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### A Clinical Study of *Kshara Basti* and *Panchkoal Ghanvati Amavata* w.s.r. Rheumatoid Arthritis

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#### ABSTRACT

*Amavata* is a disease that occurs due to the disturbed *ama* and *vata*. It mainly affects elderly population and it is difficult to cure if not treated in early stages. Various analgesic, anti-inflammatory and steroidal drugs are used for the management of disease. However, the drug which offers complete relief and acts on root cause of the disease is yet to be developed. The use of long term therapy also exposes humans towards various side effects of medicine; therefore it is very essential to find out any safe remedy for the management of such disorders. Considering this fact an attempt has been made to prove efficacy of Ayurveda approaches in the management of *Amavata*. This article presents efficacy of *Kshara Basti* and *Panchkoal Ghanvati* in the management of *Amavata*.

#### KEYWORDS

*Ayurveda, Amavata, Rheumatoid Arthritis, Kshara Basti and Panchkoal Ghanvati*



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## INTRODUCTION

*Amavata* is a very common health problem in elderly age and it affects quality of life due to its chronicity, incurability and crippling nature. It can be correlated with rheumatoid arthritis as per modern science<sup>1-4</sup>. It is believed that about 15% of total world population suffers from rheumatoid arthritis. Vitiation of *ama* and *vata* is the triggering factors of disease *Amavata* which mainly affect normal function of *Marma*, *Asthi* and *Sandhi*<sup>3-6</sup>.

## AIMS AND OBJECTIVES

1. To assess the efficacy of *KsharaBasti* and *PanchkoalGhanvati* in *Amavata* (RA).
2. To find out effective and safe remedy against *Amavata* (RA).

## MATERIALS AND METHODS

Ethical Committee Approval no. S. No. 15  
Date 4/1/19

1. Patients of *Amavata*, 34 in no. were randomly selected from O.P.D. and IPD of Govt. Autonomous Ashtang Ayurved College and Hospital Indore, which fulfilled the criteria of study.
2. These 34 patients were subjected to following therapeutic regimen for 30 days:

❖ The patients were given 20 *KsharaBasti* course along with *PanchkoalGhanvati* in the dose of 2 gm thrice a day with lukewarm water. Total treatment course was 30 days.

### Contents of *KsharaBasti*

- *SandhavaLavan* 10gms.
- *Shatahava* 10gms.
- *Gomutra* 300ml.
- *Chincha* 50gms.
- *Jaggery* 100gms.

### Contents of *PanchkoalGhanvati*

- *Pippali* (*Piper longum*)
- *Pippalimool* (*Piper longum root*)
- *Chavya* (*Piper retrofractum*)
- *Chitrak* (*Plumbagozeylanica*)
- *Sunthi* (*Zingiberofficinale*)

These drugs were taken in equal quantity and *Ghanavati* were prepared (each *Ghana Vati* 2 gm) according to classical description<sup>4-8</sup>.

### Assessment Criteria:

#### *Subjective*

1. Pain in joint
2. Swelling of the joint
3. Tenderness of joint
4. Stiffness of the joint
5. Redness of joint

#### *Objective*

1. R A factor
2. E.S.R.
3. Serum cholesterol

#### *Functional*

1. Walking time in second.
2. Grip strength in mm Hg
3. Foot pressure in kg.
4. Range of joint movement.

### Procedural protocol

Registered patient of *Amavata* were given 20 *KsharaBasti* course along with *PanchkoalGhanvati* (2 gm) thrice a day with lukewarm water. Same treatment course was followed for 30 days.

## DISCUSSION

The clinical trial was conducted in a randomized sample of 34 patients. The end results were assessed on the basis of various parameters.

**Table 1** Profile of patients

| Parameter         | Description    | Range/Percentage |
|-------------------|----------------|------------------|
| Age               | Range in year  | 20-60            |
| Sex               | Male           | 10 (29.4%)       |
|                   | Female         | 24 (70.6%)       |
| Religion          | Hindu          | 25 (73.5%)       |
|                   | Muslim         | 9 (26.5%)        |
| Economical status | Poor           | 10 (29.4%)       |
|                   | Middle         | 18 (52.9%)       |
|                   | Rich           | 6 (17.7%)        |
| Habitat           | Urban          | 26 (76.5%)       |
|                   | Rural          | 8 (23.5%)        |
| Marital Status    | Married        | 30 (88.2%)       |
|                   | Unmarried      | 4 (11.8%)        |
| Chronocity        | Below one year | 2 (5.9%)         |
|                   | 1 to 3 yrs.    | 20 (58.8%)       |
|                   | 4 to 6 yrs.    | 10 (29.4%)       |
|                   | Above 6 yrs.   | 2 (5.9%)         |
| Date              | Vegetarians    | 25 (73.5%)       |
|                   | Mix            | 9 (26.5%)        |
| Bowel habits      | Regular        | 14 (41.2%)       |
|                   | Irregular      | 20 (58.8%)       |
| Bowel             | Loose          | 8 (23.5%)        |
|                   | Constipated    | 26 (76.5%)       |

### Profile of patients

Maximum numbers of patients from age group 41 to 50 yrs. Number of female patients were more (70.6%) as compared to male patients (29.4%) as shown in **table 1**.

