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# To evaluate the efficacy of *Siravyadha* and *Basti* in the management of *Siraja Granthi* (Varicose Vein) - A Comparative Clinical Study

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## ABSTRACT

**Background:** In this changed lifestyle of human beings, he has become a victim of several diseases, amongst them one is Varicose Veins, which are caused due to long standing or sitting in chairs which causes extra load on veins to pump the blood against gravity towards the Heart, especially the veins of the legs. Finally the veins get fatigued that leads to dilation and cause Varicosity in veins. **Objectives:** To compare the effect of *Siravyadhana* and *Basti* in the management of *Siraja Granthi* (Varicose Vein). **Methods:** Cases presenting with classical signs and symptoms of *Siraja Granthi* were randomly divided into 2 groups. Group A was treated with *Siravyadhana* and Group B were subjected for *Sahacharadi Basti*. The data was collected before treatment and after 8<sup>th</sup> day and 30<sup>th</sup> days. The obtained data was statistically analyzed. **Results:** 20 patients in Group A, 93.33% reduction was seen in *Shoola*, while 93.02% reduction was found in Group B. In *Gaurava* 86.36% reduction was found in Group A and 85.71% reduction was seen in Group B. *Shotha* was decreased by 67.74% in Group A, while 62.65% in Group B. In *Sira Utseda*, 54.05% reduction was seen in Group A and 47.36% reduction in Group B. **Conclusion:** Group A, cases showed better improvement. Out of 20 patients, 2 patients got complete remission in Group A, 2 patients showed excellent response, while in Group B, 6 patients showed excellent response, In Group A and B, 11 and 8 patients showed good response respectively. In Group A and B, 5 and 6 patients showed moderate response.

**Key words:** *Siraja Granthi*, *Varicose Vein*, *Sahacharadi Basti*, *Siravyadha*.

## INTRODUCTION

Now-a-days, the life style of man has changed considerably owing to economic liberalization undertaken by the Government. A vast majority of

liberalization has changed the day to day lifestyle of human being. He has to work whole day and nights. In this period he has to stand, sit and travel constantly to add on, the mental stress and strain also contributes substantially. Due to these reasons, he is surely a sufferer in some or other manner, hence the advantages and disadvantages of this lifestyle can be termed as 'Two faces of the same coin'.

Varicose veins is becoming a day to day problem particularly in middle aged and elderly people claiming considerable portion of national economy because of longtime hospital stay of the patient or high costs of treatments, medical or surgical. Abnormal dilated, elongated and tortuous alteration in the saphenous veins and their tributaries is called as varicose veins.<sup>[1]</sup> 10-20% of adults develop varicose veins.<sup>[2]</sup>

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In this fast lifestyle both income group peoples get affected. In the low income group people, their job styles affect the physical and mental state and adds stress to them. They have to work by standing at one place constantly or they have to travel from longer distance owing to their constant erect or standing posture they suffer from dilatation of veins and cause varicose veins.<sup>[3]</sup>

In Ayurvedic Samhitas this particular disease has been described as *Siraja Granthi*. Sushruta, the pioneer of surgery has taken enough of brains in elaborately for describing the disease.<sup>[4]</sup> As far as the treatment of the disease is concerned he explains *Siravyadhana*<sup>[5]</sup> as the best treatment for *Siraja Granthi*. In *Uttaratantra*, *Vagbhatta* has explained *Siravyadhana* and *Basti* for *Siraja Granthi*.<sup>[6]</sup> So study regarding the efficacy of *Siravyadhana* and *Basti* in *Siraja Granthi* was undertaken.

## OBJECTIVES

To compare the effect of *Siravyadhana* and *Basti Karma* in the management of *Siraja Granthi* (Varicose Vein).

## MATERIALS AND METHODS

### Source of data

The study was carried out on the patients attending the OPD and IPD of A.M.C.H. and special camps conducted by A.M.C.H. Davangere.

### Method of collection of data

The study was carried out on the patients attending to Ayurvedic Medical College & Hospital, Davangere, irrespective of sex, religion, economic status and occupation.

