



Management of Siraj Granthi (varicose vein) through Ayurveda

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Abstract

Introduction: 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. Certain jobs demand prolonged standing as in bus conductors, policemen and the persons involved in these jobs often suffer from varicose veins. Varicose vein can be compared to *Sirajagranti* as described in Ayurvedic texts. *Panchakarma* treatment is great boon to Ayurveda. By collaborative use of *virechana* (Purgation) and *Shamana chikitsa* (Palliative treatment) brought encouraging results in case study of varicose vein. So, case study is conducted to study the efficacy of *Panchkarma* treatment for management of varicose veins.

Material and method: This is a case presentation of a 37 years old female patient with history of varicose veins, having complaints of pain, muscle cramps, blackish discoloration over left foreleg since 2 years. *Virechana karma* with *Trivruutta Leha* was administered, prior that with *snehanana* (oleation) with Cow ghee was given. After following *Sansajarna Krama* (dieted regime or plan

after treatment), *Shamana Chikitsa* started with various method of local *Snehana* (massage with oil), *Swedana* (sudation), *Udwartana* (massage with dry powder) treatment by using basic principles to break pathophysiology of *Siraj granthi*. .

Observation and result: The patient got relief in all symptoms with appreciable change in blackish discoloration of both legs, pain, cramps, tortuous swelling over left leg,

Conclusion: Conservative management with Ayurved principle provides significant relief and improves quality of life of patient. It may possible to treat this disease with satisfaction with the help of purgative therapy and palliative treatment.

Key words: Varicose vein, *Siraj Granthi*, *Panchkarma*, *Virechana*, *Shamana Chikitsa*

Introduction

A varicose veins are normal sacular dilated, elongated and tortuous alteration in the sephanous veins and their tributaries¹It is the Common surgical entity in clinical practice affecting the lower limbs which are associated with cramps which may develop especially while doing sudden movement such as standing up and aching or

heaviness which typically increases throughout the day or with prolonged standing and is relieved by elevation or compression stockings.² 10-20% of adults develop varicose veins.³ The adult prevalence of visible varicose veins is 25–30 per cent in women and 15 per cent in men⁴. Its prevalence raises with age certain jobs demanding prolonged standing as in bus conductors, policemen.

The primary causes of varicose veins are the incompetency of the valves and the weakness in walls of the veins. The secondary causes are obstruction of venous outflow due to pregnancy, fibroid, ovarian cyst, pelvic cancer, ascitis, and deep vein thrombosis. The common risk factors of varicose veins include prolonged standing, older age, obesity, hormonal replacement therapy etc.

It has major morbidity rather than mortality and requires treatment in early conditions to avoid complications such as varicose ulcer, thrombotic limbs. Along with that due to pain it induces loss of productivity of work. Current treatment modalities in varicose vein are stripping method, tying, blocking (complicated by hematoma formation, infection and saphenous nerve irritation), endovenous Radio treatment ablation, Sclerotherapy. Among the various treatment modality of Modern surgery none of these is labeled as ideal since their failure to give permanent relief and the recurrence rate is more along with their side effects. Due to high cost of this treatment care (medical or surgical), patients can now be referred for more precise assessment and a greater range of therapeutic options than ever before. So it is need of hour to search some alternative modalities to treat them. Ayurveda gives a comprehensive description of the management of *Siraja Granthi* (varicose veins) and several formulations and therapies which are also found to be very effective in the treatment and prevention of *Siraja Granthi* (varicose veins). According to Ayurveda, varicose vein can be compared to *Sirajagranthi* which are described in various Ayurvedic compendiums. *Acharya Vagbhata* modifies the

physical signs with addition of *Vakreekarana* (tortuosity) makes the focus of the clinical picture clear and also narrates that *Sirajagranthi* will be Nishphura (nonpulsatile) and Neeruja (painless).⁵ *Sushruta Acharya* describes site as the painful variety as *Krichrasadhya* (difficult to cure).⁶ *Vagbhata Acharya* too is keen on the selection of cases.⁷ And not claimed the disease as *Sukhasadhya* (easily curable) or *Krichrasadhya* (difficult to cure).⁸ To pursue efficacy of alternative management in varicose vein, this case study of *sirajgranthi* has been studied to study of efficacy of Shodhana Chikitsa (Purgation treatment with Cow ghee Snehapana) and palliative treatment in *Sirajagranthi*.

