EFFICACY OF SHATAVHADI TAILAM MATRABASTI IN AMAVATA

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ABSTRACT
According to Ayurvedic texts-changing diets, faulty food habits and behavior patterns plays a major role in the manifestation of any disease. In Ayurveda, all these are leading causes for formation of Ama and also aggregate Vatadosha. Vitiation of Vatadosha in association with Ama leads to Amavata. Occurrence of Amavata on large scale is a very common complaint in today’s modern world. Vatadosha plays a key role in the formation of Amavata. Amavatais a common type of Vatavyadhi in which predominant dosha is Vata; “Basti Vataharanam Shreshthkam”-Basti is said to be best therapy to treat all VataVyadhis. So, in this study, 30 patients of Amavata were selected and Shatavhadi Tailam Matrabasti was given for consecutive 7 days. All the observations were done thoroughly before and after treatment. Clinical assessment was done, and it has shown a significant reduction in symptoms. Drawbacks of the study were also discussed.

Keywords: Vatadosha, Amavata, Shatavhadi Tailam, Matrabasti, Ama

INTRODUCTION
According to Ayurveda, the living body is composed of vata, pitta and kaphadosha. Out of these, vitiated Vatadosha plays a key role in the formation of any disease.1 In today’s world of modern era, most of the dietary habits and dietary systems, food varieties, social and behavioral structures, various lifestyles and environmental factors have been changing continuously. These changing patterns of diet and behavior play a major role in the manifestation of musculoskeletal and joint disorders. Now-a-days, joint pain is a common complaint found in number of people including young. Due to unwholesome diet, erroneous and sedentary habits, exertion immediately after taking oily foods and changing lifestyles, occurrence of Amavata on large scale is very common complaint2

It is the commonest among chronic inflammatory and debilitating joint diseases in which joints become swollen, painful and stiff.3 Therefore, it has taken the foremost place among the joint disorders. It continues to pose challenge to physicians due to severe morbidity and crippling nature and claiming the maximum loss of human power making it the biggest worldwide burning problem. Signs and symptoms of Amavata in Ayurveda can be equated with Rheumatoid Arthritis in modern medical science.

Now-a-days, multiple types of medical and paramedical treatments are available for Amavata and Rheumatoid Arthritis. No doubt, modern allopathic system of medicine has got an important role to give pain relief in patients of Amavata, but prolonged use of allopa-
thic medicines is giving rise not only to many side effects, toxic symptoms but also adverse reactions. Hence the management of Amavata, is merely insufficient in modern medical and other paramedical systems of medicine. So, patients are continuously looking for ayurvedic system of medicines to overcome this challenge.

The purpose of selecting this topic for research was a relatively high incidence and difficulty in the management of the disease. The Ayurvedic management defends a good deal on the disease compared with other medical and paramedical management. Amavata is a common type of Vatavyadhi and per ayurveda, ‘Basti’ is said to be best therapy to treat all Vata Vyadhis. Also, Bastichikitsa is the one among all treatments which are directly mentioned for Amavata in the Ayurvedic texts. That’s why; ‘Basti’ karma treatment was selected for the study.

Among all types of basti- ‘Matra Basti’ is the simplest type of snehabasti which can be easily given at any age, any time in all the seasons and is harmless. No any clear contraindication is mentioned for it. For this ‘MatraBasti’ karma was selected for the study.

For the purpose of Matra Basti ‘ShatavhadiTailam’ is selected as it has been recommended in Bastikalpadhayay by Acharya Vagbhata. It is easy to prepare as the drugs i.e. Shatavha, Yava, Bilva, Kanji and Tila Tail are easily available. All the above factors inspired me for definite remedy, and this was my effort to put light on effective treatment for the same.

**Aim:** To study the efficacy of ‘Shatavhadi Tailam’ Matra Basti in Amavata.

**Primary Objectives:** To evaluate the role of Shatavhadi Tailam Matra Basti in Amavata.

**Other Objectives:**
- To study the Amavata Vyadhi and its aetiopathogenesis.
- To study the standardization of ingredients as well as finished product (Shatavhadi Tailam).

