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## A Review On Understanding of Siraja Granthi vis-a-vis Varicose Vein

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### Abstract:

Ayurveda, an ancient science aimed at promoting longevity and health, offers unique perspectives on various medical conditions. The current review focuses on understanding Siraja Granthi from Ayurveda and correlating it with the modern medical condition known as varicose veins. Siraja Granthi is described in Ayurvedic literature as an elevated, quickly developing, round swelling of veins caused by vitiated Vata, leading to constriction, drying, and tortuosity of the veins. Varicose veins, a chronic venous disease, involve permanently dilated, tortuous veins primarily in the lower extremities due to valve incompetence, leading to reversed blood flow. The current review article delves into the etiology, symptoms, treatments, and complications of both conditions from Ayurvedic and modern medical perspectives, highlighting their similarities and differences. Ayurvedic treatments emphasize internal medications, external therapies, and lifestyle modifications, whereas modern medicine focuses on interventions such as sclerotherapy, surgery, and compression therapy. By understanding both approaches, this review aims to provide a comprehensive view of the disease related to blood vessels, facilitating integrated and effective treatment strategies.

**Keywords - Siraja granthi, Varicose vein, Ayurvedic, blood vessels, Allopathy.**

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### Introduction:

Siraja granthi in which due to excessive exercise vata increases and invades the network of veins and squeezes constricts and dries up and give rise to an elevated quick developing and round swelling of veins.<sup>1</sup> Varicose veins are a common manifestation of chronic venous disease (CVD)<sup>2</sup>, are dilated, often palpable subcutaneous veins with reversed blood flow, most commonly found in the legs. In some people varicose veins are

asymptomatic or cause only mild symptoms, but in others they cause pain, aching or itching and can have a significant effect on their quality of life. It may become more severe over time and can lead to complications such as changes in skin pigmentation, eczema, superficial thrombophlebitis, bleeding, lipodermatosclerosis or venous ulceration<sup>3</sup>. It is reported in up to 30 percent of the general population, with significantly increased rates in the older population<sup>4</sup>. It

is seen globally and are influenced by activity and lifestyle. Overall, varicose veins are more common in women than in men<sup>5</sup> Estimates of the prevalence of varicose veins vary. Visible varicose veins in the lower limbs are estimated to affect at least a third of the population. Risk factors for developing varicose veins are unclear although prevalence rises with age and they often develop during pregnancy There are several established risk factors associated with varicose veins, including age, sex, pregnancy, raised body mass index in women, obesity, and family history of varicose veins<sup>6</sup>. Although these risk factors may contribute to varicose vein formation, many individuals exposed to these risk factors do not develop the disease. The prevalence of varicose veins was found to be high in northern Indian population and approximately half of women and a third of men affected, 46.7% of females and 27.8% of males.<sup>7</sup> Furthermore, the so-called environmental risk factors may also contain substantial genetic components. The aim of this review is to understand varicose vein and *siraja granthi* with two different dimensions.

### Ayurvedic Literature Review:

#### *Siraj granthi*:

*According to Vagbhata*,<sup>8</sup> *Siras* are those which are blue yellow or black, warm to touch and bleed quickly and which carry rakta; the *granthi* is so called because of its genuine quality of *grathan*, that is the property of accumulation or collection. **According to *shabdakalpa***

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*druma*<sup>9</sup>; *Gradh*- curved or curl in nature. Formation of knot or twist like structure by the quality of curliness or coiling, rippling in action ; *Gradhita*– to twist into ringlets; *Granthi*- formation of knot like structure by way of accumulation It also means swelling and hardening of the vessels , In samhitas ambiguous reference about varicose vein (*sirajgranthi* )is seen; Its *nirukti*; *Granthi* can be defined as a round mass caused by vitiation of *tridosha mamsa medas and sira* **According to *Vagbhat***<sup>10</sup>, *describes samprapti* as *sampeedan, sankochya ,vishoshana,* and *vakrikarana* of *siras* by *vata, vakrikarana* (tortuosity) is the sign of foremost clinical significance **According to *Sushruta***<sup>11</sup> a round knotty elevated swelling which is caused by *mamsa rakta meda*

