INTRODUCTION

Ayurveda, the ancient system of medicine which originated thousands of years before, is a treasure of outputs and data obtained through invasive research program. Based on many remarkable theories, the science has maintained its unique protocol to make the world healthy and happy as well. Amavata is one of the major diseases in the present era, which is mainly induced due to uncontrolled habits developed gradually in society. It was described as a separate disease with its Nidana Panchaka in detail by Acharya Madhava who belonged to the medieval period. A separate chapter on its behalf was explained by Acharya. From the modern point of view, this disease can be more or less compared to Rheumatoid arthritis based on its clinical appearance. “Sarvar dravyam Panchabhoutikam” i.e., all the dravyas existing in the world are made up of Panchamahabhootas and normal physiology, pathology is dependent on the variation in the constitution of these mahabhootas. Panchamahabhoota Siddhanta is more important than any other Siddhantas because, it includes everything into it. For example, the main constituents of the body – Tridosha, Saptadhatu, Trimala etc are all Panchabhoutika. Panchamahabhoota is able to provide ultimate solution for the doubts in the field of Ayurveda. Basti is said to be the most important constituent of the Panchakarma due to its multiple effects. The prime cause for the causation of so many diseases, the Vata is being treated efficiently well by Basti. So, in the present study, Basti has been selected as Shodhana procedure. Since Panchamahabhoota is related to both the disease and the treatment, an attempt has been made to establish this relation through this study.

MATERIAL AND METHODS

30 subjects suffering from Amavata, fulfilling the diagnostic and inclusion criteria belonging to either gender, irrespective of socio-economic status or caste were selected for the clinical study. All the 30 subjects were taken under single group and were treated with Erandamooladi niruha basti for 16 days. Study was approved by institutional ethical committee on 13 April 2019. The results were then subjected to statistical analysis.

Analysis of Panchamahabhoota siddhanta in the manifestation of Amavata

It is a well-known fact that Ayurveda is the life science, which is based on the philosophical thoughts and facts, which very much exist in each of the things in this universe. It is the medical science which is brought down directly from the celestial city. Since it is believed to be the knowledge documented directly by Lord Brahma, the Creator himself, it can be proclaimed that this science is based on the philosophical, practical and logical happenings in and around the world. It establishes the fact of Loka Purusha samya, which means whatever is present in universe is present in our body and vice versa. One of the basic and prime factors which exist in common between the individual and the universe is Panchamahabhoota.

In the present study, an attempt has been made in relating to the Nidana, Lakshana and Sampapti of Amavata and its management to Panchamahabhootas and justifies the proven fact, i.e. Sarvar dravyam Panchabhoutikam.
Nidanas

Aharaja nidanas like Viruddahara- E.g. Consumption of curd during night, consumption of Fruit salad with Ice cream/banana along with milk, drinking water every day in the morning, consuming cold water after exhaustion, Guru, Abhishyandi Bhojana, Ati Madhura Bhojana and Viharaja nidanas like Viruddhachesta- E.g. Ratri Jagarana, Divaswapna, Sitting/Sleeping in uncomfortable postures; Avyayama; Ativyayava; Snigdha bhojana anantara vyayama and Nishchalatva and Manasika nidanas like Chinta, Shokha, Bhaya etc are all mainly of Prithvi, Jala and Vayu mahabhoota pradhana (because all are of Kapha and Vata dominant)7

Lakshanas

The pratyatma lakshanas of Amavata- Angamarda, Aruchi, Trishna, Alasya, Gourava, Jwara, Angashoonata etc are mainly of tridosha with the dominance of Vata and Kapha. From this, we can interpret that the lakshanas are with the predominance of Prithvi, Vayu, Jala and Akasha Mahabhoota.8

Samprapti

- In the Samprapti of Amavata, the dooshita Ama is mainly of Prithvi and Jala mahabhoota pradhana.
- Prakupita Vata is of Vayu and Akasha mahabhoota pradhana.9

Nidana

Amotpatti and vata prakopa

Ama with the help of vyana vata travel to the sira hridaya and kantha pradesha

There it gets more vitiated by the vatadi doshas and travel through the dhamani leading to nana varna and ati picchila anna rasa(ama)

This leads to sroto abhishyandha

Vitiated vata and kapha along with ama together gets more vitiated and lodges in shleshma sthana- Dosha (Ama, Vyana Vata and Shleshaka Kapha) – dushya (Rasa Asthi Sandhi) sammoorchana

Causes severe pain in trika pradesha, sandhi and koshta leading to stabdhata of anga-pratyanga

Amavata
Chikitsa

Chakradatta was the one to describe in detail, the chikitsa sootra for Amavata. According to him

