Abstract: Science of the Ayurveda has contributed a lot in the area of sandigata roga (joint disorders) Amavata, Sandhigatavata, Vataraktha, Krostitukasirsa & Majjagatavata refer to some of the joint disorders described in Ayurveda. Physical structure & function of the sandhi are also clearly described by Acharyas in classical ayurvedic books. Their Nidana, Samprapthi, Classification, Chikithsa siddantha and Pathyapathya have mentioned separately in each sandhi roga. On close examination of them we can say that Vata is the important Dosa that is involved in pathogenesis of almost all joint disorders. When we consider the joint disorders mentioned in ayurveda we can compare them with Arthritis in modern medicine. Finally we can say ayurvedic treatment is the best for prevention and treatment of joint diseases as they are well effective, safe and less side effects.

Key words: Ayurveda, Sandhigata roga, Dosa, Ama, Chikithsa

Introduction: Science of the Ayurveda has contributed a lot in the area of joint disorders. Amavata, Sandhigatavata, Vataraktha, Krostitukasirsa & Majjagatavata refer to some of the joint disorders described in Ayurveda. Joint disorders are quite a significant global burden, particularly for general working population and create heavy socio-economic burden over the families.

Anatomical and Physiological Aspect of Sandhi (joints) in Ayurveda:
Acharya Charaka described 200 sandhis in human body. Shusrutha described 210 & 8 types of sandhi. The sandhi denotes the site of union of asthis, capable of active and passive movements & held together by number of snayus & enable the man to carry heavy weight. Snayus are the structure which bind the mamsa (muscle), Asthi (bones & medas). Lubrication in the sandhi is caused by 'Slesaka kapha' (synovial fluid) which is situated in the joints. This keeps the bones firmly united, protects their articulation & opposes their seperation.

Common Nidana (Etiological Factors) of Sandigata Roga:
*Factors which aggregative vata (rough, cold, little,& light food), suppression of urges, anger, fear, fasting etc.
*An excess formation of Ama (undigested food materials) & lack of Agni (digestive fire)
*Factors which aggregative pitta (spicy, hot food, fasting or skipping meals, over exposure to the sun, hot temperature etc.)

Different Types of Sandigata Roga: According to ayurveda joint disorders which are mainly described Amavata, Vataraktha, Sandhigatavata and Krostrukasirsa

Amavata: The term Ama literary means unripe, uncooked, immature and undigested, incomplete processing of food material due to insufficient action of Agni. Vayu takes the Ama to the slesmastana where it becomes highly contaminated. When simultaneously vitiated vayu and ama deposited into trikapradesh & sandhis producing stiffness of the body, the disease known as Amavata. Bodyache, loss of appetite, malaise, thirst, fever, indigestion, feeling of heaviness & inflammation of the body parts etc. are the symptoms of it.

Vataraktha: Vitiation of Vata & Raktha due to their own causative factors cause the disease. The disease is produced by simultaneous vitiation of vata & rakata. Due to intake of diet consisting of salty, sour, pungent, fatty, hot & uncooked articles, curd, butter milk and injury, journey on horse, jumping, suppression of urges, the aggravated vata having been obstructed into
its passage affects the entire blood. First appearance of swelling & pain in great toe and then spread to other joints. Principally affecting joints are parva sandhi and big joints. The symptoms produced due to rakta dusti are also present

**Sandhigata Vata:** The ayurveda describes a disease termed sandivata which is one of the nanathmajavata vyadhi. This is a disease with symptoms of shoth which on palpation revealed as air filled bag & shoola on prasarana & akunchana. Clinically, represent as joint pain in or around the knee (often aggravated by joint use & relieved by rest) stiffness usually occurring after periods of rest or inactivity, tenderness, crepitations & functional impairment.

**Krostukasirsa:** An extremely painful swelling in the knee joints which is originated through the concerted action of the deranged vayu & vitiated blood. It is not a pure vatavayadhi. In this the causes are vata & shonita while among joints knee is mostly affected. It resembles the head of a jackal (kroshtuka) in shape. The peculiarity of single joint involvement (knee joint) and specific shape of the joint.

**Importance of Vata in the Pathogenesis of Joint Disorders**

<table>
<thead>
<tr>
<th>Type of Joint disorder</th>
<th>Dosa</th>
<th>Dusya</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sandhi gatavata</td>
<td>Vata</td>
<td>Rasa, Asthi</td>
</tr>
<tr>
<td>Amavata</td>
<td>Vata,Ama,Kapha</td>
<td>Rasa</td>
</tr>
<tr>
<td>Vatarakha</td>
<td>Vata, Rakiha</td>
<td>Rasa,Rakiha</td>
</tr>
<tr>
<td>Kroshukasirsa</td>
<td>Vata, Rakiha</td>
<td>Rasa, Rakiha</td>
</tr>
</tbody>
</table>

On close examination of above clinical condition it become obvious that vata is the important dosa, that is involved in the pathogenesis of almost all joint disorders. According to the theory of "Asraya-Asrayibhaya Sambandha" [9] the seat of vata is Asthi (bones)