**Materials and Methods**

The method used to evaluate the efficacy of Shatavhadi Tailam Matrabasti in Amavata comprises clinical trial.

**Clinical Trial:**

- Screening of subjects for inclusion
- Initial assessment 0th day
- Shatavhadi Tailam Matra–basti daily for 7 days
- Follow up at the end of treatment i.e. 7days
- Second follow up on 14th day
- Final assessment on 21st day
- Statistical assessment
- Discussion
- Conclusion

Clinical trial was conducted in the Inpatient and Outpatient sections of Department of Panchakarma in Tarachand Ayurved Hospital on 30 patients of Amavata who fulfilled criteria for inclusion for this
study. Patients under trial were in a single group; it was because the aim of this study was to assess the efficacy of Shatavhadi Tailam Matrabasti in Amavata. The clinical trials were conducted Patients of both the genders in the age group from 18yrs to 60 years, irrespective of socio-economic status, were selected randomly for these trials.

**Study design:**

**Inclusion criteria:**
- Patients having textual signs and symptoms of Amavata.
- Sex – Male / Female
- Age group - 18 to 60 years.

**Exclusion criteria:**
- Patients with other joint deformities or diseases which are not related to Amavata such as Vatarakta, Vatakantaka, Koshtrukshirsh etc.
- Fractures which need surgical care.
- Chronicity for more than 10 years.
- Age group: <18 yrs. &>60 yrs.
- Contraindications of Sneha Basti:- Navajwar, Sravi Arsha (Bleeding piles), Kamala, Pratishyaya, Atisara, Adhoga Raktapitta, Udana.

**Withdrawal Criteria:**

- Occurrence of Serious adverse events/major complications.
- The investigator feels that the protocol has been violated or patient has become in co-operative.
- Further continuation of the study is likely to be detrimental to health of the patients.
- If patient remains absent for continuous 2 days.
- If patient refuses to continue the trial.

**Method of Administration:**
- Form: MatraBasti.
- Dose: 60ml.
- Kala: Immediately after breakfast in the morning.
- Duration of therapy: For 7 days
- Initial assessment: 0th day
- Follow up: 7th, 14th days.
- Final assessment: 21st day

**Preparation of Patient:**

After selection of patient as per inclusion criteria, detailed history of present and past illness was recorded in the formatted case-paper. Initial assessment was done as per assessment criteria.

**Follow up:-**

After the 0th day’s initial assessment, patients were followed up and re-examined on 7th, 14th days and final assessment was done on 21st day. Patient was assessed according to the following criteria and methods of assessment.

**Criteria of Assessment:**

**Table 1:**

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Assessment Criteria</th>
<th>Day 0</th>
<th>Day 7</th>
<th>Day 14</th>
<th>Day 21</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Sandhishoola (Joint pain) Visual Analog Scale</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Sandhisotha (Joint swelling)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Sandhistabdhata (Joint stiffness)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Sparshasahyata (Tenderness)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Agnimandya (Loss of Appetite)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Aruchi (Anorexia)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Jwara (fever)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Bahumutrata (Polyuria)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Methods of Assessment:

Table 2: Visual Analog Scale for Sandhi Shoola:

<table>
<thead>
<tr>
<th>Observation</th>
<th>VAS Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Day 0</td>
<td>Day 7</td>
</tr>
<tr>
<td>VAS in 10cm point scale</td>
<td></td>
</tr>
<tr>
<td>0 cm</td>
<td>_________________________________</td>
</tr>
</tbody>
</table>

There is a 10 cm. horizontal line for each day pain assessment. There is “zero mark” on left hand side and “10” on right hand side. “0” indicates absolutely no pain. “10” indicates severe pain. Each cm. indicates digits from “0” to “10”. Patients were called and asked to grade their pain and define accordingly in number. Relief in pain for VAS is calculated as per following formula -

\[
IP_0 - IP_{21} \times 100
\]

Where, - IP0 is intensity of Pain on 0th day of assessment i.e. before treatment.