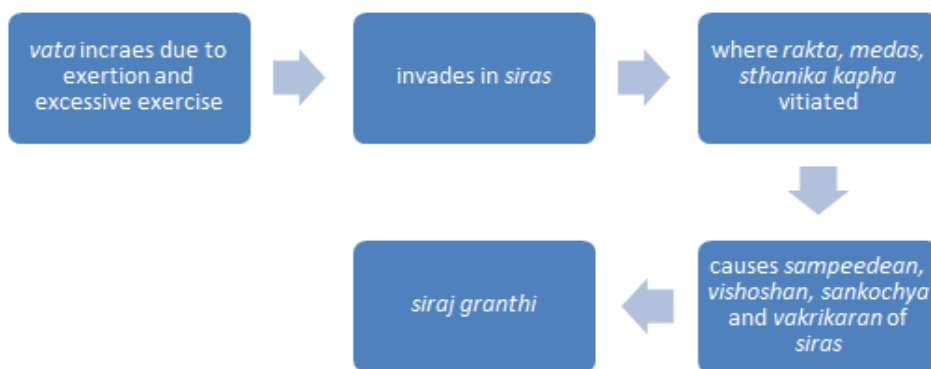
#### *Nidana*:

The cause for *granthi* can be anything which vitiates all the *tridoshas* at time, there are some factors as follows which directly result in the vitiation of *tridoshas* which in turn form the cause for *granthi* Diets that of *virrudha aahara*, indigestion, improper timing of food, impure water and putrified flesh, dried vegetables especially *moolaka* residue of oil, consuming *naveen madya*, improper dieting abnormal variations wind blow from east. Due to excessive exercise, exertion weakness and *abhighata*. *Granthi* is also manifests due to exposure to sun and due to excessive smoking and also due to coming contact with irritants

**Samprapti of siraja granthi:**

All the three *doshas* are involved in the *samprapti*. Initially vitiated three *dosha* by their own individual causes results in the involvement of *mamsa* and *rakta*. The characteristics of *granthi* i.e. swelling. The *shareerik vrudha dosha* invades the *mamsa rakta and sira*. Apart of from this *stanikakapha* will be greatly involved in the disease process; the localized *vata* in the diseased area accounts for the dryness blockage and accumulation, whereas *pitta* results in the transformation of the entities to increase in their number. On the other hand, the *kapha* gives rise to *grathana*, consistence and shape. These mechanisms are being noticed a *dooshya* like *mamsa rakta sira meda*. Thus, *granthi* that is formed out by above mechanism is no doubt involving all the three *doshas* but still the

*amshamsakalpana* the *vyadhisambhava* elicits that *kapha* and *meda* will be dominant factor in most of the *granthi* According to *Sushruta* In person who are weak indulging in more of physical exercise *vata* gets aggravated invades in the network of veins and squeezes constricts and dries up and give rise to an elevated quick developing and round swelling of vein (*siraja granthi*) According to *Vagbhata* Persons immersing themselves suddenly in to the water or other persons getting exhausted by exertion. *Vata* getting increased invades *siras* causing constriction distortion and dryness in them give rise to *granthi* These *granthis* normally do not undergo the suppuration but may undergo changes in relation to the *samkshobhakanidana*, its *samprapti* is as shown below

**Samprapti**

<b>Lakshanas</b>	<b>Sadhyasadhyata</b>
1) <i>Granthi</i> will be round in shape 2) Knotty 3) Elevated 4) <i>sampeedan</i> , <i>sankochya</i> , <i>vishoshana</i> , and <i>vakrikanan</i> of <i>siras</i>	<i>Vagbhata</i> opines that out of 9 <i>granthis</i> he mentioned the <i>vataj granthi pittaja granthi kaphajagranthi rakthaja granthi</i> and <i>medoja granthi</i> are said to be <i>sadhya</i> . According to <i>Sushruta</i> ; it is difficult to cure if it becomes painful and moves from place to place that which is not moving big in size that situated on vital spots even though these are painless should be rejected

<b>Chikitsa–</b>	In initial stage <i>sahacharataila</i> should be administer internally. Along with this <i>Dravya basti karma</i> can be adopted. <i>Abhyang</i> and compression treatment can be advised. Leech application can be advised. Internal medicine such as <i>Arogyavardhini vati</i> , <i>Kanchnar guggulu</i> , <i>Mahamanjishtadi kada</i> , <i>punarnavadi guggulu</i> etc are preferred
<b>Pathya , Apathya</b>	<i>Ahara sambhandhi- amalaki</i> , fiber vegetables, grains, black and blue berries and cherries, carrot, lemon, onion, <i>Brahmi</i> , garlic, ginger, pineapple, egg, milk and meat (not red meat) <i>Vihar sambhandhi-</i> healthy walking swimming and cycling  Alcohol, strong coffee
<b>Upadrava</b>	If this disease is treated properly in initial stage, there is no occurrence If not treated in proper time, then leads to complication such as 1 weakness 2 <i>vrana</i>

**Modern Literature Review:****According to modern<sup>12,13</sup>**

VARICOSE VEINS – it is permanently dilated veins with tortuous path causes pathological circulation this is reversal of blood flow through its faulty valves. It is classified in three ways.