The variation observed in economic status of registered patient which were 52.9% patients belonged to middle economic status, 17.7% patients from upper middle class and 29.4% patients from poor economic class. It was recorded that 76.5% patients were from urban area while 23.5% patients were from rural area.

Study registered 88.2% married patients while 11.8% patients were from unmarried status. Chronicity of 1 to 3 years was observed in 58.8% patients while 29.4% patients registered with chronicity of 4 to 6 years and chronicity below one year found in only 5.9 % patients. It was noted that 58.8% patients were used to pass stool irregularly, 76.5% patients were found to be constipated while 23.5% patients were habitants to frequent motions; these all findings suggested about irregular functioning of *Apanvayu* in most of the registered patients (**Table 2**).

**Table 2** Distribution According to Symptoms

| Cardinal Symptoms     | No of patients | Percentage |
|-----------------------|----------------|------------|
| Pain in joint         | 34             | 100        |
| Swelling of the joint | 34             | 100        |
| Tenderness of joint   | 34             | 100        |
| Stiffness of joint    | 30             | 88.2       |
| Redness of joint      | 18             | 52.9       |

### Cardinal symptoms

All patients presented complaints of joint pain, swelling and tenderness, 88.2% patients reported stiffness of joint while 52.9% patients reported redness of joint.

### Effect of Therapies on Symptoms

**Table 3** Response on cardinal symptoms of *Amavata*

| S. No. | Cardinal symptoms     | Means Score |     | % of relief | SD    | SE   | T     | P      |
|--------|-----------------------|-------------|-----|-------------|-------|------|-------|--------|
|        |                       | BT.         | AT. |             |       |      |       |        |
| 1      | Pain in joint         | 3.0         | 1.7 | 56.66       | 0.82  | 0.26 | 5.00  | <0.001 |
| 2      | Swelling of the joint | 3.1         | 1.2 | 61.3        | 0.57  | 0.18 | 10.59 | <0.001 |
| 3      | Tenderness of joint   | 1.7         | 0.6 | 64.7        | 0.32  | 0.1  | 11.0  | <0.001 |
| 4      | Stiffness of joint    | 2.9         | 1.7 | 56.82       | 0.091 | 0.29 | 4.13  | <0.01  |
| 5      | Redness of joint      | 2.5         | 1.1 | 56.0        | 0.84  | 0.26 | 5.25  | <0.001 |

### Swelling of joint

The swelling reduction was found highly significant (61.3%).

### Tenderness of joint

The mean score of tenderness was reduced to 0.6 from 1.7 which was statistically significant (64.7%).

### Stiffness of Joint

The initial mean score of stiffness was 2.9 which was reduced to 1.7. 56.82 % relief

**Table 4** Response on functional parameters *Amavata*

| S. No. | Cardinal symptoms                 | Means Score |       | % of relief | SD    | SE   | T    | P      |
|--------|-----------------------------------|-------------|-------|-------------|-------|------|------|--------|
|        |                                   | BT.         | AT.   |             |       |      |      |        |
| 1      | Walking time in sec.              | 139.5       | 105.0 | 24.7        | 22.17 | 7.01 | 4.92 | <0.001 |
| 2      | Grip strength in mm Hg            | 92.2        | 132.8 | 44.7        | 28.8  | 10.8 | 3.8  | <0.01  |
| 3      | Foot pressure in kg.              | 23.65       | 29.75 | 25.8        | 5.62  | 1.78 | 3.43 | <0.01  |
| 4      | Range of joint movement in degree | 71.55       | 74.43 | 4.03        | 2.04  | 0.44 | 6.48 | 0.001  |

### Walking time in second:

The initial mean score of walking time B.T. was 139.5 sec. This was reduced to 26.3 sec. AT, which considered highly significant ( $p < 0.00$ ).

### Grip Strength in mm Hg:

### Pain in joint

Reduction in pain was found to be statistically significant. Since 56.66% patients were get relief from pain after therapy (**Table 3**).

was recorded in stiffness which considered as statistically significant.

### Redness of joint

The mean score of redness was reduced to 1.1 from 2.5 which considered statically significant.

### Effect on Functional Parameters

The effect of therapy on functional parameters mentioned in **table 4** and results were as follows:

An average improvement of 44.7 mm Hg was noticed in hand grip power, which was significant at  $p < 0.01$ .

### Foot Pressure in Kg:

The initial mean foot pressure in this group was 23.65 kg which was improved to 29.75

kg, which was statistically significant ( $p < 0.01$ ).

