Study the Effectiveness of Vaitarana Basti in Amavata: A Clinical Trial

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Abstract
Background - Amavata is madhyammargashrit (pertaining to bones, joints and vital point) disease. Aggravated Vata and Ama are the core factors taking part in the pathogenesis of Amavata. Basti (therapeutic medicated enema) is important treatment for Vatadosha and Vaitarana Basti (VB) is indicated in Amavata. Thus it was chosen for the study. In this study, a total 21 patients of Amavata were registered and all patients completed the treatment.

Method - As Vaitarana is a Kshar-basti, Basti treatment was started first with Matrabasti(oil enema of 60ml dose) of sesame oil to gain pakvashayasningdha (oleation of bowels). After that one MatraBasti was followed after every two VB. Total seven Bastis were given to every patient. Basti was instilled as explained in texts (pre Basti management, Basti procedure, post-Basti management).

Results—Pain assessment was done with Oxford Pain Chart and results were analyzed statistically, using students‘t’ test. Calculated p-value was p<0.001. Hence VB provided significant pain relief in Amavata. It was observed that there was 50% relief in bodyache and all other symptoms of Amavata on fourth day of VB while up to seventh day total relief was obtained for these symptoms. Total recovery was achieved in 38.1% patients followed by good relief in 57.14% patients.

Conclusion—VB proved highly significant in Amavata.

Keywords

Vaitarana Basti, Amavata
INTRODUCTION

‘Vijayrakshit’, in his Madhukosh Vyakhyan on Madhavnidan, has touched on Amavata. No disease named as Amavata is described in prime compendia of Ayurveda viz, Charak, Sushruta and Ashtang –Hriday. Aggravated Vata and Ama are the core factors taking part in the pathogenesis of Amavata. In its pravruddavastha (severe form) all joints get affected. Pain related to Amavata is so dreadful that it is compared with pain of scorpion bite. Even though swelling along with pain is there, major concern for patient of Amavata is pain relief. As it is madhyammargashrit disease, it is very difficult to cure it completely. Shodhanachikitsa for it comprises of ‘Basti’ (medicated therapeutic enema), which is important treatment for Vatadosha. VaitaranaBasti (VB) is indicated in Shool (Pain) as well as in Amavata. Thus this clinical trial aims to assess its effectiveness in Amavata essentially in pain relief.

Aim- To study the effectiveness of VB in Amavata

Objectives –
1. To assess the pain relieving effect of VB in Amavata.
2. To assess the effect of VB in Amavata

MATERIALS AND METHODS

The method used to evaluate the efficacy of VB in Amavata was clinical study. Clinical trial was conducted on 21 patients of Amavata fulfilling criteria for inclusion. The study was carried out at Seth Tarachand Ramnath Hospital, Pune, in I.P.D. and O.P.D. of Kayachikitsa Dept.

Patients of both male and female sex, belonging to all socio economic groups were selected according to the inclusion criteria for trial.

Study Design

Inclusion criteria - patients presented with textual signs and symptoms of Amavata.

Exclusion criteria- a) Joint pain regarding ‘NirupstambhitaAvastha’ of disease.

b) Anuvasa (patients contraindicated for therapeutic enema of oil and decoction).

c) Age below 15 and above 70 years.

Duration of Basti :- 7 days

As Vaitarana is a Kshar-basti, Basti treatment was started with first Matrabasti (oil enema of 60ml dose) of sesame oil to gain pakvashyasnigdhata (oleation of bowels). After that one Matra Basti was followed on completion of every two VB. Total seven Bastis were given to every patient.

Matra (doses) – Variation in the doses of VB, especially of Gomutra (cow’s urine)
was done according to age, *vyadhibala* (severity of disease), *rugnabala* (mental and physical strength of patient), *kala* (seasons). One kudava (160ml) is the dose of cow’s urine in VB. It was reduced up to 80ml in some patients.

*Rugnaparikshan* (Examination of patient):- After selection of patient, complete case was recorded in special case paper format along with detail history of present and past illness. Written informed consent was taken from every patient.

**Method of preparation of VB**
1) 40gm of ripped tamarind was taken in a container
2) 220 ml of hot water was added to it.
3) Allowed it to cool.
4) Rubbed it well and removed the fibrous part from it.
5) Filtered it properly to get thick tamarind pulp.
6) 20 gm of jiggery was added to the tamarind pulp and mixed it well.
7) 80 gm of honey and 10 gm of rock salt was taken in another container.
8) It was properly mixed with hand.
9) 40 ml of sesame oil was mixed in mixture of honey and rock salt.
10) Again it was mixed well to become a homogenous mixture.
11) Mixture of tamarind and jiggery was poured to this container.
12) Lastly 160 ml of cow’s urine was added to the formed mixture.
13) Stirred it well to get homogenous mixture of VB.
14) Made it lukewarm by keeping it in hot water before administration.