Classification 1 - long / great saphenous vein varicosity

- Short/ small saphenous vein varicosity
- Varicose veins due to perforator incompetence

Classification 2- (dermal flares) telangiectasis / spider veins (small varices in the skin)

- Reticular veins, slightly larger varices
- Varicose veins, dilated tortuous elongated
- Combination of any above

Classification 3 CEAP (lower limb varicose veins)

Attempts to group like people together have been attempted with classifications such as the CEAP grading system. This provides a method of classifying varicose veins, providing information on the clinical severity, etiology, anatomical location and pathophysiology of varicose veins. The clinical severity aspect of CEAP classification (for example, C1-C6) is used

throughout the document, to match the outcomes used in the included randomized controlled trials.

**C- Clinical signs (grade 0-6)**

0 grade-no visible or palpable signs of venous disease

1 grade- telangiectasis reticular veins or malleolar flare

2 grade- varicose veins

3 grade- oedema without skin changes

4 grade- skin changes ascribed to venous disease(pigmentation)

5 grade- healed venous ulcer

6 grade- an open ulcer

**E-** Etiological classification – primary, secondary

**A-** Anatomic distribution – superficial, deep, perforator

**P-** Pathophysiological dysfunction

<p><b>Symptoms of varicose veins</b></p> <ol style="list-style-type: none"> <li>1- Dragging pain postural discomfort-</li> <li>2- Heaviness in the legs</li> <li>3- Oedema feet</li> <li>4- Itching</li> <li>5- Discoloration/ ulceration of the feet</li> <li>6- Painful walk</li> <li>7- Pigmentation</li> <li>8- Hemorrhage</li> </ol>	<p><b>Dragging pain postural discomfort-</b> many patients do however experience considerable discomfort which is sometimes localized to the main varices but is often dull ache felt throughout the legs which gets worse as the day passes and is exuberated by prolonged standing</p> <p><b>Heaviness in the legs</b> – many patients experience these symptoms also</p> <p><b>Oedema feet-</b> damage of the deep veins can cause ankle oedema and lower leg</p> <p><b>Hemorrhage-</b> a varicose vein may bleed after injury and can occasionally bleed spontaneously</p>
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**Examination** – always examine the legs twice, first when the patient is standing and then when the patient is lying down,

except when muscle pain and discomfort are severe

Inspection-	Three abnormalities may be visible on inspection, dilated superficial veins, changes in the skin and swelling.
Palpation	The size and tension of the veins can easily be assessed with the finger tips. Veins that cannot be seen, can often be felt, especially in the thigh. A calf that is the site of a deep vein thrombosis will be warmer than the normal calf. Recently thrombosed veins are firm, incompressible and tender. The surface of an ulcer is painful if it is infected or necrotic. The oedema of venous obstruction is soft and pits easily with firm pressure. The thickening of lipodermatosclerosis sometime looks like oedema but is hard and incompressible and can even become calcified
Percussion	A dilated blood-filled vein will conduct a percussion impulse in a direction of normal blood flow and retrogradely if the valves are incompetent

Auscultation	Do not forget to place a stethoscope over large bunches of varicosities, especially if they are in an abnormal position. On rare occasions there will be a machinery murmur indicating the presence of an arteriovenous fistula
Elevation	If the veins in a limb are distended when the patient is lying down, slowly raise the limb until the veins collapse. The height to which the limb has to be raised corresponds to the pressure in the veins and indicates the severity of the venous obstruction

