Efficacy of Hapushadi Yapan Basti in Janu Sandhigata Vata (Knee Osteoarthritis)

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ABSTRACT
Osteoarthritis (OA) is the most common joint disorder. In Ayurveda the disease Sandhigata Vata resembles with OA. Nonsteroidal anti inflammatory drugs (NSAIDS) are mainly prescribed by modern doctors for its treatment. These medicines provide symptomatic relief, but the underlying pathology remains unchecked. Ayurvedic Acharyas have described the application of Bahya Snehan (External oleation), Swedana (fomentation), Abhyantara Tikta Snehapan (medicated ghee), Basti (medicated enema) treatment and Guggulu Prayoga in the management of Sandhigata Vata. Basti is prime treatment for various Vata disorders which includes Sandhigat vata. Hapushadi Yapan basti mentioned in Charak siddhisthan for management of various Vata related disorders. Aim: To evaluate the efficacy of Hapushadi Yapan Basti in Sandhigata vata. Materials & Method: In the present study, 30 patients of Sandhigata Vata were given Hapushadi Yapan Basti. Subjective assessment by classical symptoms Sandhi Shoola, Sandhi Shotha, Vatapurna Druti Sparsha, Graha (Restricted movement), Oxford pain chart, WOMAC (Western Ontario and McMaster Universities Osteoarthritis Index) index of O.A. for knee by Visual analog scale, Walking time for 10 meters were graded according to their severity. Result: Significant (P<0.05) result were found in all cardinal symptoms of Sandhi Shoola, Sandhi Shotha, Vatapurna Druti Sparsha, Graha (Restricted movement). Conclusion: Hapushadi Yapan Basti was significant in the subjective symptoms of Sandhigata Vata.

KEYWORDS: Sandhigat vata, Osteoarthritis, Hapushadi Yapan Basti.

INTRODUCTION
In today’s fast and furious modernized era, everyone is busy with living life under stress, constantly running to match with the pace of this era. Osteoarthritis (OA) is the most common type of arthritis. Its high prevalence, especially in the elderly, and the high rate of disability related to disease make it a leading cause of disability in the elderly. Osteoarthritis (OA) is the second most common rheumatologic problem in India and has a prevalence rate of 22-39%.¹ It is characterized primarily by articular cartilage degeneration and a secondary periarticular bone response.²⁻³ World-wide prevalence rate of OA is 20% for men, 41% for women and it causes pain or dysfunction in 20% of the elderly respectively.⁴ Because of the obesity, a major risk factor, are increasing in prevalence, the occurrence of osteoarthritis is on the rise.⁵ OA is joint failure, a disease in which all structures of the joint have undergone pathologic change, often in concert. The pathologic sine qua non of disease is hyaline articular cartilage loss, present in a focal and, initially, nonuniform manner.⁶ Due to continuous changes in life style, over exertion, improper and disturbed dietary habits, excessive travelling, improper working and sleeping schedules, as well as improper application of Ritucharya (Seasonal regimen) and Dinacharya (Daily regimen) and likewise other factors leads to vitiation of Vata dosha. This vitiation of Vata leads to the production of number of diseases and Sandhigatavata is one of them.⁷ A faulty dietary habit, irregular life style is responsible for changes in body tissues and plays a vital role for the manifestations like above disease. Now a day, this disease is having high prevalence and becoming significant threat to the working population. In Sandhigatavata, the deformity occurs in Sandhi i.e. joints. janu sandhi i.e. Knee joint is one of the mostly affected joints in Sandhigatavata.

Panchakarma therapy, one of the Gems of Ayurveda is a unique gift to modern civilization by Ayurveda. Panchakarma, the rejuvenation therapy plays important role in the management of various disorders by Ayurveda way of treatment. Out of Panchakarmas, Basti (Medicated enema) is most important part of treatment in the management of disorders of Vata.⁸

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Basti treatment acts on main site of Vata i.e. Pakwashaya (area over large intestine), so is the supreme treatment regarding Vata dosha. Basti, when applied acts on Pakwashaya and radially pacifies vitiated Vata, sole Doṣha responsible for all movements including other Doṣha, Dhātu, mala within the body. In Ayurveda classics, so many therapeutic procedures and line of treatments regarding the same is given. Yapan basti is one of the Basti treatment indicated in Vata disorders and Hapushadi Yapan Basti is one of them. Both Lekhana as well as Bruhana (Nourishing) properties can be achieved with Yapan basti as it do have properties of Niruha basti as well as Anuvasan basti. 

AIM
To study the efficacy of Hapushadi Yapan Basti in Sandhigata vata with special reference to Janu sandhi.

OBJECTIVES
1. To study the concept of Sandhigata vata with special reference to Janu sandhi.
2. To study the standardization of ingredients (Hapushadi yapan basti).
3. To evaluate the role of Hapushadi yapan basti in Sandhigata vata with special reference to Janu sandhi.