### Range of Joint Movement in Degree:

In this series the initial mean range of joint movement was 71.55 which improved to 74.43 as highly significant result ( $p < 0.001$ ).

### Effect on Hematological Values:

#### Response on R A factor:

No change of R. A. factor was observed after treatment (Table 5).

Table 5 Response on R. A. Factor

Table 6 Response on ESR & Serum Cholesterol Level

| Investigation | Means Score |       | % of relief | SD    | SE    | T     | P      |
|---------------|-------------|-------|-------------|-------|-------|-------|--------|
|               | BT.         | AT.   |             |       |       |       |        |
| ESR           | 77.90       | 51.75 | 33.56       | 8.945 | 2.572 | 12.00 | <0.001 |
| S.Cholesterol | 288.86      | 198.4 | 4.91        | 10.38 | 2.323 | 8.15  | <0.001 |

### OVERALL EFFECT OF THERAPY:

In this study complete remission was found in 12 patients (35.3%), major improvement was observed in maximum 20 patients (50.8%), while only 2 patients (5.9%) were reported with minor improvement as shown in Table 7.

Table 7 Overall effect of therapy

| Treatment effect   | No. of patients | Percentage |
|--------------------|-----------------|------------|
| Complete remission | 12              | 35.3       |
| Major improvement  | 20              | 58.8       |
| Minor improvement  | 2               | 5.9        |
| Un. Changes        | 0               | 0          |

### Probable mode of action of KsharaBasti and PanchkoalGhanvati

The major objective of present research work was to re-examine the facts related to effect of KsharaBasti and


| R. A.    | B.T. | %    | A.T. | %    |
|----------|------|------|------|------|
| Positive | 12   | 35.3 | 12   | 35.3 |
| Negative | 22   | 64.7 | 22   | 64.7 |

### Response on E.S.R. & Cholesterol:

The average mean score for E.S.R. before treatment was 77.90 which was reduced to 51.75 after treatment which was considered significant at  $p < 0.001$ . The mean score of serum cholesterol was reduced to 198.4 from 288.86 after treatment which was highly significant ( $p < 0.001$ ) as shown in

### Table 6.

*PanchkoalGhanvati* on *Amavata*. In *KsharaBastiGomutra* is chief content possesses *KatuRasa*, *KatuVipaka*, *UshnaVirya*, *Laghu-Raksha* and *TikshnaGuna* which acts as *Chhedak*, *Strotovishodhan* & *Kaphashamak*, *Srotoshodhak* and *Agnideepak*. As per *BhavaPrakash* it acts as *Rasayan* therefore offers useful effect in the management of *Amavata* disease. It also boosts *Mandagni* due to its *Agnideepaka* property. *SaindhavLavana* offers *Tridoshsamak*, *Deepana* and *Pachana* properties thus acts as *Sothanashak* and *Vednashamak*, it also destroys pathogenesis of *Amavata*. *PuranaGuda* (jaggary) may be taken as *Laghu*, *Pathya*, *Anabhishtyandi*, *Agnivardhaka* and *Vata-pittaghna*. *Amlika*



having *Vata-Kaphashamka*, *Rukshna* and *Ushna* properties thus reduction in joint pain may be observed due to the *AmaPachana* and *VataShaman* effect of drugs. *Basti* acts as *vata anulomana* thus help in correcting the circulation of *Apana Vayu*. *Basti Dravyas* reaches in large and small intestine and absorbed through intestine; due to their *Laghu*, *Usna* and *Tikshna Guna*. These properties of *Basti Dravyas* help to break obstruction and expel out the morbid material from the body which results in diminished pathogenesis of disease. *Kshara Basti* alleviates *Avarana* of *Vata*, breakdown in the *Avarana* was also observed along with improvement in *Kaphavritta Vyana* symptoms. The contents of *Panchkol Ghanvati* having *Katu Rasa*, *Katu Vipaka*, *Ushna Virya*, *Laghu-Raksha* and *Tikshna* properties provided better relief in pain, stiffness, and tenderness and common symptoms of *Amavata*<sup>7-11</sup>.

## CONCLUSION

*Kshara Basti* and *Panchkol Ghanvati* were found to be effective in relieving pain and tenderness. This therapy showed effective reduction in swelling of different joints and morning stiffness.

The functional assessments like joint movement, foot pressure, hand grip and

walking time also improved significantly after the treatment. None of the patients in this study reported any unwanted effects of *Kshara Basti*. The trial drug in this study seem to be very good combination of *Vedanashamaka*, *Agnivardhak*, *Aampachak*, *Shothaghna* and *Rasayana Dravyas*.

Finally, it can be concluded that *Kshara Basti* along with *Panchkol Ghanvati* may be recommended for the management of *Amavata* (RA). However more research work for longer duration in large population required to establish findings of study.

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