- IP21 is intensity of Pain on the final day of assessment.

**Sandhi Shotha:** Shotha can be measured. So, it is an objective parameter. Shotha was measured by using measuring tape. In this study shotha of joints both extremities were measured at the center of joint i.e. measurement of circumference of shotha before, during and after the treatment. All measurements were taken. Mean is calculated & effect of a trial is calculated in terms of difference between the Shotha before treatment and after treatment.

Table 3: *Sandhi Stabdhatra*:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Assessment criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal</td>
<td>00 Easy activities.</td>
</tr>
<tr>
<td>Mild</td>
<td>01 Some limitation of joint movement.</td>
</tr>
<tr>
<td>Moderate</td>
<td>02 Marked restriction – assistant require</td>
</tr>
<tr>
<td>Severe</td>
<td>03 Confined to chair/bed bound in capacitated and dependant.</td>
</tr>
</tbody>
</table>

Table 4: *Sparshaasahyata*

<table>
<thead>
<tr>
<th>Grade</th>
<th>Assessment criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal</td>
<td>00 No tenderness</td>
</tr>
<tr>
<td>Mild</td>
<td>01 Subjective experience of tenderness.</td>
</tr>
<tr>
<td>Moderate</td>
<td>02 Wincing of face on pressure.</td>
</tr>
<tr>
<td>Severe</td>
<td>03 Withdrawal of affected part on pressure.</td>
</tr>
</tbody>
</table>

**Agninandyia:** Assessment will be done on the basis of “Agnim Jaranshaktyam Parikshet” Jaranshakti means duration of complete digestion of meals as manifested by feeling of hunger. In this study for a particular patient feeling of complete digestion & hunger after 6 hours of taking meal was considered as normal.

Table 5

<table>
<thead>
<tr>
<th>Grade</th>
<th>Assessment criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal</td>
<td>00 6 hrs.</td>
</tr>
<tr>
<td>Mild</td>
<td>01 6 to 9 hrs.</td>
</tr>
<tr>
<td>Moderate</td>
<td>02 9 to 12 hrs.</td>
</tr>
<tr>
<td>Severe</td>
<td>03 &gt;12 hrs.</td>
</tr>
</tbody>
</table>
Table 6: Aruchi:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Assessment criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal</td>
<td>00 Absent</td>
</tr>
<tr>
<td>Mild</td>
<td>01 Can take diet but no perception of taste</td>
</tr>
<tr>
<td>Moderate</td>
<td>No perception of taste but can take little amount of food.</td>
</tr>
<tr>
<td>Severe</td>
<td>03 No perception of taste, can’t take regular diet</td>
</tr>
</tbody>
</table>

Table 7: Jwar: Axial temperature was recorded by using digital thermometer.

<table>
<thead>
<tr>
<th>Grade</th>
<th>Assessment criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal</td>
<td>00 98 to 99 °F</td>
</tr>
<tr>
<td>Mild</td>
<td>01 99 to 100 °F</td>
</tr>
<tr>
<td>Moderate</td>
<td>02 100 to 103 °F</td>
</tr>
<tr>
<td>Severe</td>
<td>03 &gt;103 °F</td>
</tr>
</tbody>
</table>

Table 8: Bahumutrata: This was assessed by frequency of urination per 24 hrs as follows.

<table>
<thead>
<tr>
<th>Grade</th>
<th>Assessment criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal</td>
<td>00 7 to 10 times</td>
</tr>
<tr>
<td>Mild</td>
<td>01 10 to 15 times</td>
</tr>
<tr>
<td>Moderate</td>
<td>02 15 to 20 times.</td>
</tr>
<tr>
<td>Severe</td>
<td>03 &gt;20 times</td>
</tr>
</tbody>
</table>

Relief Criteria: Based upon following points –

- Reduction of joint pain, swelling stiffness and tenderness
- Increased appetite
- Fall of temperature.
- Decreased frequency of urination.

