ABSTRACT-
Due to rapid urbanization and excessive workloads lifestyle becomes stressful and individuals suffer from various degenerative diseases. One such disease is Osteoarthritis whose prevalence ranges from 22 – 39% in India. Ageing and obesity are the major risk factors for its increased prevalence. In Ayurveda, it can be correlated with Sandhigata vata, a disease of vata origin which occurs due to vatavardhaka ahara vihara sevana and asthidhatu kshaya. The present study was conducted at Institute of Post Graduate Ayurvedic Education & Research, Shyamadas Vaidya Shastra Pith Hospital on 40 patients of
sandhigata vata which was divided into two groups. Group A: 20 patients treated with Trayodashanga guggul in the dose of 500mg twice daily with dashamooladi kwath after meal for 1 month and Group B: 20 patients treated with Matrabasti by Mahamash taila(Niramish) for 21 days. The result was found to be highly significant in group B as compare to group A. Group of drugs in mahamash tail like Mash,Dashamula, Aswagandha,Rasana Shigru etc along with sneha plays an important role in subsiding the symptoms when applied per rectum as pakwashaya is the main site for vata dosha and aggravated vata dosh is responsible for this disease. So it acts as a key for overcoming this disease.

**Keywords:** Osteoarthritis, Sandhivata, Trayodashanga guggul, Matrabasti, Mahamash tail(Niramish).

**INTRODUCTION**

Ayurveda, the ancient science of life aims to provide longevity by its preventive, promotive and curative aspects. In today’s era of rapid globalization, metabolic and degenerative lifestyle disorders of connective tissue and joints are quite affluent due to consumption of incompatible diets (viruddhahara) and excessive workloads. During different stages of human life, disease prevalence is common due to genetic, systemic, infection, environmental, age related factors and so on. Osteoarthritis is a most common form of arthritis associated with ageing and is a major cause of pain and disability in older people. It may be defined as a condition of synovial joints characterized by focal loss of articular hyaline cartilage with proliferation of new bone and remodeling of joint contour. Epidemiologically, the prevalence of osteoarthritis ranges from 22 – 39% commonly seen in females in India. It is estimated that age, sex, body weight, trauma, genetic factors plays an important role in the genesis of osteoarthritis.

In Ayurveda, Osteoarthritis can be correlated with Sandhivata which has been describes under the heading of vatavtyadhi. Sandhivata is a vataja disease which occurs due to vatavardhaka ahara sevana and vihara leading to asthidhatu kshaya and is characterized by sandhisula (pain), sotha (swelling in the joints), prasarana akunchana pravrittischa vedana (pain during flexion and extension of joints),
Vatapurnadritisparsha (coarse crepitus in the joints), sphetana (restricted movement of joints) and thus hampers the daily activities of an individual\(^2\). The treatment principle of sandhivata includes Abhyanga, swedana, mridu samsodhana, vasti, upanaha etc\(^3\). According to Charak, in sandhigatavata there is oedema of the joints which on palpation appears as if it is a leather bag inflated with air and pain while making efforts for extension and contraction of the joints\(^4\). Modern medicine reduces the pain in osteoarthritis by administration of Non Steroidal Anti-Inflammatory Drugs and analgesics which provides symptomatic relief but has its adverse effects such as G.I disturbances, renal abnormalities, dizziness, skin rashes etc on prolonged usage. Thus, a lack of satisfactory regimen in the field of health rolls back the wear and tear of the joints\(^5\). So, here an effort was made to treat sandhigatavata.

Aims & Objectives

1. To find out the efficacy of Trayodashanga guggul and Matrabasti with Mahamash tail in the management of Sandhigatavata\(^6\).

2. To compare the effect of the drug and matrabasti clinically.

3. To find out cheap, effective remedial measure with minimal side effects for the disease.

MATERIALS & METHODS

Total forty patients of sandhigatavata fulfilling the selection criteria were registered for the study from the OPD and IPD of Kayachikitsa, Institute of Post Graduate Ayurvedic Education & Research, Shyamadas Vaidya Shastra Pith Hospital, Kolkata – 700009 after taking written informed consent from the patient.

