"COMPARATIVE STUDY OF SIRAVYADHA BY KUTARIKA SHASTRA AND BHADRADORUVADI BASTHI IN THE MANAGEMENT OF SIRAJAGRANTHI"

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ABSTRACT

Background: Varicose veins has become very common disorder in the present era. Patients with Varicose vein have to deal with unattractive, painful, dicoloured and swollen legs, which is not good for living an attractive life style.

Ayurveda explains a similar diseases condition, Acharyas explains Sirajagranti as one among the types of Granthi, in which vitiated Vata with Raktha causes Sampeedana, Sankocha and Vishoshana of Siras. For such condition treatment like Siravyadha, Basti, Pana of Sahacharadi taila, Upanaha are explained.

Objective: To study the efficacy of Siravyadha by Kutharika Shastra and Bhadradoruvadi Basti and to compare their efficacy in SirajaGranthi.

Methodology: 40 patients diagnosed as Sirajagranti were selected strictly as per the pre-set inclusion and exclusion criteria and divided into Group A, who were treated with Siravyadha by Kutharika Shastra and Group B, who were treated with Bhadradoruvadi Basti. The patients were assessed before treatment and on 11th day, 15th day, 22nd day and 30th day.

Result: In this clinical study Group A and Group B showed significant results in all the attributes of Sirajagranti, but on comparision between groups there was no statistically significant difference in Shoola, Kandu, Grathana, Vaivarnya and Daha. Shotha showed significant difference between the groups.

Conclusion: In this clinical study, both Group A and Group B showed significant results in all attributes of Sirajagranti.

Key words: Sirajagranti, Kutarika Shastra, Badradaruvadi Basti, Siravyadha, Vericose vein.

INTRODUCTION

Varicose veins are the penalty the humans has to pay for its erect posture, due to gravitational force. Incompetency of valves due to various reasons like, life style changes, obesity, hormonal changes, occupation-prolonged standing and pregnancy are found to be significantly contributing to

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this condition. Varicose veins of lower limbs are abnormally dilated, elongated, tortuous and gnarled alteration in the saphenous veins and their tributaries, which may later lead to complications like Hemorrhage, Chronic venous insufficiency, Pigmentation, Ankle flare, Eczema, Ulcerations, Calcification of wall, DVT, Thrombophlebitis, Pulmonary embolism.

Approximately 20% of population is affected by Varicose veins, prevalence of Varicose vein is 35%, Severe varicose veins is 10%, Chronic venous insufficiency is 8%, Venous ulcers 2%. Most commonly it affects females than males. It affects 15-25% of all adults. Many conservative as well as surgical treatments are available like, sclerotherapy, ligation with stripping of vein. But all these have one or the other complications, limitations and also recurrence rate is high.

The condition of Varicose vein is similar to the Sirajagranti a type of Granthi Roga, where vitiated Vata along with Raktha causes Sampeedana, Sankochana, and Vishoshana of Siras. For this condition Siravyadha, Basti, Paana of Sahacharadi taila, Upanaha with Vatahara Dravyas are told as treatment of choice by Acharya Vagbhata.

Rakthamokshana is the treatment of choice for Siragata Vata. In which Siravyadha is one technique of treatment, Siravyadha is considered as Ardhachikitsa of Shalya Tantra. Rakthamokshana if done regularly will never leads to Granthi, Shopha, Tvak and Raktha Vikaras. Among the types of Siravyadha, Vrihimukha and Kutharika Shastra have been described. Here Kutharika Shastra is taken for the study, which is explained for the Siras situated over Asthi.

Basti is told as Ardhachikithsa of Kayachikithsa. Basti when carried out properly not only enhances the growth, complexion and strength but also increases the life span of the individual. The administered Basti reaches Pakvashaya and eliminates all the Prakupita Doshas from foot to head, as “Soorya absorbs the Rasa of the Bhoomi”. In Ashtanga Hrudaya Bhadradaruvadi Gana is mentioned as Vatahara.