Laganam swedanam tiktam deepanani katooni cha |
Virechanam snehapanam bastuyachamideumarute ||

Among which Basti was mainly selected for the study. Erandamoooladi Niruha Basti in the schedule of Kala Basti, was adopted with Brihat Sandhavadi Taila for Sneha Basti. Considering the properties of the individual drugs of Brihat Sandhavadi Taila, the Taila in general is formed with the predominance of Agni, Vayu and Prithvi Mahabhoota and considering the constituents of each of the Drugs of Erandamoooladi Niruha Basti, it can be said that it is formed with the predominance of Agni, Vayu and Prithvi Mahabhoota.10

Observations

In the present study on Amavata, 30 subjects fulfilling the criteria were incidentally and randomly selected. General Observations like Age, Gender etc. as well as Observations related to the disease were recorded and are given hence forth.

Table 1: Age wise distribution

| Age in Years | Trial Group | No. of Subjects | Percentage (%) |
|--------------|-------------|-----------------|----------------|
| 21 to 30     |             | 4               | 13.33          |
| 31 to 40     |             | 19              | 63.33          |
| 41 to 50     |             | 5               | 16.66          |
| 51 to 60     |             | 2               | 6.66           |

Table 2: Gender wise distribution

| Gender          | Trail Group | No. of Subjects | Percentage (%) |
|-----------------|-------------|-----------------|----------------|
| Male            |             | 13              | 43.33%         |
| Female          |             | 17              | 56.66%         |
| Transgender     |             | 0               | 0%             |

Table 3: Prakriti wise distribution

| Deha prakriti   | Trial Group | No. of Sub | Percentage (%) |
|-----------------|-------------|------------|----------------|
| Vata-Pittaja    |             | 1          | 3.33           |
| Vata-kaphaja    |             | 15         | 50             |
| Kapha-Vataja    |             | 14         | 46.66          |
| Samnipatana     |             | 0          | 0%             |

Table 4: Chronicity wise distribution

| Chronicity | Trial Group | No. of Sub | Percentage (%) |
|------------|-------------|------------|----------------|
| 1-2 Years  |             | 9          | 30             |
| 2-3 Years  |             | 10         | 33.33          |
| 3-4 Years  |             | 7          | 23.33          |
| 4-5 Years  |             | 4          | 13.33          |

Table 5: Symptoms wise distribution

| S. No. | Symptom       | Mild | Moderate | Severe | Remarks |
|--------|---------------|------|----------|--------|---------|
| 1      | Sandhishooha  | 6    | 6        | 66%    | p < 0.001 Highly Significant |
| 2      | Sandhishotha  | 1    | 1        | 27%    | p < 0.001 Highly Significant |
| 3      | Sandhistabdhata | 0   | 1        | 27%    | p < 0.001 Highly Significant |
| 4      | Angamarda     | 4    | 2        | 50%    |         |
| 5      | Aruchi        | 2    | 1        | 16.66% |         |

RESULTS

Overall Relief Obtained in the study are taken under the heading of Results. All the 30 subjects registered completed the course of treatment of 16 days and a follow up of 30 days. The results thus obtained before treatment and after follow-up were analyzed statistically and are depicted as mentioned below.

Table 6: Effect of Erandamoooladi niruha basti on Sandhishooha

| Subjective parameter | Phase | Mean | SD  | SE  | t - value (calculated) | p' value | Remarks   |
|----------------------|-------|------|-----|-----|------------------------|----------|-----------|
| Sandhishooha         | BT - AT | 2.53 | 0.937 | 0.171 | 14.81                  | p < 0.001 Highly Significant |
|                      | BT - AF | 3.9  | 1.125 | 0.205 | 18.99                  | p < 0.001 Highly Significant |

Table 7: Effect of Erandamoooladi niruha basti on Sandhistabdhata

| Subjective parameter | Phase | Mean | SD  | SE  | t - value (calculated) | p' value | Remarks   |
|----------------------|-------|------|-----|-----|------------------------|----------|-----------|
| Sandhistabdhata      | BT - AT | 0.96 | 0.49 | 0.08 | 10.80                  | p < 0.001 Highly Significant |
|                      | BT - AF | 1.93 | 0.63 | 0.11 | 16.55                  | p < 0.001 Highly Significant |

Table 8: Effect of Erandamoooladi niruha basti on Aruchi

| Subjective parameter | Phase | Mean | SD  | SE  | t - value (calculated) | p' value | Remarks   |
|----------------------|-------|------|-----|-----|------------------------|----------|-----------|
| Aruchi               | BT - AT | 1.16 | 0.53 | 0.09 | 12.04                  | p < 0.001 Highly Significant |
|                      | BT - AF | 1.66 | 0.60 | 0.11 | 15.02                  | p < 0.001 Highly Significant |