Inclusion Criteria

1. Patients of either sexes between 35 – 70 years.

2. Patients presenting with clinical sign and symptoms i.e. sandhistula (pain), sotha (swelling of joints), stambha (stiffness), sphetana (restricted movement), akunchana prasarana vedana (pain during flexion and extension of the joint), Vatapurnadritisparsha (coarse crepitus in the joints) etc.

3. Patients with osteophyte formation\(^7\).

4. Patients with reduced joint space\(^8\).

Exclusion Criteria
1. Patients having history of rheumatoid arthritis, gouty arthritis etc.

2. Patients having history of uncontrolled diabetes mellitus.

3. Patients having history of hypertension, heart disease and other systemic diseases.

4. Patients having history of pregnancy and lactation.

5. Patients associated with other concomitant diseases.

**Grouping of Patients**

The patients were randomly selected and divided into two groups with twenty patients in each group:

- **Group A** – Twenty patients were treated with *Trayodashanga guggul* in the dose of 500mg twice daily after food with 10ml *dashamoola kwath* as *anupan* for 1 month.

- **Group B** – Twenty patients were treated with *Matrabasti* by *Mahamash tail* (*Niramish*) in a dose of 60ml for 21 days.

**Follow Up:** The patients were followed at an interval of fifteen days.

**Assessment Parameter:**

The patients were assessed on the basis of relief of sign and symptoms and a scoring pattern was aligned following Visual Analogue Scale.

**Subjective Parameter:**

1. Pain in the knee joint.

2. Stiffness of knee joint.


4. Walking time.

5. Range of movement.

**Statistical Analysis:**

Student paired ‘t’ test has been adopted for the assessment of the drug therapy.

**OBSERVATIONS & RESULTS**

Demographic study reveals that maximum patients i.e. 70% were in 50 – 60 years age group, 70% were female, 60% were housewives, 85% were belonging to middle socio – economic status, 40% patients was having *visamagni*, and in 60% cases bowel habit was constipated in nature. Further effects of therapy on various parameter are presented in Table – 1 & Table – 2.
Table – 1: Effect of Trayodashanga guggul in Group A patients of Sandhigatavata

<table>
<thead>
<tr>
<th>Cardinal Features</th>
<th>Mean BT</th>
<th>Mean AT</th>
<th>Percentage of Relief</th>
<th>SD</th>
<th>SE</th>
<th>‘t’ test</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sandhisula</td>
<td>3.5</td>
<td>2.95</td>
<td>15.71%</td>
<td>1.35</td>
<td>0.30</td>
<td>1.83</td>
<td>&lt; 0.05</td>
</tr>
<tr>
<td>Sandhisotha</td>
<td>3.8</td>
<td>2.4</td>
<td>36.84%</td>
<td>0.47</td>
<td>0.11</td>
<td>4.68</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>Sandhisphutana</td>
<td>2.1</td>
<td>0.7</td>
<td>66%</td>
<td>0.78</td>
<td>0.29</td>
<td>2.84</td>
<td>&lt; 0.10</td>
</tr>
<tr>
<td>Sandhigraha</td>
<td>2.5</td>
<td>1.7</td>
<td>32%</td>
<td>0.78</td>
<td>0.29</td>
<td>2.65</td>
<td>&lt; 0.10</td>
</tr>
<tr>
<td>Sparsha-asahatwa</td>
<td>1.14</td>
<td>0.28</td>
<td>75.43%</td>
<td>0.69</td>
<td>0.26</td>
<td>3.29</td>
<td>&lt; 0.05</td>
</tr>
<tr>
<td>Akunchana Prasarana Vedana</td>
<td>1.79</td>
<td>0.71</td>
<td>60.96%</td>
<td>0.90</td>
<td>0.34</td>
<td>3.75</td>
<td>&lt; 0.05</td>
</tr>
</tbody>
</table>

* SD = Standard Deviation, SE = Standard Error, P value = Level of Significance\(^9\).
Table – 2: Effect of Matrabasti by Mahamash tail in Group B patients of Sandhigatavata