Lots of research studies have been carried out pertaining the treatment of Sirajagranti. As the number patients
are increasing day by day, selecting the ideal treatment with minimum discomfort is required for the patient. Considering the above points, here an attempt was made to compare the effect of one parasurgical technique that is Siravyadha by Kutarika Shastra with one Panchakarma procedure that is Bhadraruvadi Basti in the management of Sirajagranti.

**MATERIALS AND METHODS:**

**Sample source:** 40 patients diagnosed as Sirajagranti were selected from the O.P.D & I.P.D of Alva’s Ayurveda Hospital, Moodbidri, other camps and referrals and were grouped into two Groups A & B.

**Sample size:** 40 patients diagnosed as Sirajagranti were divided into two equal groups- Group A and Group B for the study.

**Study design:** Comparative clinical study.

**Selection Criteria:**

**Diagnostic criteria:**

- Clinical features of Sirajagranti (varicose vein) viz. Sampeedana, Samkochana and Vishoshana of Siras (dilated, elongated and tortuous veins)
- Brodie -Trendelenburg test.
- Multiple Tourniquet test.
- Perthes test.

**Inclusion criteria**

- Patient aged between 16-70 years of either gender
- Patient suffering from Primary varicose vein.
- Patient with Sirajagranti (Varicose vein) in lower limb only.
- Patient indicated for Basti and Siravyadha.

**Exclusion criteria**

- Patient with Anemia, Diabetes mellitus and other systemic diseases.
- Patient with Hemophilia, Coagulopathy or Bleeding diseases.
- Varicosity associated with complications like Deep Vein Thrombosis, Calcification, Equines deformity, Venous ulcer.
- Congenital varicose vein, pregnancy.

**INTERVENTIONS**

**GROUP A:** 1st day – Siravyada, upto 7th day - Paschat Karma, 8th day – 30th day Observation period.

Assessment was done before treatment and after treatment on the 11th day, 15th day, 22nd day and 30th day.

**GROUP B:** 1st - 3rd day: Deepana and Pachana with Panchakola Choorna 5 gram with
Ushna Jala thrice daily before food, 4\textsuperscript{th} - 11\textsuperscript{th} day: Basti in Yoga Basti schedule. 12\textsuperscript{th} - 30\textsuperscript{th} day: Observation period which includes Parihara Kala also.

Assessment was done before treatment and on the 11\textsuperscript{th} day, 15\textsuperscript{th} day, 22\textsuperscript{nd} day and 30\textsuperscript{th} day.

\textbf{Follow up:} The patients was advised to come for follow-up on 45\textsuperscript{th} and 60\textsuperscript{th} day.

\textbf{Study period:} Including observation and follow up - total 60 days.

\textbf{Procedure}

Informed written consent of the patients were taken for both groups.

\textbf{Group A}

Siravyadha by using Kutharika Shastra was done on 20 patients of Group A.

\textbf{Materials used:} Yavagu, Moorchita Tila Taila, Nadi Swedana Yantra, Kutharika Shastra, sterile cotton pad, adhesive plaster, tourniquet, kidney tray, measuring jar, surgical spirit, distilled water.

\textbf{Site:} Maximum tortuous area was selected for the Siravyadha.

\textbf{Poorva Karma:} Yavagu was given to the patient and after 1 hour Abhyanga with Moorchita Tila Taila and Nadi Swedana were to the lower limb.

\textbf{Pradhana Karma:} Tourniquet was tied above the site of Siravyadha and Rakthamokshana was carried out by using Kutharika Shastra.

\textbf{Paschat Karma:} After the complete stoppage of bleeding, loose bandaging was done with wet sterile cotton pad. The food or diet, which is neither hot nor cold and is light, which can be easily digested, and that which stimulates the digestion was recommended. The patient will be advised to take Ksheera along with Guda.