Material and methods: A single case study

Name	:- A.B.C.	Occupation	:-ASHA worker
Sex	:-Female	Marital status	:- Married
Age	:- 42 Years	Education	:-H.S.C
Address	:-Ajanti	Socio economic status	:-Lower Middle Class
Phone no.	:- *****2060	O.P.D. No.	:- 1708040044

Chief complaints

	Complaints	Duration
1	Elongated ,Prominent ,dilated and torturous ,hard vein below left knee joint at the posterior aspect i.e. above calf muscle over left foreleg	since 2 years
2	Heaviness in left leg	
3	On and off pricking type pain in left leg (pain specifically increased at night and long standing)	6 months
4	Blackish discoloration over anterior aspect of left leg i.e. over shin of tibia prominently	
5	Cramps in both calf muscles after making a sudden move as standing up	
6	Itching sensation over site of varicosity	

Associated complaints

- Recurrent Intermittent Constipation(unsatisfactory bowel evacuation) (since 4 -5 years)
- Dysuria (since 1 month)
- General weakness (since 1 month)

History of present illness

A female patient of age 43 years with complaints of elongated, Prominent, dilated and torturous, hard vein below left knee joint at the posterior aspect i.e. above calf muscle over left foreleg, heaviness in left leg, On and off pricking type pain in left leg (pain specifically increased at night and long standing, Slight Blackish discoloration over anterior aspect of left leg i.e. over shin of tibia prominently, Cramps in both calf muscles after making a sudden move as standing up, Itching sensation over site of varicosity as well as from calf region to dorsum of foot of left leg since 2 Years. She visited to govt. aided hospital, underwent investigations and got oral medications. She got temporary relief only after taking analgesic and by taking rest. But it was reversible. She had dull aching pain in calf region of left leg which aggravated on long standing or walking accompanied with swelling since 6 months especially during evening hours. Pain was relieved by elevation of legs. Along with these symptoms she had recurrent constipation and feeling of general weakness

Then she approached to Panchkarma OPD of Ayurved Hospital for further management. After Examination she was advised to undergo Virechana treatment (purgation therapy) with snehapana (unction) with cow ghee in incremental dose. After following sansar jana karma (diet plan), she was advised to undergo Dhara sweda (sudation with oil drip) with local snehana (massage with oil) and internal medications.

History

Past medical history	K/C/O Hypothyroidism on regular treatment
Personal history	Vegetarian diet, no smoker, no tobacco chewer and non alcoholic.
Drug History	Intake of Analgesic frequently (Tab Akpar SOS)
Family history	Mother and father-K/C/O D.M.II

Asthvidha & Dashvidha Parikshana (Subjective Examination)

1	Nadi (Pulse)	84/min	7	Druka (Vision)	Good
2	Mala(Stool)	Intermittent hard and unsatisfactory bowel evacuation	8	Akruti (Posture)	Krush
3	Mutra(Urine)	Sashoola	9	Prakruti	Pittapradhana vataja
4	Jivha(Tongue)	Coated(Sama)	10	Kostha	Madhyama
5	Shabda(Speech)	Spashta (Clear)	11	Agni	Samagni
6	Sparsha (Touch)	Anushna sheet (Normal)	12	Satva (will)	Madhyama

General examination

- Patient is well conscious and oriented.
- No pallor, no icterus and no clubbing, lymphadenopathy

Pulse	84/min	Temperature	37.8 degree F
Blood pressure	100/70 mm/Hg	R.R.	16/mins

Local examination

- Inspection
 - Patient was examined in standing position
 - Localized swelling and Long tortuous and dilated veins are seen extending below left knee joint at the posterior aspect i.e. above calf muscle over left foreleg
 - Pain over it and blackish discoloration over anterior aspect of left ankle joint and left foot prominently left ankle joint.
- Palpation
 - + ve Homan's sign (pain in the calf region on passive dorsiflexion of the foot)
 - + ve Mose's sign (pain in calf region on gentle squeezing of calf region)
 - + ve Neuhof's sign (feeling of full and tenderness of calf)
 - + ve Brodie -Trendelenburg test (feeling of impulse over lower part of vein when finger kept over lower

part of vein and upper part of vein is tapped) ,were positive in the patient. One of the veins in calf was purplish and slightly tender when she rubbed her fingers along it)

- No lymphadenopathy occurs
- **Other limb examination:** No varicosity or ulceration over right lower limbs

Investigations- Venous Doppler was done to check perforators which are incompetent and to check incompetency of sephano femoral and sephano popliteal junction/rule out deep vein thrombosis. Reports of venous Color Doppler of left leg:-16/11/2017 (Before treatment) Varicosity of great sephanous vein in left leg was secondary to incompetent above ankle perforator.