<table>
<thead>
<tr>
<th>Cardinal Features</th>
<th>Mean BT</th>
<th>Mean AT</th>
<th>Percentage of Relief</th>
<th>SD</th>
<th>SE</th>
<th>‘t’ test</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sandhisula</td>
<td>3.5</td>
<td>1.7</td>
<td>52.4%</td>
<td>0.83</td>
<td>0.15</td>
<td>11.84</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>Sandhisotha</td>
<td>2.8</td>
<td>1.2</td>
<td>57.2%</td>
<td>0.89</td>
<td>0.10</td>
<td>9.82</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>Sandhisphutana</td>
<td>3.3</td>
<td>1.3</td>
<td>60.6%</td>
<td>0.87</td>
<td>0.16</td>
<td>13.10</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>Sandhigraha</td>
<td>3.2</td>
<td>1.5</td>
<td>53.1%</td>
<td>0.84</td>
<td>0.15</td>
<td>11.11</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>Sparsha-asahatwa</td>
<td>2.14</td>
<td>0.85</td>
<td>60.28%</td>
<td>0.75</td>
<td>0.28</td>
<td>4.51</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>Akunchana Prasarana Vedana</td>
<td>2.8</td>
<td>1.4</td>
<td>50%</td>
<td>1.01</td>
<td>0.18</td>
<td>7.57</td>
<td>&lt; 0.001</td>
</tr>
</tbody>
</table>

*SD = Standard Deviation, SE = Standard Error, P value = Level of Significance.

**DISCUSSION**

Among the diseases of locomotor system, osteoarthritis is the most common painful condition which causes wear and tear of the joints and leads to disability. It is a degenerative, inflammatory disorder which causes pain, swelling and restricted movements of joints. On movement, excruciating pain occurs which becomes unbearable even on mild touch and results in the formation of crepitus. Mahamash tail (niramisa) contain ingredients such as Masa, Dashamula kwath, Aswagandha, Rasna, Punarnava Satapuspa, Citraka etc which possess sothahara, balya etc property which reduces swelling and provides strength to the joints. It has anti-inflammatory, immunological and rasayana property which prevents the recurrence of disease and also eliminates the toxins from the body which prevents the formation of ama. The snigdha guna of taila antagonizes the rukshata of vayu and tikshna guna removes the srotodushti due to sanga. Thus matravasti directly pacifies apana vayu and
restores the equilibrium of agni which controls both samana and prana vayu\textsuperscript{11}.

**Probable mode of action**

*Trayodashanga guggul*- It contains

Abha, Aswagandha, Hapusa, Guduchi, Satavari, Gokṣura, Vṛddhadaraka, Rasna, Satapuspa, Sati, Yavani and Sunthi which has properties of sothahara, balya, rasayan, vedanasthapan, deepan etc. Its pharmacological activities include anti inflammatory, analgesic, anti oxidant etc\textsuperscript{12}. By these properties, this drug is beneficial for the remission of sandhigatavata to an extend.

*Matrabasti by Mahamash tail*- Basti is the best treatment for vata as said by Acharya Charaka “Bastihi Vataharaṇam”. Basti drug reaches to the Pakwashaya(large intestine). It is the main seat for Vata dosh as earlier said. Pakwashaya is the site of Purishadharakala. Acharya Dalhan in his commentary said purishadhara and Asthidhara kala are one and same. Acharya Sushruta mention 8\textsuperscript{th} basti nourishes Asthi dhatu. Thus through basti, we can achieve the shaman and snehan of Asthidhatu\textsuperscript{13}. Mahamash tail has also sothahara, balya, vedanasthapan, deepan, rasayan as well as brimhan properties which helps in remission of this disease. It also used in pakshwaghat, grivagraha, ardita and muscular dystrophy\textsuperscript{14}.

**CONCLUSION**

Marked improvement was found in both groups but maximum remission and highly significant result was found in group-B. *Matrabasti* by *Mahamash tail* possess the therapeutic potential in mitigating the pain, stiffness, swelling of joints and is effective in decreasing the restricted movement of joints compare to oral administration of *Trayodashanga guggul*. Further no any adverse effect of *Matravasti* was seen. Hence, it can be concluded that *Matravasti* with *Mahamash taila* is effective in the management of Sandhigatavata. Along with present therapy, sthaulyahara treatment in sthula patients and exercise of the joints may help in improving joint function.

**LIMITATIONS**

- The study population was small.
- The study period was short.
- Hence extensive and large scale studies are suggested.
REFERENCES


