Clinical Research

Effect of Kshara Basti and Nirgundi Ghana Vati on Amavata (Rheumatoid Arthritis)

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Abstract

Ayurveda has taken the foremost place in the management of crippling disease, one of them is Amavata which can be compared with Rheumatoid Arthritis due to its clinical appearance. Due to wide spectrum of disease, much prevalence in the society and lack of effective medicament, the disease is being chosen for the study. The line of treatment described for the disease in Chakradatta can be summarized under following captions. i.e to bring Agni to normal state to digest Ama, and eliminate vitiated Vata and Ama. Thus, here Kshara Basti is selected for the present study as Samshodhana process which corrects all of above captions. It is mentioned in Chikitsa Sutra described by Chakradatta. Nirgundi has Amavatahara property which is stated by Bhavaprakasha, considering which Nirgundi Patra Ghanavati is selected as Shamana drug. Total 50 randomly selected patients of Amavata were registered among them 45 were completed the treatment. Kshara Basti in the format of Kala Basti was given to these patients and Nirgundi Ghana Vati was given for one month. Statistically significant improvement was found in ESR, RA factor (quantitative) and also highly significant results were found in symptoms of Amavata. Moderate improvement was seen in 40% of patients, 35.56% patients got marked improvement, while mild improvement was found in 24.44% of patients.

Key words: Amavata, Kshara Basti, Nirgundi Ghana Vati, Rheumatoid Arthritis

Introduction

In present time, due to modern life style, hectic schedule, stress, and many such reasons, incidence of diseases are increasing, one of them is Amavata. The concept of autoimmunity is well-explained under the concept of Ama, an intermediate product generated due to the deranged metabolism of digestive fire triggering a chronic inflammatory process in the body. Rheumatoid arthritis is a chronic inflammatory disease. In the whole world, rheumatic disease is the most common cause of physical impairment in society. The lives of more than one million people are physically impaired by rheumatic disorders and one fifth of these are severely disabled. The prevalence rate of this disease is about 3% with a male to female ratio of 1:3.[1] It occurs throughout the world in all climates and ethnic groups. Till date, about 39 Research activities have been carried out in PG. Institute, Jamnagar. Previously in Jamnagar, eight activities have been done on Basti, while nine on Virechana Karma, and only three on Kshara Basti. This number itself suggests its large occurrence and faith of patients in Ayurvedic Management. Only three research activities had been done on Kshara Basti in Jamnagar.[2]

Shodhana (bio-purification), Shamana (pacification) and Nidana Parivarjanam are main modalities of treatment for any disease.[3] So, in the present study, Kshara Basti has been selected as Shodhana Chikitsa which is mentioned in Chikitsa Sutra described by Chakradatta[4] and Nirgundi Ghana Vati has been selected as Shamana Chikitsa.

Aims and Objectives

• To evaluate the efficacy of “Kshara Basti along with Nirgundi Ghana Vati” on Amavata.
• To evaluate the efficacy of Kshara Basti along with Nirgundi Ghana Vati on Hemaotological and Bio chemical parameters especially ESR and R.A. Factor (quantitative) test.

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Materials and Methods

Total 50 patients fulfilled criteria for diagnosis of the disease Amavata (Rheumatoid Arthritis) were selected from the O.P.D. and I.P.D. of Panchakarma Department of I.P.G.T. and R.A., Jamnagar. This study was approved by Institutional Ethics Committee.

Inclusion criteria
1. Patients having classical features of Amavata like Angamarda, Aruchi, Trishna, Hrillasa, Gaurava, Jwara, Shila, Shotha etc.[3] were selected for the present clinical research work. Detailed research proforma was prepared incorporating all the clinical features seen in the disease Amavata (Rheumatoid Arthritis).
2. The patients who had fulfilled the revised criteria for Rheumatoid arthritis fixed by the American college of Rheumatology in 1987.[6] Rheumatoid factor positive and negative both cases were included.

Exclusion criteria
- Chronicity of more than 10 years
- Having severe crippling deformity
- Having cardiac disease, pulmonary tuberculosis and pregnant women
- Age less than 18 years and more than 60 years

Plan of study
The selected patients were given Kshara Basti along with Eranda Taila Anuvasan Basti in format of Kala Basti[7] i.e., 16 days.
- Deepana, Pachana with Shunthi Churna for three days
- Sarvanga Nirgundi Patra Pinda Sweda before giving Basti
- After completing Basti, Nirgundi Ghana Vati 2 tab (500 mg/tab) thrice a day for 30 days. Nirgundi Ghana Vati is prepared from Nirgundi Patra Kwatha
Total Duration: 46 days.