Detailed clinical examination and laboratory investigation was done prior to the treatment.

40 patients were randomly selected for the study and were divided into two groups. Group A and Group B, each consisting of 20 patients.

### Inclusion Criteria

- Patients suffering from clinical signs and symptoms of varicose veins pertaining to lower limbs were selected for the present study.
- Patients of age group between 20 - 70 years were selected for the study.

### Exclusion Criteria

- Patients with other systemic disorder which intervene the process of treatment were excluded.
- Patients suffering from varicose vein due to secondary cause like pregnancy, tumor, loaded colon, retroperitoneal fibrosis, ascites and congenital arteriovenous fistula were excluded.
- Other varicosity diseases were excluded.
- If HB% was below 10 gms% were excluded for the procedure.

### Investigations

**Blood :** Hb%, TC, DC, ESR, BSL, CT, BT.

**Urine :** Sugar, Albumin and Microscopic.

### Intervention

Group A - *Siravyadhana Chikitsa*

Group B - *Sahacharadi Basti*

**Duration of treatment** - 30 days

### Pathyapathya

#### Pathya

- Rest
- Foot end elevation

#### Apathya

- Hard work
- Long standing

### Assessment Criteria

The patients response is assessed on the subjective and objective changes and analyzed statistically by scoring.

**Subjective parameter**

| <b>Shoola (pain)</b> |   |
|----------------------|---|
| No Shoola            | 0 |
| Mild                 | 1 |
| Moderate             | 2 |
| Severe               | 3 |

| <b>Gaurava (heaviness)</b> |   |
|----------------------------|---|
| Absent                     | 0 |
| Mild                       | 1 |
| Moderate                   | 2 |
| Severe                     | 3 |

**Objective parameter**

| <b>Sira Sankocha (tortuosity)</b> |   |
|-----------------------------------|---|
| No tortuosity                     | 0 |
| One single curve seen             | 1 |
| If multiple curves seen           | 2 |
| If looks like a <i>Granthi</i>    | 3 |

| <b>Utseda</b> |   |
|---------------|---|
| No Utseda     | 0 |
| Mild          | 1 |
| Moderate      | 2 |
| Severe        | 3 |

| <b>Shotha (oedema)</b> |   |
|------------------------|---|
| No Shotha              | 0 |

|          |   |
|----------|---|
| Mild     | 1 |
| Moderate | 2 |
| Severe   | 3 |

| <b>Twak Vaivarnya</b> |   |
|-----------------------|---|
| Absent                | 0 |
| Present               | 1 |

**Overall assessment**

|                    |           |
|--------------------|-----------|
| Complete remission | 100 %     |
| Excellent response | 76 - 99 % |
| Good response      | 51 - 75 % |
| Moderate response  | 26 - 50 % |
| Poor response      | 0 - 25 %  |

**OBSERVATIONS**

In this study on *Siraja Granthi*, 40 patients were registered, out of them 20 patients were treated under Group A and 20 patient under Group B.

Maximum, 15 i.e. 37.5% patient belonged to 30 - 40 age group followed by 27.5 and 22.5% between 50 - 60 and 40 - 50 age group respectively. 28 patients i.e. 70% were male and 12 patients i.e. 30% were female. 18 patients i.e. 45% belong to labour followed by 10 i.e. 25% house wives and 5 i.e. 12.5% businessman. Maximum patients had a history of 1 - 3 years duration i.e. 21 (52.5%), while 15 (37.5%) patients gave a history of more than 3 years and 4 (10%) patients gave history of less than 1 year duration. The patient have involvement of limb i.e. 20 (50%) right leg and 20 (50%) left leg. Majority of patients had excessive exercise i.e. 18 (45%), 13 (32.5%) medium exercise, 9 (22.5%) have less exercise. 20 (50%) patients were of *Vata- Kapha Prakruti*, 17 (42.5%) patients of *Vata-Pitta Prakruti* and 3 (7.5%) patients of *Pitta-Kapha Prakruti*. All the patients in the study

complained *Sira Sankocha* and *Sira Utseda*, 40 (100%) respectively, while 38 (95%) patients had *Pada Shotha*, 37 (92.5%) patients had *Pada Gaurava*, 35 (87.5%) patients had *Shoola* and 10 (25%) had *Twak Vaivarnya*.