Thus, Relief Criteria is divided into 3 grades

Table 9

<table>
<thead>
<tr>
<th>Relief criteria</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>70% and above</td>
<td>Fair</td>
</tr>
<tr>
<td>50% and above</td>
<td>Moderate</td>
</tr>
<tr>
<td>Below 50%</td>
<td>Poor</td>
</tr>
</tbody>
</table>

Statistical Analysis:

Statistical significance of the study group was calculated with paired ‘t’ test with a value of p<0.05 considered statistically significant.

Observations:

- Maximum number i.e. 14 (46.67%) patients were found in age group 41-5 years of which 5 (16.66%) were male and 9 (30%) were male. Minimum number i.e. 3 (10%) patients were found in age group 18-30 years of which 2 (6.67%) were male and 1 (3.33%) was female.

- 27 (90%) patients were Hindu and 2 (6.67%) patients were Muslim and 1 (3.33%) patient was Christian.
- Maximum number i.e. 15 (50%) patients were housewives, 9 (30%) patients were in service, 3 (10%) patients were businessman, 2 (6.67%) patients were students and minimum number i.e. 1 (3.33%) was worker.
- Maximum number of patients i.e. 24 (80%) were from middle economical strata, 5 (16.67%) were from upper economical strata and minimum number of patient i.e. 1 (3.33%) was from lower economy.
Out of 30 patients, 2 (6.67%) were illiterate and 28 (93.33%) were educated. Out of 25 educated patients, 1 (3.33%) had primary education, 14 (46.67%) had secondary and 13 (43.33%) were graduates.

All 30 patients were with dwandajaprakruti. Out of 30 patients’ maximum patients i.e. 14 (47%) were vata-kaphaprakruti followed by 6 (20%) were pitta-kaphaprakruti and only 1 (3%) were with pitta-vata and kapha-pitta prakruti.

Out of 30 patients 18 (60%) patients were with mixed type of food and 12 (40%) were of vegetarian diet.

Out of 30 patients 27 (90%) were married, 2 (7%) were single and 1 (3%) was windowed.

**Statistical Analysis:**

According to VAS there is significant reduction in Sandhishoola on day 7, day 14 and day 21 i.e. $p=0.001$

There is significant reduction in Sandhishotha on day 7, day 14 and day 21 i.e. $p=0.001$

There is significant reduction in Sandhistabdhata on day 7, day 14 and day 21 i.e. $p=0.001$

There is significant reduction in Sparshasahyatwa on day 7, day 14 and day 21 i.e. $p=0.001$

There is significant reduction in Agnimandya on day 7, day 14 and day 21 i.e. $p=0.001$

There is significant reduction in Aruchi on day 7, day 14 and day 21 i.e. $p=0.001$

There is significant reduction in Jwar. On day 7, day 14 and day 21 i.e. $p=0.001$

There is significant reduction in frequency of urination (Bahumutrata) on day 7, day 14 and day 21 i.e. $p=0.001$