Laboratory investigations
- Rheumatoid Factor (Quantitative) test
- Erythrocyte Sedimentation Rate by Westergren method
- Serum uric acid (for exclusion)
- X-ray of the affected joint
- Routine urine, blood examination

Criteria for assessment
The results of therapy were assessed on the basis of clinical features of the disease Amavata, which are mentioned in Ayurvedic classic as well as with the help of criteria fixed by American Rheumatism Association in 1987. The scoring pattern adopted for assessment of clinical features is as follows:

Observation and Results
Effect of therapy on chief complaints such as Sandhishoola, Sandhishotha, Sandhistabdhata and Sandhisparsa Asahyata is found to be statistically highly significant (P>0.001) [Table 1]. Also statistically highly significant (P>0.001) results were found on general symptoms such as Angamarda, Aruchi, etc.; associated symptoms such as Daurbalya, Agnimandya, Praseka, etc. and on functional capacity parameters [Tables 2-4].

The retention time of Kshara Basti up to 5mins was observed in maximum number of patients (60%) and retention time of Anuvasan Basti - 3 to 6 hrs was observed in 62.22% patients [Tables 5,6].

Table 1: Effect on chief complaints

| Chief complains       | N  | B.T. | A.T | %   | SD  | SE  | T    | P     |
|----------------------|----|------|-----|-----|-----|-----|------|-------|
| Sandhishoola         | 45 | 40.02| 8.77| 78.06| 11.13| 1.66| 18.82| <0.001|
| Sandhishotha         | 45 | 16.26| 2.53| 84.42| 7.45 | 1.11| 12.35| <0.001|
| Sandhistabdhata      | 45 | 31.02| 5.22| 83.16| 9.54 | 1.42| 18.12| <0.001|
| Sandhisparsa Asahyata| 45 | 29.26| 4.51| 84.58| 10.26| 1.35| 16.17| <0.001|
The effect of therapy on Erythrocyte sedimentation rate and RA factor (Quantitative) was found to be statistically highly significant (P>0.001) and significant (P>0.01) respectively [Tables 7,8].

In overall effect of therapy maximum number of patients (40%) got moderate improvement [Chart 1].

**Discussion**

Maximum number of patients (40%) belonged to the age group of 41-50 years, which shows its predominance in the middle age group. This data is slightly in accordance with the modern findings, that the onset is most frequent during the fourth and fifth decades of life with 80% of all patients developing disease between the age of 35 and 50 years. In this study, majority of the patients were female (91.11%) as compared to male. Textual references also reflect the predominance of rheumatoid arthritis in females. Majority of the patients were having Mandagni (97.77%). Mandagni is the root of all the disease, particularly of Amavata. In the present study, majority of the patients had Madhyama (46.66%) and Krura Koshtha (57.77%). It justifies the finding of Prakriti. The study reveals that maximum number of patients possesses Vata Pitta Prakriti i.e., 48.88%. According to Acharya Vagabhadha, Dwidoshaja Prakriti is Nindya, Hemadri gives commentary on that Vata-Pitta Prakriti is Hinatama, persons who having this Prakriti, are more prone to disease. Maximum numbers of patients were having history of gradual onset (86%) and chronicity of <2 years (51%). The disease runs a chronic course and also becomes chronic due to the non-availability of good treatment in contemporary medicine. It may be due to the fact that Amavata is a chronic disease and usually manifests itself over a period of a few months. Most of the patients were found to be indulged in Viruddha Ahara (93%), Atiguru (65%), Visamahana (42%), Snigdha Ahara (40%), Divasapragha (66%), Nischalat, (55%), Bhujanottara Vayama (31%), Chinta (69%). All these factors lead to Mandagni and consequently to formation of Ama. So, it can be concluded that all the above mentioned factors play an important role in precipitation and aggravation of the disease Amavata. These data also support the etiology of Amavata, mentioned in classics. Kshara Basti comprises of Saindhava, Guda, Chineha, Shatavaha and Gomutra. In this Basti, maximum quantity is of Gomutra, which is having Kshara Guna. Kshara has the property of Lekhana and Vishoshana,[9] which are antagonistic to Ama and is very much required in the conditions like Amavata. But it must be kept in the mind that, it may further vitiate Vata. Thus, keeping this view in mind Eranda Taila Anuvaseana was given in the format of Kala Basti. Eranda has a typical property of Ama Pachana.[10] Chineha to be taken in Kshara Basti should be in Pata stage that is having Vata-Kapha Shamaka[11] property. Regarding Purana Guda to be used, it is Laghu, Pathya, Anabhisheyandi, Agnivardhaka and Vata-Pittaghna.[12] Saindhava due to its Sakshma and Tikshna[13] property helps the Basti Dravya to reach up to the molecular level. It is capable of liquefying the viscid matter and breaking it into minute particles. Thus solves both the purpose; to curing the disease and to purify the body. Nirgundi Ghana Vati, which was given after Basti has a definite action on vitiated Vata Kapha Dosha. Specially, Tikta and Katu Rasa present in Nirgundi possess the antagonistic properties to that of Ama and Kapha which are the chief causative factors in this disease. Because of their Agrivridhikara property