\textbf{Group B}

Bhadradaruvadi Basti was administered to the patients of group B.

\begin{table}[h]
\centering
\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|}
\hline
\textbf{Day} & \textbf{1\textsuperscript{st} day} & \textbf{2\textsuperscript{nd} day} & \textbf{3\textsuperscript{rd} day} & \textbf{4\textsuperscript{th} day} & \textbf{5\textsuperscript{th} day} & \textbf{6\textsuperscript{th} day} & \textbf{7\textsuperscript{th} day} & \textbf{8\textsuperscript{th} day} \\
\hline
\textbf{A} & \textbf{A} & \textbf{A} & \textbf{A} & \textbf{A} & \textbf{A} & \textbf{A} & \textbf{A} & \textbf{A} \\
\hline
\end{tabular}
\caption{Course of Basti: Yoga Basti Pattern}
\end{table}

\textbf{Note:} - A – Anuvasana Basti \hspace{1cm} N – Nirooha Basti

\textbf{Anuvasana Basti}

\textbf{Poorva Karma:} Sthanika Abhyanga with Moorchita Tila Taila and Nadi Swedana was given to the lower abdomen, and thighs of the patient. Light food was given to the patient.
Pradhana Karma: Patient was asked to lie in the left lateral position by keeping left leg straight and right leg flexed at the knee joint and hip joint. Anus was anointed by using cotton swab dipped in Taila and 80 ml of Sahacharadi Taila was administered using Basti Yantra.

Paschat Karma: Sphik Thadana, Mardhana over Nabhi region was done and asked to rub the palms together briskly. Simultaneously patient’s sole was rubbed. After that the patient was made to raise the legs by flexing the hip several times. Avoidance of Ashta Mahadoshakara Bhava.

Nirooha Basti
Poorva Karma: Patient was asked to be on empty stomach and made to lie on the cot. Sthanika Abhyanga with Moorchitha Tila Taila was done followed by Nadi Swedana over lower abdomen, back and thighs of the patient.

Pradhana Karma: Patient was asked to lie in the left lateral position by keeping left leg straight and right leg flexed at the knee joint. Anus was anointed by using cotton swab dipped in Taila and appropriate quantity of prepared Nirooha Basti Dravya was administered.

Paschat Karma: The patient was advised to take luke warm water bath and light diet. Avoidance of Asta Mahadoshakara Bhava.

Method of Preparation of Bhadraruvadi Basti – To prepare Bhadraruvadi Basti, Basti Dravyas were mixed in a particular fashion as mentioned in classics, initially 60 ml of Madhu and 5gms of Saindhava Choorna was taken in a Khalva Yantra and mixed homogenously, after that 80 ml of Sahacharadi Taila was taken and is mixed to form uniform mixture. There after 40 gms of Kalka made of Bhadraruvadi Gana was added to the above mixture. Followed by the mixing of 300 ml of Kwatha prepared with Kwatha Choorna’s of Devadaru, Jatamansi, Kusta, Dashamoola, Baladvaya was added and mixed thoroughly to form a homogenous mixture and tested for Suyojita Nirooha Lakshana’s. The whole of the Basti Dravya was filtered and it was administered after making it lukewarm by heating indirectly. The particular pattern of mixing the Basti Dravya is followed so that all the contents was
mixed properly and finally a uniform mixture was obtained. The total quantity of Basti Dravya was maintained around 480ml.

ASSESSMENT CRITERIA

Assessment of the condition was done based on a detail proforma adopting different methods of scoring of subjective and objective parameters and was analysed statistically.