*Basti* was instilled as explained in texts (prebasti management, *basti* procedure, *post-basti* management). 

**Pathogenesis of Amavata**

1. **Formation of Ama and vitiation of Vata**
   - Embellishment of *Vata*, especially to *shleshmasthana* due to gunasamanya
   - *Margavarodha* and *abhishyanda* in *srotasas*
   - Undue stiskiness in *srotasas*
   - Enters in *Triksandhi* and produce stiffness
   - *Amavata*

How VB brake pathogenesis of *Amavata*?

One of the treatment of *Amavata* according to *Yogaratnakar* is *Basti*. Owing to the
diversity of combination of drugs used in the Basti, it can perform diverse functions like shodhana (cleansing), shaman (pacifying), sangrahana (checking) ⁸. In Amavata, as disease progresses, margavarodha (obstructive pathology) increases, so it requires cleansing therapy which can cleanse the closed channels and restore its normal function. VB has very potent cleansing action.

Table 1 Action of VB

<table>
<thead>
<tr>
<th>Dravya</th>
<th>Rasa</th>
<th>Veerya</th>
<th>Vipaka</th>
<th>Guna</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>PakvaAmlika⁹ (ripeed tamarind)</td>
<td>Amla, Madhur</td>
<td>Ushna</td>
<td>Amla</td>
<td>Laghu, Ushna, Ruksha</td>
<td>Vatakaphashamak, Pittavardhak</td>
</tr>
<tr>
<td>Guda¹⁰ (jiggery)</td>
<td>Madhur, Lavana</td>
<td>Ushna</td>
<td>Madhur</td>
<td>Guru, Snigdha</td>
<td>Vatapittaghna, Kaphavardhak</td>
</tr>
<tr>
<td>Saindhavan¹¹ (rock salt)</td>
<td>Lavana, Madhur</td>
<td>Sheeta</td>
<td>Madhur</td>
<td>Laghu Snigdha, Sukshma, Agnideepana, Deepana, Pachana</td>
<td>Tridoshaghna</td>
</tr>
<tr>
<td>Gomutra¹² (Cow' urine)</td>
<td>Katu, Lavana, Tikta</td>
<td>Ushna, Tiksha, Laghu, Ruksha, Bhedi.</td>
<td>Kaphavataghna, pittakara</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tila tail¹³ (Sesame oil)</td>
<td>Madhur, Kashay, Tikta</td>
<td>Ushna</td>
<td>Madhur</td>
<td>Vyavai, Vikasi, Sara, Vishad, Snigdha, Sukshma, Lekhan</td>
<td>Vatakaphashmak, Raktapittakrut</td>
</tr>
</tbody>
</table>

As a cumulative effect, VB is

**Rasa-** Madhur, amla, lavana, katu, tikta, kashay. Veerya- Ushna

**Vipak-** Madhur

Properties- Ushna, teekshna, laghu, ruksha, vyavayi, vikasi

Other functions- Chedan, bhedan, lekhan

Doshaghanata- Kapha-Vataghna, Pittakara

The properties and potency of the Basti will be responsible for its action.

Amavata is madhyammargashrit disease. These Doshas if brought into the Koshtha, can be expelled out by nearest root. Owing to the potency, VB fetch the Doshas in Koshtha by creating substantial increase, liquefaction in Dosha and by digesting Ama thereby opening the blocked channels keeping Vata in control. These vitiated Doshas are then expelled out from anal root by Basti.

Assessent criteria

Overall relief in symptoms –

Complete – 4, Good – 3, Moderate –2, Slight- 1, No relief – 0

Pain assessment was done with Oxford Pain Chart

The oxford scale is a pain level scale, zero is no pain, one is a very small amount of discomfort, and two is perhaps a score level of discomfort. The scale goes up to the
count of ten. Level five of the Oxford scale is the half way mark.