Causative factors:

- *Ruksha & Rakta prakopaka Aahara* (Daily Consumption Of Stale Food With Bakery Products, Highly crazy for sour food)
- Continuous & excessive walking (ASHA worker), Standing for whole day continuously 12 >hrs
- *Ambho avagahat* (Sudden Bathing of legs after exposure to sunlight)
- *Aatapa sevana* (excessive walking in sunlight)
- straining due to Constipation

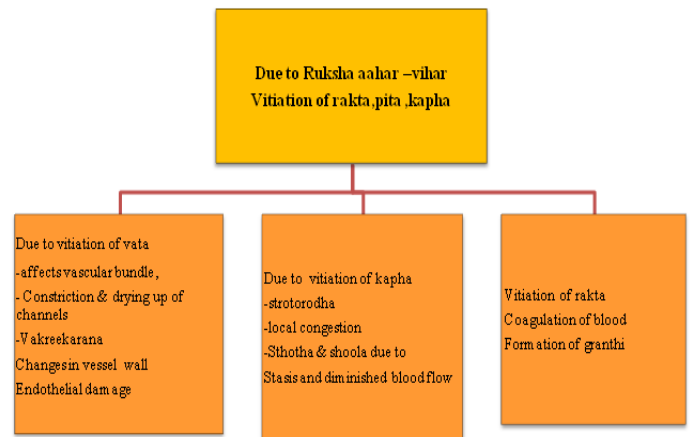
Samprapti (Patho-physiology)

In the disease *Sirajagranthi*, the main vitiated *doshas* are *Vata* and *Rakta*. *Rakta dushti* is due to *aatapa sevana* (excessive walking in sunlight). Venous insufficiency is the basic cause. It induces defective venous or valvular structure.

Sudden bathing (*ambhoavagahat*) after excessive walk or excessive exercise leads to vitiation of *vata dosha*. This vitiated *Vata dosha* causes *Rakta dushti* in *sira* (blood vessels)

Due to Above mentioned *Vata and Rrakta prakopaka Nidana* specifically *Vyan Vayu* vitiation due to daily

consumption of stale food with bakery products and continuous walking and standing for whole day continuously for 12 hours (ASHA worker),*Vayu* enters the *Sira* causing *Sampeedana* (local congestion), *Sankocha* (constriction) and *Vishoshanam* (drying up of channels) and produce *Granthi* (clots) formation in *Sira* (vessels) and produce as *Sirajagranthi*. It is characterized by dull aching pain.⁹ *Grathana* (Hardening of *Sira*), *Shotha* (Swelling), *Vivarnya* (Pigmentation) are also occur in this entity.



The explanation given by *Acharya Charaka* has got a little difference that, because of the *Nidana* (causative factors) not only *Vata* but *Kapha*, *Rakta* and *Pitta* also get vitiated which then enter the external blood vessels, get lodged there and produce obstruction and spreads to the nearby areas causing edema.¹⁰

As per *Acharya Susruta*, the etiological factors such as exposure to sunlight or excessive walking or exercise plays a role in the vitiation of *Vata* in weak persons.¹¹ Which directly affects the *Sira Prathana* (vascular bundles) by *Akshepa* (contraction) and *Vayu* enters the *siras* causing *Sampeedana* (aching/squeezing type of pain), *Sankochana* (constriction) and *Vishoshana* (drying up) and exposes them to produce *Granthi* (clots) formation in *Siras* (vessels) which are prominent, quick and developing around i.e. Manifesting *Sirajagranthi*.¹²

In addition, *Acharya Vagbhata* said that the vitiated *Vata* playing major role, will exert its influence on *Siras* and *Rakta Dhātu*, causing *Sampeedana* (aching/squeezing type of pain), *Sankochana* (constriction), *Vakrekarana* (tortuosity) and *Vishoshana* (drying up of channels) of the *Sira* resulting in formation of *Granthi* (clots) which is non-pulsating and painless. This causes local congestion in that area causes *Shoola* (pain) and *Shotha* (swelling).¹³

Diagnosis

Varicose vein with clinical grade 2 with sephano femoral competence (Siraj granthi)

It was done on basis of clinically obtained sign and symptoms, clinical examination i.e. Homan's sign, Moes's sign, Neuhof's sign (feeling of full and tenderness of calf), Brodie-Trendelenburg test and venous color Doppler report

Treatment Plan

treatment period.