Table No 2-Subjective and Objective parameters

<table>
<thead>
<tr>
<th>Subjective parameters:</th>
<th>Objective parameters:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shoola (Pain)</td>
<td>1) Grathana (Hardening of Sira).</td>
</tr>
<tr>
<td>Kandu (Itching sensation)</td>
<td>2) Shotha (Swelling).</td>
</tr>
<tr>
<td>Daha (Burning sensation)</td>
<td>3) Vaivarnya (Pigmentation).</td>
</tr>
</tbody>
</table>

Table No.3 COMPARATIVE EFFECT OF TREATMENT BETWEEN TWO GROUPS

<table>
<thead>
<tr>
<th>Symptoms</th>
<th>BT-At mean</th>
<th>Difference of mean</th>
<th>Standard Deviation</th>
<th>T value</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Group A</td>
<td>Group B</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shoola</td>
<td>2.1</td>
<td>2.35</td>
<td>-0.25</td>
<td>0.447</td>
<td>0.1687</td>
</tr>
<tr>
<td>Kandu</td>
<td>1.7</td>
<td>1.35</td>
<td>0.35</td>
<td>0.47</td>
<td>1.911</td>
</tr>
<tr>
<td>Grathana</td>
<td>1.35</td>
<td>1.25</td>
<td>0.1</td>
<td>0.489</td>
<td>4.257</td>
</tr>
<tr>
<td>Shotha</td>
<td>1.55</td>
<td>0.7</td>
<td>0.85</td>
<td>0.686</td>
<td>4.257</td>
</tr>
<tr>
<td>Vaivarnya</td>
<td>1.6</td>
<td>1.45</td>
<td>0.15</td>
<td>0.503</td>
<td>0.737</td>
</tr>
<tr>
<td>Daha</td>
<td>1.45</td>
<td>1.7</td>
<td>-0.25</td>
<td>0.51</td>
<td>1.344</td>
</tr>
</tbody>
</table>

Table No.4 COMPARATIVE PERCENTAGE OF RELIEF BETWEEN GROUP A & GROUP B

<table>
<thead>
<tr>
<th>SIGNS AND SYMPTOMS</th>
<th>MEAN DIFFERENCE</th>
<th>PERCENTAGE OF RELIEF</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>GROUP A</td>
<td>GROUP B</td>
</tr>
<tr>
<td>SHOOOLA</td>
<td>2.1</td>
<td>2.35</td>
</tr>
<tr>
<td>KANDU</td>
<td>1.7</td>
<td>1.35</td>
</tr>
<tr>
<td>GRATHANA</td>
<td>1.35</td>
<td>1.25</td>
</tr>
<tr>
<td>SHOtha</td>
<td>1.55</td>
<td>0.7</td>
</tr>
<tr>
<td>VAIVARNYA</td>
<td>1.6</td>
<td>1.45</td>
</tr>
<tr>
<td>DAHA</td>
<td>1.45</td>
<td>1.7</td>
</tr>
</tbody>
</table>
Discussion on Results

Effect on Shoola

In Group A out of 20 patients, the mean score of the symptoms which was 2.7 before treatment was reduced to 0.5 on 30th day after treatment. This revealed a statistically significant effect of Siravyadha by Kutarika Shastra on Shoola at P<0.001. This may be probably due to letting out of stagnated vitiated blood, also reduces the pressure in the veins and removes the P substances by this it reduces the Shoola.

In Group B, out of 20 patient, the mean score of Shoola before treatment was 2.9 which was reduced to 0.55 on 30th day after treatment. This revealed a statistically significant effect of Bhadraruvadi Basti on Shoola at P<0.001. This may be probably due to Vatahara and Vedanahara action of the Basti.

Effect on Kandu

In Group A, out of 20 patients, the mean score of Kandu the symptoms which was 1.95 before treatment was reduced to 0.25 on 30th day after treatment. This revealed a statistically significant effect of Siravyadha by Kutarika Shastra on Kandu at P<0.001. This may be probably due to letting out of stagnated vitiated blood, and entry of fresh blood, breakage of RBC gets reduced, which in turn reduces the pigmentation and itching over the site.

In Group B, out of 20 patient, the mean score of Kandu before treatment was 1.6 which was reduced to 0.25 on 30th day after treatment. This revealed a statistically significant effect of
Effect on Grathana

In Group A, out of 20 patients the mean score of the symptoms which was 1.9 before treatment was reduced to 0.5 on 30th day after treatment. This revealed a statistically significant effect of Siravyadha by Kutarika Shastra on Grathana at P<0.001. This may be due to letting out of stagnated vitiated blood, also reduces the pressure in the veins.