| Table 2: Effect on general symptoms | General symptoms | B.T. | A.T. | % of relief | SD | SE | T | P |
|-----------------------------------|------------------|------|------|-------------|----|----|---|---|
| Angamarda                         | 45               | 2    | 0.22 | 88.88       | 0.42 | 0.62 | 28.36 | <0.001 |
| Aruchi                            | 43               | 2    | 0.06 | 92.22       | 0.47 | 0.25 | 0.47 | <0.001 |
| Trishna                           | 32               | 2    | 0.23 | 81.08       | 0.68 | 0.12 | 13.46 | <0.001 |
| Hrilassa                          | 22               | 2    | 0.13 | 96.15       | 0.27 | 0.05 | 32.52 | <0.001 |
| Jwara                             | 31               | 2    | 0.26 | 90.00       | 0    | 0   | 0    | <0.001 |
| Apaka                             | 41               | 2    | 0.07 | 96.34       | 0.26 | 0.04 | 46.79 | <0.001 |
| Gaurava                           | 44               | 2    | 0.34 | 82.95       | 0.52 | 0.07 | 20.93 | <0.001 |

| Table 3: Effect on associated symptoms | Associated symptoms | n | B.T. | A.T. | % of | SD | SE | T | P |
|---------------------------------------|---------------------|---|------|------|------|----|----|---|---|
| Daurbalya                             | 45                  | 2 | 0.64 | 67.77 | 0.52 | 0.07 | 17.19 | <0.001 |
| Agnimandya                           | 42                  | 2 | 0.04 | 97.61 | 0.21 | 0.03 | 58.70 | <0.001 |
| Praseka                              | 6                   | 2 | 1.00 | 0     | 0    | 0   | 0    | <0.001 |
| Kandu                                 | 14                  | 2 | 0.28 | 85.71 | 0.46 | 0.12 | 13.68 | <0.001 |
| Antrakunjana                         | 16                  | 2 | 0.12 | 93.75 | 0.34 | 0.08 | 21.95 | <0.001 |
| Anaha                                 | 31                  | 2 | 0.26 | 88.37 | 0.54 | 0.09 | 17.26 | <0.001 |

| Table 4: Effect on functional capacity | Functional capacity | n | B.T. | A.T. | % of | SD | SE | T | P |
|----------------------------------------|---------------------|---|------|------|------|----|----|---|---|
| Walking time                           | 45                  | 2 | 20.2 | 26.81 | 3.22 | 0.48 | 15.37 | <0.001 |
| Gripping strength                      | 45                  | 2 | 75.77 | 132.8 | 75.24 | 22.52 | 3.35 | 16.97 | <0.001 |
| Foot pressure                          | 45                  | 2 | 9.11 | 13.22 | 45.12 | 1.94 | 0.28 | 14.17 | <0.001 |
| General function                       | 45                  | 2 | 2.4  | 74.07 | 0.63 | 0.09 | 18.76 | <0.001 |

| Table 5: Effect on ESR | Gr. | N | Mean score | % A.T. | % A.T. | S.D. | S.D. | S.E. | S.E. | t | t | P | P |
|-----------------------|-----|----|------------|--------|--------|------|------|------|------|---|---|---|---|
|                       |     |    |            | A.T.1  | A.T.2  |      |      |      |      |   |   |   |   |
| A                     | 45  | 61.28 | 50.62 | 44.86 | 17.40 | 28.42 | 18.48 | 25.31 | 2.75 | 3.77 | 3.87 | 4.61 | <0.001 | <0.001 |