**Results of Basti:**

Fair relief was seen in Bahumutrata, Agnimandya and Aruchi. Moderate relief was seen in Jwar, Sandhistabdha and Sparshasahyatwa. Poor relief was seen in Sandhishoola and Sandhishotha. Maximum retention time was observed as (53.33%) of the patients were having 3 – 6 hours retention time followed by 1 – 3 hour in (6.66%), 6 – 9 hours in (13.13%), 9 – 12 hours in (16.66%) of the patients. It is observed that some of the Pitta Prakriti patients have complaints like slight burning sensation in abdomen after Basti administration. It may be due to hot nature (UshnaVirya) of the Shatavhadi tailam.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>% of Relief</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sandhishoola (Joint pain) Visual Analog Scale</td>
<td>9.54</td>
</tr>
<tr>
<td>Sandhishotha (Joint swelling)</td>
<td>3.658</td>
</tr>
<tr>
<td>Sandhistabdha (Joint stiffness)</td>
<td>64.70</td>
</tr>
<tr>
<td>Sparshasahyata (Tenderness)</td>
<td>64.34</td>
</tr>
<tr>
<td>Agnimandya (Loss of Appetite)</td>
<td>70</td>
</tr>
<tr>
<td>Aruchi (Anorexia)</td>
<td>72.67</td>
</tr>
<tr>
<td>Jwara (fever)</td>
<td>66.18</td>
</tr>
<tr>
<td>Bahumutrata (Polyuria)</td>
<td>72.83</td>
</tr>
</tbody>
</table>

It can be observed from the above-mentioned data that shatavhadi tailam Matra Basti has provided better relief in most of the symptoms except sandhishoola and sandhishotha. More relief was observed in the symptoms of bahumutrata than aruchi, agnimandya, jwara, sandhistabdha and sparshasahyatwa.
DISCUSSION

The objective of the dissertation was to study the efficacy of shatavhadi tailam Matra Bastiin Amavata. In this clinical study 30 patients were registered. Clinical trials were carried methodically & proper record of the observations was maintained. All the observations were done thoroughly. The data is discussed as follows. Observations made on 30 patients of Amavata are being discussed here.

- Maximum number of patients i.e. 47 % belonged to the age group of 41-50yrs which show its predominance in middle age group. This data is slightly in accordance with the modern findings, that the onset is most frequent during the third, fourth and fifth decades of life with 80% of all patients developing disease between the age of 35 and 50 years.

- Majority of patients i.e. 64% were female which clearly shows the predominance of the disease in females. The nature of the household work especially after taking meal, which is one of the causative factors mentioned in Ayurvedic text, may be the responsible factor of Amavata in females.

- Maximum number of patients were Hindu (90%), married (90%), housewives (50%), secondary education (47%), mixed diet pattern (60%), and belonged to socio-economic status middle class (80%). This reflects the Geographical predominance of Hindu community in this particular region. It may be due to the fact that this study was conducted in a general charitable hospital which is situated in the reachable distance of rural areas patients, where free treatment facilities are available. Another possibility was that middle- and lower-class people are most prone to stress and strain, which may precipitate the disease Amavata. This disease is chronic in nature and no perfect treatment except steroid is available in modern system of medicine too. So steroid dependent patients were seen in the present study.

- Maximum numbers of patients i.e. (47%) were having Vata-KaphaPrakruti, it is justifiable that Kapha-VataPrakriti persons with vitiated doshas are easily prone to Amavata due to Guna Samanyatwa.

Overall Effect of Therapy:
Marked improvement was seen in all general body symptoms of Amavata i.e. aruchi, agnimandya, bahu- mutrata and jwar while moderate improvement was seen insandhistabdha and sparshasahyatwa while only slight relief was seen in sandhishotha and sandhishoolas per the obtained statistical data.

Probable Mode of Action of the Drugs:-
To explain the mode of action of a drug means to establish a relationship between the SampraptiGhataka of the disease and Penta fold principles of Rasa, Guna, Virya, Vipaka and Prabhava of a drug. On the basis of these results and general principle of mode of action of drug the probable mode of action of ingredients of shatavhadi tailam in the disease Amavata is being discussed here.

Tikta and Katu Rasa present in shatavha and bilva possess the antagonistic properties to that of Ama and Kapha which are the chief causative factors in this disease. Because of their Agnivriddhikar and Amapachana property, they increase digestive power which also digests Amarasa and reduces the excessive production of Kapha and also removes the obstruction of the Srotas. 