**Common Features of Sandhi Roga **

| Sandhi -shaithilaya     | - Flaccidity of joints |
| Sandhiruja, sandhisula  | - Pain in affected joints |
| Sandhi-bhedha           | - Breaking type of pain |
| Sandhi-chyuti           | - Dislocation of joint |
| Sandhi-sabdha           | - Cracking and creaking |
|                          | Or crepitus sound |
| Sandhi -shotha          | - Joint swelling |

**Etiopathogenesis of Sandhi Roga**

*Nidana........Practise of vata vardhaka ahar & vihar, Dhatu kshaya, Avarana*

Vitiation of vata

\[\downarrow\]

Transmission of vitiated vata

\[\downarrow\]

Accumulation of vata in sandhi

\[\downarrow\]

Diminution of sleshaka kapha & destructive changes in Ashti

\[\downarrow\]

Manifestation of signs & symptoms of sandhi vata
**Amavata**

**Management & Treatment:** When considering the *chikithsa* mentioned in ayurveda, prevention is always given the upper hand & *nidana parivarjana* or withdrawal from the primary causative factors is considered as the most base approach in management of the disease. The approach of ayurveda to the treatment of a disease consists of two major procedures *samshodhana & samshamana*. 

- **Samshodana** therapy- Elimination of the vitiated *doshas* causing disharmony in the body.
- **Samshamana** therapy - Suppression of vitiated *doshas* within the body by using drugs.

Herbal medicated drugs are prescribed according to the patients *prakrti* and condition of the disease.

**Goals of Treatment:** Treatments of *sandhi roga* depends on which particular form of it and its location, severity, persistence and any underlying background & medical condition of the patient. (1) 1. Short term treatment: Relieving pain & restoring joint function. (2) Intermediate term: Controlling inflammation, protection of joint & preserving body & joint function. (3) Long term: Achieving remission, preventing complications, & minimizing toxic effect of medicine.

- *Ama & vata* are the main cause, so efforts should be made to digest *ama* & reduce *vata*
- Digestion should be improved so that no further *ama* is produced.
- Drugs should be used to relieve the pain & inflammation.
• Fasting is very beneficial for digesting ama.
• Body massage with sesame oil or mustard oil helps to reduce the vata & thus reduces the pain.
• Light exercise is useful like Walking & yoga.
• Guggulu preparation is very helpful for arthritis [1].
  - Simhanada Guggulu-Amavata,
  - Kaishore Guggulu, Amritadi Guggulu–Gambhiheera vata raka
  - Mahayogaraja Guggulu- Sandhigata vata
  - Trayodasanga Guggulu- Sandhigata vata
  - Punarnava Guggulu-Kapha type of sandhi roga (Bhaisajya Rathnaveli)

Pathya Aahara & Vihara
Food of easily digestible & do not make vata or gas are good.
• Vegetable juices & soups (carrot, beets, cucumber, beans)
• Green vegetable salad with a dressing of lemon juice & little salt
• Cooked vegetable like squash, zucchini & pumpkin are good
• Cooking with spices like cumin, coriander, ginger, asafoetida, garlic, fennel & turmeric is also helps a lot.
• Fruits like Apple, Oranges, Grapes, & Papaya can be taken
• Exercise daily & massage with oil.

Apathya Aahara & Vihara [12]
• Avoid hot, spicy & fried foods, sweets & vata formed foods like cabbage, cauliflower, spinach, broccoli, brinjal, long beans & potatoes.
• Avoid too much of tea, coffee, white sugar, chocolate, & cocoa.
• Excessive smoking, drinking alcohol etc.
• Sleeping during day
• Staying up late in the night
• Mental tension like worry, anxiety, fear, stress & grief etc.

Conclusion: When we consider the modern medicine, we can compare sandhi roga mentioned in ayurveda with Arthritis. It is one of the worlds burning health related issue and making majority of those suffering crippled and dependent. Arthritis not only affects the individuals suffering from it but also influence passively on all the dependents. Arthritis has its deadly influence on the socio-economic life and also the professional life of an individual. The person suffering from arthritis will be morally injured. It may be several types including Inflammatory arthritis e.g. Rheumatoid arthritis, Degenerative arthritis-Osteo arthritis, Crystal arthritis -Gouty and infective types of arthritis. What ever may be the form of arthritis they produce pain & disability. Common symptoms include pain in affected joints, stiffness of the body, swelling, redness, crepitus of joints, difficulty in moving the joints etc.

We can compare them as; Amavata vis Rheumatoid arthritis, Sandhigata vata vis Osteo arthritis, Gambira vataaraka vis Gouty arthritis. Arthritis is a life style disorder. We can avoid ourselves from being victim of Arthritis when we follow a disciplined & planned approach towards our diet and way of living which are indicated in Ayurveda.

References
1. Mad/Nid/ 25th Chapter, Haritha San/su/su/3-22
2. Cha/chi/29/9  5. Cha/Chi/28/21
9. Astan/su/su/13/25  10. Cha/vin/7th chapter