Easiest way of treating a disease is avoidance of the etiological factors.

The patient was advised to take *Trikatu churna* (for 3 days) to maintain the digestive fire, *Abhyantara snehapana* (internal oleation) with plane Cow Ghee for consecutive 7 days followed by *Virechanan* (purgation therapy) with *Trivrutta leha*. Internal oleation with plane cow ghee was given in increment dose for 7 days, starting from 30 ml up to 210 ml on last day i.e. daily increment of 30 ml. Virechan yoga (purgation medicine): *Trivrutta leha* (60 grams). Total 13 episodes and *kaphant* sign (sticky stool at last episode) were observed indicating *Pravar Shuddhi* (grade I quality purgation). Diet plan for 7 days was given to patient. After that she was advised to undergo external *Panchakarma* procedures with oral medicines for duration of 3 months. Follow up was done one month after the treatment period.

	Shodhana Chikitsa		Drug	Anupana (Vehicle)	Duration
1	Virechana (Purgation)	<i>Arohi Snehapana</i>	plane cow ghee	Luke warm water	Consecutive 7 days (4 th -10 th Day)
		<i>Bahya snehana And Dashmool Qwath Nadi Swedana</i>	<i>Sahachara Oil +Ksheerbala Oil</i>	-	11 th -13 th day
		Purgation medicine	trivrutta leha (60 grams)	Luke warm water	On 14 th day
		Sansarjana karma	Peayadi krama	-	7 day
	Bahya chikitsa	Drugs	Duration		
1	Local <i>Udwaratana</i> (Powder Massage)	Sariva ,manjistha ,lodhra ,Musta	For 15 days		
2	Local snehana	<i>Sahachara Oil</i>			

	(External oleation)	+Ksheerbala Oil	
3	Local Dhara Swedana	Nadi swedana with qwath of Guava leaves	
	(sudation with oil drip)	Local Dhara Sweda /Nadi Sweda Guava Leaves	

	Internal Medication	Dose	Duration	Anupana	Time of administration
1	<i>Kaishor Guggulu</i>	250 mg BID	2 Months	Luke warm water	After each meal
2	<i>Mahamanjisthadi Qwath +Sahacharadi Qwath</i>	Each 10 ML	2 Months	With 20 ml lukewarm water	1 hour before each food
3	<i>Avipattikar Powder</i>	10 gms	2 Months	With lukewarm milk	At bedtime
4	<i>Ksheerbala Aavarti</i>	1 cap	4 Months	Luke warm water	At bedtime

Assessment of Results

SN	Subjective	Before	After Virechana	After 3 months
1	Elongated ,Prominent ,dilated and torturous ,hard vein below left knee joint at the posterior aspect i.e. above calf muscle over left foreleg	4+	3+	1+
2	Heaviness in left leg	4+	1+	Absent
3	On and off pricking type pain in left leg (Pain specifically increased at night and long standing	4+	1+	Absent
4	Blackish discoloration over anterior aspect of left leg i.e. over shin of tibia prominently	4+	2+	Absent
5	Cramps in both calf muscles after making a sudden move as standing up	4+	Absent	Absent
6	Itching sensation over site of varicosity	3 +	Absent	Absent

SN	Objective			
1	Homan's sign	Positive	Negative	Negative
2	Mose's sign	Positive	Negative	Negative
3	Neuhof's sign,	Positive	Negative	Negative
4	Brodie -Trendelenburg test	Positive	Partially positive	Negative

Symptoms before and after

The clinical features of varicose veins were improved during snehapana and at the end of 3rd month. Pain, itching, oedma and blackish discoloration reduced considerably. Dilated and tortuous veins in the calf region reduced in size and became prominent only during exertion.