MATERIAL AND METHODS
Type of study: Randomized single group open labeled clinical study
Place of study: OPD and IPD at S.T.R.H. Pune.
Duration of study: study was conducted during March 2012- May 2013

SELECTION OF PATIENTS
Total 30 patients of Janu Sandhigata vata who attended were selected, enrolled irrespective of sex, religion, economical status, education, occupation etc.

INCLUSION CRITERIA
1) Patients having textual symptoms of Sandhigata vata with special reference to Janu sandhi will be taken as a subject to study.
   - Sandhi Shoola
   - Sandhi Shotha
   - Vatapurna Druti Sparsha
   - Graha (Restricted movement)
2) Sex: Male & Female
3) Age: 30 to 70 Years.
4) Patient who will give written consent

EXCLUSION CRITERIA
- Patients with other joints deformities or diseases which are not related to Janu Sandhigata vata, such as Amavata, Vatarakta.
- Fracture of Knee joint, and needs surgical care were excluded.
- Auto immune diseases like SLE, Ankylosing Spondylitis.
- Neoplasms
- Permanent joint damage.
- Known cases of Cardiac disease, Pulmonary TB, Pregnancy, Paralysis, HIV, Neurological disorder etc.
- Chronicity for more than 10 years.
- Having severe crippling deformity.
- Age <30 yrs. & >70 yrs.

WITHDRAWAL CRITERIA
a) Occurrence of Serious adverse events.
b) The investigator feels that the protocol has been violated or patient has become incorportive.
c) Further continuation of the study is likely to be detrimental to health of the patients.
d) Patients absent for continuous 2 follow-ups will be considered as dropped out from this project.
e) The patients are not willing to continue the trial.
f) During the trial any medication like
   - Corticosteroids, Analgesic, Local application containing steroid & analgesic.
   - Self medication.
   - Narcotics are not permitted.

Upon questioning if, any subject is found to be using medications in non permitted categories he was withdrawn from the trial automatically.

MEDICATION AND TREATMENT PERMITTED
Treatment for minor ailments requiring medication for less than 3 days was permitted. Rescue of medication in the form of life-saving drugs, antibiotics, I.V. fluids may be permitted if 2 experts agree on their necessity.

METHOD OF ADMINISTRATION
Form: Yapan basti
Dose-240 ml.
Duration of therapy- 7 days
Follow up- on day 7 and day 14

PROCEDURE
Purvakarma- Sthanik snehan (Local oleation) and Swedana (Medicated fomentation)
Position- left lateral
Pradhankarma- Basti-dana
Pashchatakarma- Tadana karma and Uttana position.
Preparation of Hapushadi Yapan Basti

Table 1: The essential components

<table>
<thead>
<tr>
<th>Content</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hapusha (Juniperus communis)</td>
<td>1/2 Kudav (80 gms)</td>
</tr>
<tr>
<td>Yava (Hordeum vulgare)</td>
<td>1 Kudav (160 gms)</td>
</tr>
<tr>
<td>Godugdha (Cow’s milk)</td>
<td>6 Prasrut (480 ml)</td>
</tr>
<tr>
<td>Sneha (Tilataila &amp; Ghruta)</td>
<td>Each 11/2 Prasrut (240 ml)</td>
</tr>
<tr>
<td>Saindhava</td>
<td>1 Karsha (10 gms)</td>
</tr>
<tr>
<td>Madhu (Mel millis)</td>
<td>2 Prasrut (160 ml)</td>
</tr>
</tbody>
</table>

According to text, first Hapusha (Juniperus communis) and Yava (Hordeum vulgare) in above mentioned quantity with its twice quantity of cow milk and water each were boiled till only Ksheera (Cow’s milk) remain. Then Saindhava and Madhu (Mel millis) were mixed to form a homogenous mixture. Then Sneha dravya i.e. Tila taila and Ghruta 120 ml each were mixed in above mixture to form a homogenous mixture. In above mixture lukewarm Ksheerpaka was added and was churned to form a homogenous mixture. Out of above mixture 240 ml of Hapushadi Yapan Basti in luke warm condition was administered to patient.\(^{[12]}\)

**METHOD OF ASSESSMENT**

- Detailed case papers were prepared incorporating all signs & symptoms of Sandhigata vata.
- Pain was scored according to severity & involvement of knee joint.
- Oxford pain chart.
- WOMAC (Western Ontario and McMaster Universities Osteoarthritis Index) index of O.A. for knee by Visual analog scale.
- Walking time for 10 meters.