## RESULTS

General conditions of all the patients was assessed before and after treatment in both the groups. The clinical conditions were assessed by *Sira Sankocha*, *Sira Utseda*, *Shoola*, *Gaurava*, *Shotha* and *Twak Vaivarnya*.

**Table 1: Effect on *Sira Sankocha* in Group A and Group B after 30 days of treatment.**

| Group | Mean |      | Diff. in Mean | Paired 't' test |      |     |        |
|-------|------|------|---------------|-----------------|------|-----|--------|
|       | BT   | AT   |               | SD              | SEM  | t   | p      |
| A     | 2.05 | 1.40 | 0.65          | 0.49            | 0.11 | 5.9 | <0.001 |
| B     | 1.95 | 1.20 | 0.75          | 0.55            | 0.12 | 6.1 | <0.001 |

In Group A, the mean score of *Sira Sankocha* which was 2.05 before treatment was reduced to 1.40 after treatment and this change is statistically highly significant at  $p < 0.001$ .

In Group B, the initial mean score was 1.95 which was reduced to 1.20 after treatment, result is statistically highly significant at  $p < 0.001$ .

**Table 2: Effect on *Sira Utseda* in Group A and Group B after 30 days of treatment.**

| Group | Mean |      | Diff. in Mean | Paired 't' test |      |      |        |
|-------|------|------|---------------|-----------------|------|------|--------|
|       | BT   | AT   |               | SD              | SEM  | t    | p      |
| A     | 1.85 | 0.85 | 1.00          | 0.32            | 0.07 | 13.7 | <0.001 |
| B     | 1.90 | 1.00 | 0.90          | 0.45            | 0.10 | 9    | <0.001 |

In Group A, the mean score of *Sira Utseda* was 1.85 before treatment was reduced to 0.85 after treatment and this change is statistically highly significant at  $p < 0.001$ .

In Group B, the initial mean score was 1.90 which was reduced to 1.00 after treatment, result is statistically highly significant at  $p < 0.001$ .

**Table 3: Effect on *Shoola* in Group A and Group B after 30 days of treatment.**

| Group | Mean |      | Diff. in Mean | Paired 't' test |      |     |        |
|-------|------|------|---------------|-----------------|------|-----|--------|
|       | BT   | AT   |               | SD              | SEM  | t   | p      |
| A     | 1.50 | 0.10 | 1.40          | 0.94            | 0.21 | 6.6 | <0.001 |
| B     | 2.15 | 0.15 | 2.30          | 0.97            | 0.22 | 9.2 | <0.001 |

In Group A, the mean score of *Shoola* was 1.50 before treatment was reduced to 0.10 after treatment and this change is statistically highly significant at  $p < 0.001$ .

In Group B, the initial mean score was 2.15 which was reduced to 0.15 after treatment, result is statistically highly significant at  $p < 0.001$ .

**Table 4: Effect on *Gaurava* in Group A and Group B after 30 days of treatment.**

| Group | Mean |      | Diff. in Mean | Paired 't' test |      |      |        |
|-------|------|------|---------------|-----------------|------|------|--------|
|       | BT   | AT   |               | SD              | SEM  | t    | p      |
| A     | 2.20 | 0.30 | 1.90          | 0.72            | 0.16 | 11.8 | <0.001 |
| B     | 1.75 | 0.25 | 1.50          | 0.89            | 0.20 | 7.5  | <0.001 |

In Group A, the mean score of *Gaurava* was 2.20 before treatment was reduced to 0.30 after treatment and this change is statistically highly significant at  $p < 0.001$ .

In Group B, the initial mean score was 1.75 which was reduced to 0.25 after treatment, result is statistically highly significant at  $p < 0.001$ .