**Investigation:**

Trendelenburg test	To determine the competency of the valves in the superficial and deep veins of the leg
Parthetest	Is a clinical test for assessing the patency of the deep femoral vein
Modified parthes test	This test is primarily intended to know whether the deep veins are normal or not. A tourniquet is tied round the upper part of the thigh tight enough to prevent any reflux down the vein. The patient is asked to walk quickly with the tourniquet in place the test is done by applying a tourniquet at the level of the saphenofemoral junction
Three tourniquet test	In this test the tourniquet is tied around the thigh or leg at different levels after the superficial veins have been made empty by raising the leg in recumbent position. The patient is now asked to stand up. If the veins above the tourniquet fill-up and those below remain collapsed it indicates presence of incompetent communicating vein above the tourniquet. Similarly, if the veins below the tourniquet fill rapidly whereas veins above the tourniquet remain empty, the incompetent communicating veins must be below the tourniquet. Thus, by moving the tourniquet down the leg in steps one can determine the position of the incompetent communicating veins
Schwartz test	In a long standing if a tap is made on the long saphenous varicose vein in the lower part of the leg an impulse can be felt at the saphenous opening with the other hand
Fegans test	In the standing position the places of excessive bulges within the varicosities are marked with pencil. The patient now lies down. The affected limb is elevated and the heel is kept supported. The palpates along the line of the marked varicosities carefully so that he can find gap or small pit in the deep fascia which transmits the incompetent perforator. That is marked with X this is a site of the perforator it should tally with the skin pencil mark of the venous bulge marked before

Morrissey cough impulse test	In the test the limb is elevated to empty the veins. the patient is asked to cough forcibly. An expansile impulse, if felt in the long saphenous varicose vein, it may be presumed that the saphenous femoral valve is incompetent similarly, if the patient coughs and the saphenofemoral junction are incompetent bruit may be heard on auscultation
Venous doppler tests	Is used to check the circulations in large veins of the legs
Duplex scan	Is a painless exam that uses high frequency sound waves to capture internal images of the major arteries in the arms, legs and neck

**Treatment:**

<ol style="list-style-type: none"> <li>1) Elevation of limb</li> <li>2) Diosmin therapy- increases the venous tone, elevation of the limb to relieve edema</li> <li>3) Unna boot- provides nonelastic compressive mechanism</li> <li>4) Elastic crape bandage- application from below upwards or use of pressure stockings to the limb pressure gradient 30 to 40 mm of hg is provided</li> <li>5) Compression stockings</li> <li>6) Pneumatic compression method</li> </ol>	<p><b>Drugs used for varicose vein</b></p> <ol style="list-style-type: none"> <li>1- calcium dobisilate 500mg BD improves the lymph flow and reduces edema</li> <li>2- Doismin 450mg + Hesperidine 50mg relieves the night cramps</li> <li>3 -toxerutin 500mg BD or TID Antierothrocytic aggregation agent which improves capillary dynamics</li> </ol>	<p><b>Surgery</b></p> <ol style="list-style-type: none"> <li>1- Sclerotherapy- injection sclerotherapy Ultra sound guided sclerotherapy</li> <li>2- Trendelenburg operation</li> <li>3- Stripping of the vein</li> <li>4- Superficial ligation of Cockett and Dodd</li> <li>5- Ligation of short saphenous vein at saphenofemoral junction</li> <li>6- Removal of superficial varicose vein by hook phlebectomy</li> <li>7- Lintons vertical approach – superficial ligation of perforators</li> <li>8- Subfascial endoscopic perforator ligation surgery (SEPS)</li> <li>9- Radiofrequency ablation method (RFA)</li> <li>10- Endo venous laser ablation (ELVA)</li> </ol>
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**Complication of surgery –**

- 1- Considerable bruising
- 2- Small area numbness may be associated with intense tingling pain
- 3- Postoperative thrombosis
- 4- Superficial thrombophlebitis
- 5- Infection
- 6- Hematoma formation
- 7- Reoccurrence

**Discussion and Conclusion:**

Varicose vein ( *Siraj Granthi*) is defined as tortuous path in blood vessel mostly seen in lower extremities , the *samprapti* is as follows where *vata* increase due to excessive exertion invades *siras* which makes *sampeedan*, *sankochya*, *vishoshan*, and *vakrikaran* of *siras* which disturbs human life by pain or ugly looking, so patients search for treatment, Varicose vein is dilated veins with tortuous path , where surgery is needed , and *siraj granthi* is which where *shamaoushdhis* are preferred, Understanding the disease concept in two dimension, where the result is to obtain relief. Each science gives relief but understanding it in different way allow one to get both knowledge and can flourish with complete skills forward. But both base and understanding is different so one must know accordingly and move forward, by combining both sciences may not get the results.

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