The relief in the intensity of pain according to oxford pain chart was calculated using following formula

\[
\% \text{ of pain relief} = \frac{I_{P0} - I_{PL}}{I_{P0}} \times 100
\]

Where \( I_{P0} \) is intensity of pain on 0\(^{th} \) day of trial i.e. before treatment \( I_{PL} \) is intensity of pain on last day of treatment

**OBSERVATIONS AND RESULTS**

**Table 2** Division according to severity before treatment

<table>
<thead>
<tr>
<th>Gradation of Severity</th>
<th>No of patients</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>4.76</td>
</tr>
<tr>
<td>2</td>
<td>19</td>
<td>90.48</td>
</tr>
<tr>
<td>3</td>
<td>1</td>
<td>4.76</td>
</tr>
<tr>
<td>4</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

**Chart 1** Division according to severity before Treatment

**Table 3** Division according to severity after treatment

<table>
<thead>
<tr>
<th>Gradation of Severity</th>
<th>No of patients</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>8</td>
<td>38.1</td>
</tr>
<tr>
<td>1</td>
<td>12</td>
<td>57.14</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>4.76</td>
</tr>
<tr>
<td>3</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>4</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

**Chart 2** Division according to severity after treatment

**Table 4** Percentage of relief on fourth day of treatment according to Oxford Pain Chart

<table>
<thead>
<tr>
<th>% of relief on fourth day of treatment</th>
<th>No of patients</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-10</td>
<td>8</td>
<td>38.1</td>
</tr>
<tr>
<td>11-20</td>
<td>12</td>
<td>57.14</td>
</tr>
<tr>
<td>21-30</td>
<td>1</td>
<td>4.76</td>
</tr>
<tr>
<td>31-40</td>
<td>12</td>
<td>57.14</td>
</tr>
<tr>
<td>41-50</td>
<td>1</td>
<td>4.76</td>
</tr>
<tr>
<td>51-60</td>
<td>10</td>
<td>57.14</td>
</tr>
<tr>
<td>61-70</td>
<td>1</td>
<td>4.76</td>
</tr>
<tr>
<td>71-80</td>
<td>1</td>
<td>4.76</td>
</tr>
<tr>
<td>81-90</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>91-100</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

**Chart 3** % of relief according to oxford pain chart on 4th day of treatment
Table 5 Percentage of relief on seventh day of treatment according to Oxford Pain Chart

<table>
<thead>
<tr>
<th>% of relief on seventh day of treatment</th>
<th>No of patients</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11-20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>21-30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>31-40</td>
<td>1</td>
<td>4.76</td>
</tr>
<tr>
<td>41-50</td>
<td>16</td>
<td>76.49</td>
</tr>
<tr>
<td>51-60</td>
<td></td>
<td></td>
</tr>
<tr>
<td>61-70</td>
<td></td>
<td></td>
</tr>
<tr>
<td>71-80</td>
<td></td>
<td></td>
</tr>
<tr>
<td>81-90</td>
<td></td>
<td></td>
</tr>
<tr>
<td>91-100</td>
<td>4</td>
<td>19.05</td>
</tr>
</tbody>
</table>

Table 6 Statistical Analysis

<table>
<thead>
<tr>
<th>Pain difference</th>
<th>Standard deviation</th>
<th>t-value</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>36.11</td>
<td>29.49</td>
<td>5.19</td>
<td>p&lt;0.001</td>
</tr>
</tbody>
</table>

DISCUSSION

In this study, total 21 patients of Amavata were registered and completed the treatment. Each patient was observed everyday for each sign and symptom. The signs and symptoms of Amavata were the main criteria for diagnosis and assessment. Oxford pain chart was used for pain assessment.

The assessment was also carried out before and after treatment to evaluate the total effect of treatment. Results were analyzed statistically by using student’s ‘t’ test.
There were 95.23% female patients indicating high prevalence of the disease in females. Moderate severity of symptoms was present in 90.48% patients. As far as pain is concerned, according to Oxford pain chart, on fourth day of VB, 8(38.1%) patients got 1-10% relief, 1 (4.76%) patient got 31-40% relief and 12 (57.14%) patients got 41-50% relief. On last day i.e. seventh day of VB, 1(4.76%) got 31-40% relief, 16 (76.49%) patients got 41-50% relief while 4(19.05%) got 91-100% relief. Also it was observed that there was 50% relief in body ache and all other symptoms of Amavata on fourth day of VB while up to seventh day total relief in these symptoms. Total recovery was achieved in 38.09% patients followed by good relief in 57.15% patients.

Some contraindications of VB are found during this clinical trial.

Contraindications of VB –

*Pitta Prakruti*

*Alpasatva, alpabalarugna*

*JeernaAmavata*

*Alpadoshavastha*

*Dhatukshyavastha*

**CONCLUSION**

VB is very useful in pravrddhavastha, navavastha of Amavata. It should not be used in pitta prakruti and ushnarutu.

Further scope of the study – As Amavata is correlated with Rheumatoid Arthritis (RA), Investigations related to RA before and after the treatment would provide objective assessment by carrying out randomized clinical trials.
REFERENCES