Because of Tikshna Guna of shatavha and kanji and UshnaVirya of shatavha, bilva and kanji it also alleviates vitiared Vata. The Tikshna and Ushna properties of shatavha and kanji do not allow the Ama to linger at the site of pathogenesis and to create Srotorodha. But it reduces Srotorodha and pain. Also, the ushna-guna and katupak of shatavha, bilva and kanji it allows the best (Param) work of Amapachana. It has also the antagonistic action of Sheeta and RukshaGuna of Vata.

Madhura rasa, guru guna and katupaka of yava control Ama and Vata together and minimize the process of pathogenesis. Katu Rasa of shatavha, bilva and kanji deepan karma occurs. This leads to assimilation of undigested and immature Amarasa.

Probable mode of action of shatavhadi tailam MatraBasti in Amavata:-
The present study of shatavhadi tailam MatraBasti in Amavata has provided better relief in almost all cardinal symptoms and general symptoms of the disease.
Here, Shatavhadi Tailam MatraBasti is given consecutively for 7 days which is a type of SnehaBasti. As a whole the qualities of MatraBasti can be considered as Laghu, Snigdha, Ushna and Tikshna. Majority of the drugs are having Vata-Kapha Shamaka action and majority of drugs has its action on Rasavaha and Annavaha Srotasa. There is no drug in this oil which acts specifically on Asthi-Majjavaha Srotasa and also drug has specific action of shulaprashamana of Asthi-Sandhi. It may be the reason that percentage of relief in sandhishoola is much less as compared with other general symptoms of Amavata. Owing to this property, antagonism to Kapha and Ama the Basti help in significant improvement in signs and symptoms of disease.

Due to SnigdhaGuna it also helpful in the chronic stage of the disease because SnigdhaGuna is antagonist of Ruksha Guna of Vata. The TikshnaGuna of Basti helps in overcoming the Srotodushhti resulting due to ‘Sanga’. The BastiDravya after reaching to Pakvashaya gets absorbed there. Due to Laghu, Usna, TikshnaGuna of Shatavhadi TailamMatraBastiDravya, it breaks the obstructions and expels out the morbid material from all over the body, thus helps in breaking down the pathogenesis of disease. Basti helps in Vat-anulomana thus helping in correcting the Apana. Thus, we can say that Shatavhadi Tailam Matra Basti plays a pivot role in the management of Amavata.

**Draw Backs of Present Study:**

Duration of the basti administration was only 7 days. That’s why there was only slight relief in sandhishotha and shotha. When we expect long term effect of a drug it is considered that this time period is too less. It could have been done for a longer duration.

In this clinical trial, the protocol for management of emergency conditions was not preplanned. So, whenever an exacerbation in symptoms was noted the patient was put on other medications and omitted from the study.

**CONCLUSION**

At the end of the study, following conclusion can be drawn on the basis of observations made, Results achieved and thorough Discussion in the present context and can be summarized as below:

Amavata is Chronic and krichrasadya disease in nature. As the word suggests, in Amavata, the pivoting entities in disease process are Ama and Vitiated Vata. It can be concluded that, poor strength of Agni otherwise termed as Mandagni is largely responsible for the formation of Ama which is the chief pathogenic factor of the disease.

All the subtypes of Vata are involved either earlier or in the later stages of Amavata. All the nidanas of Amavata ultimately results in Vataprasopaha and Mandagni (Amaproduction) initiating further pathogenesis. Pathogenesis of Amavata is initiated by Ama, occupying various Sleshma Sthanas, especially Trika Sandhis.

It is observed that symptomatology of Rheumatoid arthritis is very closely resembles with the disease Amavata. From this study, we can say that code and conduct of healthy Aahara and Vihara must be followed to achieve early and better results of the disease. Shatavhadi Tailam Matra Bastihas provided better relief in most of the cardinal and general signs and symptoms of Amavata in the present study group. Better relief was observed in Agnimandya, Aruchi, jwar, bahumutrata, Sandhistabdhata, Sparshasahyatwa but only slight relief was observed in Sandhishotha and Sandhishoolla.

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