**Table 5: Effect on Shotha in Group A and Group B after 30 days of treatment.**

| Group | Mean |      | Diff. in Mean | Paired 't' test |      |     |        |
|-------|------|------|---------------|-----------------|------|-----|--------|
|       | BT   | AT   |               | SD              | SEM  | t   | p      |
| A     | 1.55 | 0.50 | 1.05          | 0.51            | 0.11 | 9.2 | <0.001 |
| B     | 1.75 | 0.65 | 1.10          | 0.55            | 0.12 | 8.9 | <0.001 |

In Group A, the mean score of *Shotha* was 1.55 before treatment was reduced to 0.50 after treatment and this change is statistically highly significant at  $p < 0.001$ .

In Group B, the initial mean score was 1.75 which was reduced to 0.65 after treatment, result is statistically highly significant at  $p < 0.001$ .

**Table 6: Effect on Twak Vaivarnya in Group A and Group B after 30 days of treatment.**

| Group | Mean |      | Diff. in Mean | Paired 't' test |     |     |      |
|-------|------|------|---------------|-----------------|-----|-----|------|
|       | BT   | AT   |               | SD              | SEM | t   | p    |
| A     | 0.25 | 0.25 | 0.0           | 0.0             | 0.0 | 0.0 | 1.00 |
| B     | 0.25 | 0.25 | 0.0           | 0.0             | 0.0 | 0.0 | 1.00 |

In Group A and Group B the mean score of *Twak Vaivarnya* was 0.25 before and after treatment, there was no difference statistically.

**Table 7: Effect of therapy on cardinal signs and symptoms.**

| Signa and Symptoms      | Group A | Group B |
|-------------------------|---------|---------|
| <i>Sira Sankocha</i>    | 31.71%  | 38.46%  |
| <i>Sira Utseda</i>      | 54.05%  | 47.36%  |
| <i>Shoola</i>           | 93.33%  | 93.02%  |
| <i>Gaurava</i>          | 86.36%  | 85.71%  |
| <i>Shotha</i>           | 67.74%  | 62.85%  |
| <i>Twak - Vaivarnya</i> | 00%     | 00%     |

In Group A (*Siravyadha* Group), the improvement in *Sira Sankocha* is 31.71%, while 54.05% relief was found in *Sira Utseda*, 93.33 and 86.36% relief was found in *Shoola* and *Gaurava* respectively. 67.74% relief was found in *Shotha*.

While in Group B (*Sahacharadi Basti*), the improvement in *Sira Sankocha* is 38.46%, and 47.36% relief was found in *Sira Utseda*. 93.02 and 85.71% relief was found in *Shoola* and *Gaurava* respectively. 62.85% relief was found in *Shotha*.

## DISCUSSION

In this clinical study, 40 patients of *Siraja Granthi* were studied, among them 37.5% of patients belong to the age group 30 - 40 years, followed by 27.5% in age group between 50 - 60 years. The occurrence of *Siraja Granthi* is more in middle age person. It occur commonly those whose work demand for standing for long hours.<sup>[7]</sup> Out of 40 patients, 70% patients were male and 30% patients were female this figure may not represent true incidence of *Siraja Granthi*. Most of the patients were labour worker i.e. 45% followed by housewives (25%) and businessman 12.5%. Labour, housewife and business class people use to take long standing and hard sitting. The people are no doubt, prone to develop varicosity of lower limbs.

Out of 40 patients maximum 40% patients belong to middle class and 32.6% belongs to poor class and 20% belongs to lower middle class. These family have to follow busy schedules and irregular food habit, so this may be cause of *Siraja Granthi*.

Majority of patients were doing hard work i.e. 45% patients had history of long standing and travelling. This shows that varicose vein is prevalent in patient who does more heavy work or long standing or long journey. Majority of patient belongs to *Vata Pradhana Kapha Prakruti* i.e. 50%. This shows it is a *Vata* predominant disease i.e. *Vatika Purusha* were more affected by *Vatika* disease. 100% patients had *Sira Sankocha* and *Sira Utseda* as the chief complaint followed by 95% patients having *Pada Shotha* and 92.5% patients with *Gaurava*, i.e. 87.5% patient with *Shoola*, 25% patients with *Twak Vaivarnya*.