In Group B, out of 20 patients, the mean score of Grathana before treatment was 1.85 which was reduced to 0.6 on 30th day after treatment. This revealed a statistically significant effect of Bhadradaruvadi Basti on Shoola at P=0.003. This may be due to Vatahara and Shothahara action of the Basti.

Effect on Shotha

In Group A, out of 20 patients, the mean score of the symptoms which was 2.3 before treatment was reduced to 0.8 on 30th day after treatment. This revealed a statistically significant effect of Siravyadha by Kutarika Shastra on Shotha at P<0.001. This may be due to letting out of stagnated vitiated blood, also reduces the pressure in the veins.

In Group B, out of 20 patients, the mean score of Shotha before treatment was 2.45 which was reduced to 1.75 on 30th day after treatment. This revealed a statistically significant effect of Bhadradaruvadi Basti on Shoola at P=0.003. This may be due to Vatahara and Shothahara action of the Basti.

Effect on Vaivarnya

In Group A, out of 20 patients, the mean score of the symptoms which was 2.35 before treatment was reduced to 0.75 on 30th day after treatment. This revealed a statistically significant effect of Siravyadha by Kutarika Shastra on Vaivarnya at P<0.001. This may be due to letting out of stagnated vitiated blood, and entry of fresh blood, breakage of RBC gets reduced, which in turn reduces the pigmentation and itching over the site.

In Group B, out of 20 patients, the mean score of Vaivarnya before treatment was 2.0 which was reduced to 0.55 on 30th day after treatment. This revealed a statistically significant effect of
Bhadradaru Badi Basti on Vaivarnya at P<0.001. This may be due to Rakthashodhaka, Vatahara action of the Basti.

**Effect on Daha**

In Group A the mean score of the symptoms which was 1.8 before treatment was reduced to 0.35 on 30th day after treatment. This revealed a statistically significant effect of Siravyadha by Kutarika Shastra on Shoola at P<0.001. This may be probably due to letting out of stagnated vitiated blood, by this it reduces the Daha.

In Group B, out of 20 patient, the mean score of Daha before treatment was 2 which was reduced to 0.35 on 30th day after treatment. This revealed a statistically significant effect of Bhadradaru Badi Basti on Daha at P<0.001. This may be due to Rakthashodhana property of Basti.

**B. Discussion on comparative effect of the both Groups**

While comparing both the Groups there is no Statistically significant difference in Shoola, Kandu, Daha, Vivarnya, and Grathana. Shotha showed a significance difference of p<0.001 on comparing the two groups.

**Follow Up**

The improvement in the disease condition noted during the study period persisted as such in both the groups in course of the follow up period.

**CONCLUSIONS**

Based on the review of literature and observations made in this clinical study, the following conclusions are drawn.

- Sirajagranthi is one of the common clinical condition affecting the lower limbs and the incidence being prevalent in this era due to occupation and busy life schedules.
- In the people belonging to the occupation which requires standing posture for long duration and strenuous works, the disease of varicose vein was found more.
- Siravyadha by Kutarika Shastra is a simple cost effective OPD procedure which shows clinically good results.
- In Siravyadha by Kutarika Shastra large amount of blood can be removed from the tortuous area in a single attempt, which gave more symptomatic relief. Even though convincing the patient was difficult for Siravyadha.
Bhadradaruvadi Basti has Vatahara properties, it is effective in the remission of the symptoms of Sirajagranti as evidenced by statistically significant reduction in the symptoms of various subjective and objective parameters.

In this clinically study, both Group A and Group B showed statistically significant results in all the attributes of Sirajagranti.

But on comparison between the Group A with Group B there is no statistically significant difference in Shoola, Kandu, Grathana, Vaivaranya, and Daha of Sirajagranti except Shotha. Parameter Shotha showed statistically significant results in between the groups.

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