**OBSERVATIONS**

**Table 2: Gradation of symptoms**

<table>
<thead>
<tr>
<th>Symptom</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sandhishool</td>
<td>Absent</td>
<td>Mild</td>
<td>Moderate</td>
<td>Severe</td>
</tr>
<tr>
<td>Sandhishoth (expressed in terms of average knee girth in cms)</td>
<td>None 0</td>
<td>Mild</td>
<td>Moderate</td>
<td>Severe</td>
</tr>
<tr>
<td>Vatpurn druti sparsh</td>
<td>None 0</td>
<td>Mild</td>
<td>Moderate</td>
<td>Severe</td>
</tr>
<tr>
<td>Graham</td>
<td>None</td>
<td>Mild</td>
<td>Moderate</td>
<td>Severe</td>
</tr>
<tr>
<td>Walking time (for 10 m in seconds)</td>
<td>20.6±2.5</td>
<td>18.63±2.26</td>
<td>&lt;0.0001</td>
<td>Extremely significant</td>
</tr>
</tbody>
</table>

**Table 3: Symptom wise comparison of treatment**

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Test</th>
<th>Before treatment Mean ± SD</th>
<th>After treatment Mean ± SD</th>
<th>P value</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shool</td>
<td>Wilcoxon Rank sum</td>
<td>2.4±0.64</td>
<td>1.21±0.8</td>
<td>&lt;0.0001</td>
<td>Extremely significant</td>
</tr>
<tr>
<td>Shotha</td>
<td>Paired t test</td>
<td>34.88±2.12</td>
<td>34.7±2.08</td>
<td>&lt;0.0001</td>
<td>Extremely significant</td>
</tr>
<tr>
<td>Vatpurn druti sparsh</td>
<td>Wilcoxon Rank sum</td>
<td>1.3±0.89</td>
<td>0.6±0.6</td>
<td>&lt;0.0001</td>
<td>Extremely significant</td>
</tr>
<tr>
<td>Graham</td>
<td>Wilcoxon Rank sum</td>
<td>0.9±0.67</td>
<td>0.3±0.49</td>
<td>&lt;0.0001</td>
<td>Extremely significant</td>
</tr>
<tr>
<td>Oxford pain chart</td>
<td>Wilcoxon Rank sum</td>
<td>2.06±0.44</td>
<td>0.96±0.55</td>
<td>&lt;0.0001</td>
<td>Extremely significant</td>
</tr>
<tr>
<td>Walking time</td>
<td>Paired t test</td>
<td>20.6±2.5</td>
<td>18.63±2.26</td>
<td>&lt;0.0001</td>
<td>Extremely significant</td>
</tr>
<tr>
<td>Visual analogue scale</td>
<td>Paired t test</td>
<td>53.66±12.72</td>
<td>21.66±11.32</td>
<td>&lt;0.0001</td>
<td>Extremely significant</td>
</tr>
</tbody>
</table>

**Table 4: Percentagewise Assessment of Symptoms**

<table>
<thead>
<tr>
<th>Symptoms</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shool (pain)</td>
<td>50.60%</td>
</tr>
<tr>
<td>Shotha (swelling)</td>
<td>0.43%</td>
</tr>
<tr>
<td>Vatpurna druti sparsh (feeling hollowness)</td>
<td>51.53%</td>
</tr>
<tr>
<td>Graham (stiffness)</td>
<td>58.89%</td>
</tr>
<tr>
<td>VAS</td>
<td>59.62%</td>
</tr>
<tr>
<td>Oxford pain chart</td>
<td>52.93%</td>
</tr>
<tr>
<td>Walking time</td>
<td>9.56%</td>
</tr>
<tr>
<td>Overall assessment score</td>
<td>32.50%</td>
</tr>
</tbody>
</table>
DISCUSSION

The objective of the study was to evaluate the efficacy of Hapushadi Yapan Basti in Sandhigatvata. Sandhigatvata is a disorder dominated by pain affecting the Sandhi (joint). It is caused by morbid Vata Dosha. Kapha Dosha may also be involved in the clinical presentation. The vitiated Dosha or Doshas afflict the Mamsa, Asthi and Snayu. It is more evident in Asthi Dhatu with which Vayu has Ashraya ‘Ashrayee Bhava Sambhanda.

In this clinical study 30 patients were registered. Clinical trials were carried out methodically & proper record of the observations was maintained.

All the observations were observed thoroughly. The data is discussed as follows.

According to symptoms

- **Shoola (pain):** According to statistics, Mean of reduction in Shoola was 1.25 & Percentage of relief was 50.60%.
- **Shotha (swelling):** According to statistics, Mean of reduction in Shotha was 0.15 and Percentage of relief was 0.43%.
- **Vatpurna drutisparsha (feeling hollowness):** According to statistics, Mean of reduction in this symptom was 0.67. Percentage of relief was 51.53%.
- **Graha (stiffness):** According to statistics, Mean of reduction in Graha was 0.53. Percentage of relief was 58.89%.
- **VAS:** According to statistics, Mean of reduction in VAS was 32. Percentage of reduction in VAS was 59.82%.
- **OXP:** According to statistics, Mean of reduction in OXP was 1.09. Percentage of reduction in OXP was 52.93%.
- **Walking time:** according to statistics, mean reduction in walking time was 1.97. Percentage of reduction in walking time was 9.56%.

CONCLUSION

- The relief was seen all symptoms of Janu sandhigata vata by Hapushadi Yapan Basti.
- Hapushadi Yapan Basti is found to be good Brunnhane, Vathamama.
- Hapushadi Yapan Basti in Janu Sandhigata vata was found statistically highly significant.
- No any adverse effect was found during or after treatment.
- No detoriation in sign and symptoms were found after Basti treatment in maximum patients.

REFERENCES


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