| Table 6: Effect on rheumatoid factor | Gr. | N | Mean score | % A.T. | % A.T. | S.D. | S.D. | S.E. | S.E. | t | t | P | P |
|-------------------------------------|-----|----|------------|--------|--------|------|------|------|------|---|---|---|---|
|                                     |     |    |            | A.T.1  | A.T.2  |      |      |      |      |   |   |   |   |
| A                                   | 38  | 268.71 | 227.47 | 209.51 | 14.95 | 21.46 | 89.09 | 116.74 | 14.45 | 18.93 | 2.78 | 3.04 | <0.001 | <0.001 |
they increase digestive power which also digests Amarasa and reduces excessive production of Kapha and also removes the obstruction of the Srotas. Because of Tikshna Gun and Ushna Virya it also alleviates vitiated Vata and reduces Srotorodha and pain. Thus Nirgundi controls Ama and Vata together and minimize the process of pathogenesis. Chinicha, Gomutra, Shatahva, Nirgundi have anti-oxidant and anti-inflammatory properties, which reduces inflammatory process in the body.

**Table 7: Retention time of Kshara Basti**

| Retention time of Kshara Basti | No. of pt. | Percentage |
|--------------------------------|------------|------------|
| Upto 5 min                     | 27         | 60         |
| 6 to 10 min                    | 18         | 40         |

**Table 8: Retention time of Anuvasana Basti**

| Retention time of Erand Taila Anuvasana Basti | No. of pt. | Percentage |
|-----------------------------------------------|------------|------------|
| 3 to 6 hrs                                    | 28         | 62.22      |
| 6 to 9 hrs                                    | 14         | 31.11      |
| 9 to 12 hrs                                   | 3          | 6.66       |

**Chart 1: Overall effect of therapy**

Conclusion

Lastly, it can be concluded that Amavata looks similar to Rheumatoid Arthritis in its clinical appearance and Kshara Basti along with Nirgundi Ghana Vati is effective in the treatment of Amavata. Also, it gives significant results on rheumatoid factor and highly significant result on ESR which is used for diagnosis of rheumatoid arthritis.

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हिंदी सारांश

क्षार बर्तन एवं निर्गुण्डी घनवटी का आमवात (रूमेटोइड आर्थ्राइटिस)

पर प्रभाव—एक चिकित्सीय अध्ययन

कृष्णा धार्मिक, निलेश भट्ट, भी. भी. शुक्ला

आमवात का गंगार रोगों की चिकित्सा में आपनी स्थान है। उनमें से एक आमवात है। आधुनिक विज्ञान के दृष्टिकोण से रूमेटोइड आर्थ्राइटिस को उसके नैदानिक अभिव्यक्ति के अनुसार आमवात के अंतर्गत लिया जाता है। रोग के व्यापक प्रसार, लोगों में रामानुजार्ट से प्रभावित रहता है और प्रभावशाली विकिरण की कमी के कारण इस रोग को प्रसत्त अवस्थान के लिये चुना गया है। जबकि में वर्णित आयुर्वेद के विकिरण सूत्र को मिश्रित करके संकेत में लिया जा सकता है। यथा-अधि को समक्ष स्थिति में लाना, आयुर्वेद का पाचन करना और कुशीत बाले एवं आयुर्वेद का शोधन करना। इसलिए प्रसत्त अवस्थान में उपरोक्त सभी कार्य करने वाली शाखावति को चुना गया। शाखावति का उपयोग वांछन आयुर्वेद के चिकित्सा सूत्र में है। भायावक्ष में निर्गुण्डी को आयुर्वेदकार बताया है। इसलिए निर्गुण्डी घन बटी की श्रमिक विकिरण के लिये चुना गया है। प्रसत्त अवस्थान में कूल पंजीत 50 आमवात के रुग्णों में से 85% रुग्ने ने विकिरण कूपी की। शाखावति, कालकार्तीय सूत्र के में एचडीएल आयुर्वेद बालि के साथ दी गई। उनके बाद 1 माह के लिये निर्गुण्डी घनवटी 2 बटी (1 ली.) निर्देश में 3 बार दी गई। I.पर.आर. एवं आर.ए.कान्टेटिंग परिक्षण पर सांदिन्तियीय महत्वपूर्ण सुधार पाया गया। जबकि आयुर्वेद के लक्षणों पर अध्ययन में महत्वपूर्ण सार्थि परिगमन पाये गये। इनमें से 35.56% रुग्नों में उत्तम परिगमन मिले, जबकि 40% रुग्नों को मध्यम लाभ मिला और 24.44% प्रतिशत में अंतिम लाभ पाया गया।