Table 9: Effect of Erandamoooladi niruha basti on Angamarda

| Subjective parameter | Phase | Mean | SD  | SE  | t - value (calculated) | p' value | Remarks   |
|----------------------|-------|------|-----|-----|------------------------|----------|-----------|
| Angamarda            | BT - AF | 0.96 | 0.49 | 0.08 | 10.80                  | p < 0.001 Highly Significant |
|                      | BT - AF | 1.6  | 0.62 | 0.11 | 14.10                  | p < 0.001 Highly Significant |

Table 10: Effect of Erandamoooladi niruha basti on Sandhistooha

| Subjective parameter | Phase | Mean | SD  | SE  | t - value (calculated) | p' value | Remarks   |
|----------------------|-------|------|-----|-----|------------------------|----------|-----------|
| Sandhistooha         | BT - AT | 0.7  | 0.53 | 0.09 | 7.16                   | p < 0.001 Highly Significant |
|                      | BT - AF | 1.8  | 0.61 | 0.11 | 16.15                  | p < 0.001 Highly Significant |
Amavata was selected for the research study keeping in mind the prevalence rate of the disease in the country. It is one of the most common disorders that has and is affecting the human. And basti is the choice of treatment modalities accepted for Vataja diseases. The reason behind selecting Erandamooladi niruha basti was that, its importance has been mentioned by Yogaratnakara with a simile of the Lion and the Elephant. Just as the way the elephant can only be defeated by the King of the jungle, Lion, similarly Amavata can efficiently be treated with Eranda Prayoga. One of the basic and prime factors which exist in common between the individual and the universe is Pancamahabhoota. Though theoretically Pancamahabhoota is been given utmost importance, we hardly find any application of that practically. Hence, in the present study, an attempt has been made in relating to the Nidana, Lakshana and Samprapti of Amavata and its management is possible with the drugs that were of Agni, Vayu and Akasha of Brihat Panchamahabhoota. Erandamooladi niruha basti has effectively worked on the maximum number of subjects in the present study. This was mainly due to the ama getting lodged in the Sandhis with the help of Vata leading to the loss of movements of the joints, which was of Prithvi and Jala mahabhoota.

### DISCUSSION

Amavata was selected for the research study keeping in mind the prevalence rate of the disease in the country. It is one of the most common disorders that has and is affecting the human. And basti is the choice of treatment modalities accepted for Vataja diseases. The reason behind selecting Erandamooladi niruha basti was that, its importance has been mentioned by Yogaratnakara with a simile of the Lion and the Elephant. Just as the way the elephant can only be defeated by the King of the jungle, Lion, similarly Amavata can efficiently be treated with Eranda Prayoga. One of the basic and prime factors which exist in common between the individual and the universe is Pancamahabhoota. Though theoretically Pancamahabhoota is been given utmost importance, we hardly find any application of that practically. Hence, in the present study, an attempt has been made in relating to the Nidana, Lakshana and Samprapti of Amavata and its management is possible with the drugs that were of Agni, Vayu and Akasha of Brihat Panchamahabhoota. Erandamooladi niruha basti has effectively worked on the maximum number of subjects in the present study. This was mainly due to the ama getting lodged in the Sandhis with the help of Vata leading to the loss of movements of the joints, which was of Prithvi and Jala mahabhoota.

### Sandhishotha

This study shows that Sandhishotha is the prime factor bothering the subjects. A maximum number of subjects had severe sandhishotha due to vitiated Ama along with the pitta dosha. This is mainly of Prithvi and Agni mahabhoota pradhana.

### Sandhistabdha

As that of shotha, Sandhistabdha was also seen in maximum number of subjects in the present study. This was mainly due to the ama getting lodged in the Sandhis with the help of Vata leading to the loss of movements of the joints, which was of Prithvi and Jala mahabhoota.

### Angamarda

This study shows that due to the presence of Ama there is feeling heaviness leading to Angamarda. This is mainly of Prithvi and Vayu mahabhoota pradhana.

### CONCLUSION

Amavata as a disease finds its detailed description for the first time in the medieval period. Amavata is a chronic disease in nature and has an insidious onset. The role of Panchamahabhoota in the manifestation of Amavata can be easily analyzed and applied in other diseases also and managed efficiently as well. The statement that Sarvatva dravyam Panchabhoutikam can actually be understood with further studies of various other diseases and their management. The role of Basti is found to be effective in all Vataja disorders, but it was witnessed well in the present study. Erandamooladi niruha basti and Brihat Saindhavadya Taila were proved to be efficiently working on the Prithvi, Jala, Vayu and Akasha mahabhoota of the disease Amavata.

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