.
- b. Bouchard's nodes- similar lesion i.e. Heberden's nodes which may affect proximal interphalangeal joints.

Complications of OA

- 1. Avascular necrosis
- 2. Carpal tunnel syndrome
- 3. Chondrocalcinosis
- 4. Dislocations
- 5. Fractures
- 6. Disturbed sexual life

Grading of the severity of OA

- 1. Pain, morning stiffness with normal joint x-ray
- 2. Pain, morning stiffness, crepitus and marginal osteophytes on x-ray
- 3. Pain, swelling, restricted movements, increased crepitus and narrowing of the joint space with gross OA on x-ray
- 4. All above complaints, heavy crepitus with loose wadies, subchondral sclerosis, bony cyst, osteoporosis and joint deformity.

Differential diagnosis**1. Asthi-majjagat vata**

There is bhedoasthi-parvanam (pain in bony epiphysis), sandhishool (joint pain), mansbalkshaya (gradal decrease in muscular tissue and impaired immunity), aswapn (sleeplessness), santataruk (continuous generalized boydyache).

2. Vata- rakt (gout)

There is kandu (pruritis), dah (burning sensation), ayam (inceased muscle tone), tod(pain), sfuran (increased vascularity), kunchan (contraction), shyavrakta-tvagbahye tamra (bluish red or brown skin over the affected area). In severity of the vata-rakta (Gambhir) there may be swayathu(swelling), stabdhata(stiffness), kathin(hardness), antarbhrisharti(deep seated pain), pak (suppuration) may occur due to secondary infection.^[9]

3. Krostuk-sheers (infective monoarthritis)

There is typical monoarticlar infestation with janumadhye maharaja (severe pain in the joint), sthul (increase in size due to effusion), krostukshirsvat (joint shape as head).^[10]

4. Ama-vata (rheumatoid arthritis)

There is angamard(malaise), aruchi (anorexia), trishna(polydipsia), alasya(laziness), Gaurav (feeling of heaviness in the body), jvara(pyrexia), apak (without suppuration), shoonata(swelling).

5. Ankylosing spondylitis

This is chronic inflammatory arthritis with a predilection for sacro-iliac joints and spines, characterized by progressive stiffness, axial- skeleton fusion and bamboo- shaped spines on x-ray.

6. Psoriatic arthritis

A seronegative inflammatory arthritis of psoriatic patients in which distal interphalangeal joint are affected but there is no any nodes like Heberden's nodes.

Investigations

1. Blood- Hb% for anaemia (may or may not be present), TLC (for acute infections or other diseases), DLC (assess immunity), ESR always normal in OA), RF (to exclude RA, this is not specific for RA), CRP (normal in OA but increased values in connective tissue

disorders), serum uric acid (to exclude gout), serum calcium and phosphate (to exclude endocrinal diseases), blood sugar (for diabetes and their complications).

2. Urine- routine and microscopic examinations

3. Radiography – plain x-ray shows decreased joint space, osteophytes on bone margins and sclerosis in subchondral bone.

Management^[11]

1. Snehana (local application of pils)
 2. Swedana (fomentation by the help of medicinal decoctions)
 3. Vasti therapy (medicated anema)
 4. Nasya (nasal drops of medicated oils)
 5. Mridu virechan (mild luxatives)
 6. Vatanuloman (carminative medicines and diets) and deepan-paachan (appetizers and digestants)
 7. Vat- naashak ahar (diet specific to the vatic disorders)
 8. Medicated oils used for snehan therapy- Narayan/mahanarayan tail, visgarbha/mahavisgarbha tail, vrihat saindhavadi tail, kseer bala tail, dhanvantar tail
 9. Medicinal plants used for swedan-therapy- dashmool, rasna-saptak, maha rasnadi, nirgundi, erand etc.
 10. Vasti therapy- Anuvasana and Asthapana- esp. brinhan or kseer vasti
 11. Nasya therapy- esp. snigdha-nasya- with the use of bala taila
 12. Mridu-virechan -by following preparations-
 - a. Tilvak- chhal kalk sadhit ghrit
 - b. Erand- sneh with milk
 - c. Satla kalk sadhit ghrit
- These are especially used if above measures failed or there is no better response.
13. Vatanulomak aushadh- ahar
 - a. Soya, sunthi, harad, baheda, amla etc.
 - b. Fresh, well-cooked, balanced diet with ghrit as lukewarm.
 - c. Briefly diet should be snigdha, usna, with amla and lavana rasas.
 14. Regimen: avoid
 - a. Food rich in purines (cauliflower, brinjal etc.)
 - b. High protein diet

- c. Stress and tension
- d. Stannous exercises

Take

- 1. Green vegetables (cucumber, spinach etc)
- 2. Zink containing foods (spinach, carrots)
- 3. Polyunsaturated fats
- 4. Garlic and onion, pine-apple

Advices

- 1. Sunbath regularly
- 2. Use of western style latrines, restriction of stairs etc
- 3. Abnormal postures should be avoided
- 4. Extra- aided nutrients and vitamins.

Classical medicines

- 1. Yograj.
- 2. Balarisht, dashmoolarisht

Others

- 1. Glucosamine
- 2. Shallaki

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