**Photoplate 1: Instruments used for Siravyadhana (Group - A)**



**Photoplate 2: Instruments used for Anuvasana Basti (Group - B)**



**Photoplate 3: Instruments used for Niruha Basti (Group - B)**

Due to prolonged standing or hard work. The veins of lower limb get engorged due to the structural deformity of valve. Resulting into *Sira Sankocha* and *Utseda*, *Shoola*, *Gaurava* at the site of engorged vein, *Pada Shotha* and *Twak Vaivarnya* was also seen. It also indicates the predominance of *Vata Pitta Dosh*.

In Group A, 10% patient were complete cured, in Group A, 10% and in Group B, 30% patient were having excellent improvement. In Group A, 55% and in Group B, 40% patient having good response. In Group A, 25% and in Group B 30% patients were having moderate response. Poor response was not seen in both the groups.

In *Siraja Granthi*, *Sira Utseda*, *Shoola*, *Gaurava* and *Shotha* which are the most evident and presenting symptoms of *Siraja Granthi* are relieved by *Siravyadhana*. While in *Sira Sankocha*, *Sahacharadi Basti* shows good result.

#### Probable mode of action of *Siravyadhana*

*Siravyadhana* is one of the type of *Raktamokshana*. In *Siraja Granthi*, *Vata* and *Pitta* are mainly vitiated *Dosha* and *Sira* is *Dushya* which is *Upadhatu* of *Rakta*. So by *Siravyadhana*, vitiated *Dosha* is removed from *Sira*, which relieves the pressure in *Srotas*, reduces toxins, increase of supply of the pure blood to circulation. More over fresh blood cells grown up after blood letting take active part in protecting. The body by means of nutrition and increase of energy, by normalizing the *Pittadosha* maintenance of *Agni*, *Pachana*, *Deepana* etc.

If we look over the pathogenesis of *Siraja Granthi* and think of mode of action of *Siravyadhana* in the same disease, we come to know that we let the *Raktadhatu* from the *Sira* of affected site, which contains the vitiated *Vata* and *Pitta Dosh*, so there by remove the cause of disease.

This vitiated *Vata* is responsible for *Shoola* and *Rukshata* which is responsible for *Sira Sankocha*, while the vitiated *Pitta* is responsible for *Daha* and *Vranashotha*. Thus by removing directly the causative *Doshas* we get rid of the signs and symptoms of the disease.

#### Probable mode of action of *Sahacharadi Basti*

*Sahacharadi Basti* was selected from *Astanga Hrudaya* from *Vatavyadhi Prakarana*. It is useful in *Vatavyadhi* i.e. *Siraja Granthi*. *Basti* is the principal treatment for th disorders of *Vata*. *Acharya Charaka*

has mentioned that there is no cause greater than *Vata* in the manifestation of a disease and there is no better remedy than Basti. Likewise in *Siraja Granthi* also by various combinations of *Sahacharadi Basti* can cure disease of all *Tridosha*. In *Sahacharadi Basti*, *Sahachara* is having property of *Vatashamaka*, *Pittashamaka*. *Dashamoola* in *Sahachara Basti* is having property of *Shothahara*,<sup>[8]</sup> *Shatavari* is known for its *Rasayana* and *Balya* property helps in increasing vascular tone of the vessels.<sup>[9]</sup> *Basti* completely destroys the vitiated *Vatadi Doshas* by entering the *Moola Sthana* of *Vata* which is responsible for all diseases.

So in *Siraja Granthi* there is *Vikruti* in channels of *Sira*. And *Basti* is the chief of all therapies which cures all the diseases without residue, purifying the interior of the channels.

## CONCLUSION

It can be concluded that both *Siravyadhana* and *Sahacharadi Basti* are the best treatment for atleast symptomatic cure in *Siraja Granthi*. Almost equally, both treatment therapies are effective in the management of *Siraja Granthi*.

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