2. Objective criteria

Reports of colour Doppler after treatment on dated 3/2/2018 - Evidence of partial proximal segment of superficial and deep femoral veins and tibial veins appear to be normal. No signs of varicosity

Scenario on 16/11/2017	16/11/2017 Before treatment	21/02/2018 After treatment	Scenario on 21/02/2018
Prominent ,dilated and torturous ,vein Blackish discoloration Itching sensation over site of varicosity pain over calf muscle			No Prominent ,dilated and torturous ,vein No Blackish discoloration No Itching sensation over site of varicosity No pain over calf muscle

Discussion

Etiology of varicose veins can be correlated with *Sirajgranthi* in Ayurveda.¹⁴

Following types of changes occur in this case:

1. Changes in vessel wall i.e. endothelial damage (*sampidya, sankochya, vishoahya, vakra of sira*) due to

kapha and *vata* vitiation due to decrease *sthira guna, kapha* and *ruksha guna* of *vata*

2. Stasis i.e. diminished blood flow through veins (*nishphura* i.e. unable to pump the blood which leads to stasis) due to vitiation of *kapha* and *rakta dosha*.

3. Coagulation ability of blood i.e. thrombophilia (formation of *granthi*)¹⁵

Main pathology -vitiating of Vata-Rakta Dosha –

Snigdha, *Vatashamaka* (*vata* pacifying) but *Raktaprasadak* (decreasing viscosity of blood) as well blood purifying treatment is adopted. It is mainly due to vitiating of *Vata-Rakta Dosha*. By considering all above pathophysiology factors, *snigdha* (oily), *vatashamaka* (*vata* pacifying) but *raktaprasadak* (decreasing viscosity of blood) as well blood purifying, treatment is essential in this case.

So we have given *Snigdha virechan* (purgation) to expel out vitiating *dosha* followed by *Udwartana* (powder massage), *dhara* (sudation with oil drip) and *shaman* (palliative) treatment to expel *sthanik* (local) vitiating *dosha* to cure the disease. Comprehensive approach of *Shodhana* and *shaman* treatment breaks the pathophysiology of disease which can be postulated on the basis of following probable mode of action of interventions:

Why Snigdha Virechana (Purgation)?

- ✓ Main vitiating of *Vata*, *Rakta* and *Kapha* in *Sirajgranthi* and *Virechana* is main treatment of *Pitta*, *Kapha* and ultimately *Rakta*, *Vatanulomak*
- ✓ *Pittaj Pradhana Vataja Prakruti*
- ✓ *Sira* - Matruj Avayava
- ✓ *Sira* -Updhatu of *Rakta*.¹⁶
- ✓ It is indicated in *pitta* and *rakta vyadhi* (disease), as *rakta* and *pitta* are *ashray-ashrayi bhaav siddhanta* (principle).¹⁷

Why Goghrita for Snehapana (internal oleation)?

Properties of *Goghrita*

- ✓ *Drava guna*
- ✓ *Doshavilayana* (decreases viscosity of blood- improves circulation)
- ✓ *Sukshama* –penetrates at micro channels
- ✓ *Snigdha* –*Vatanulomana/Vatashamaka*

- ✓ *Mrudu guna* –*Strotomardavata* (increases elasticity of vessels, maintains laxity of channels), loosens *doshasanghata*.

Why local massage & Udwartana (powder massage)?

- ✓ Local massage

Local massage helps to avoid venous and arterial congestion, to avoid formation of ulcer and to increase venous drainage. By doing *Udwartana* and *local massage* the stagnant vitiating blood gets drained out, which helps to retain the *chalaguna* and to decrease *Ruksha Guna* of *vata*. It removes the *dustarakta* and clears the pathway of *dosha* thereby removing *srothorodha*. Healthy and nourishing blood is supplied to that tissue where the stasis is cleared off. This promotes the regaining the health of surrounding tissue as well as the vessel wall which takes little time i.e. second phase. Thus, *Sang* (the stagnant vitiating blood) has been removed with help of massage.

- ✓ Udwartana

Ruksha aahar (dry diet) and *ruksha vihara* (dry environment) vitiating *vata* and resulted into diminished *prithvi mahabhoota* as loses its *sthir guna*, veins loses their elasticity, *Lodhra* (*Symplocos racemosa Roxb.*) offers and maintains it due to its *kashaya rasa* as well as improving competency due to strengthening the valves. *Sariva* (*Hemidesmus indicus R.Br*) and *Manjistha* (*Rubia cordifolia Linn.*) are *raktaprasadak* in nature. Due to *raktaprasadak* property it brought down local swelling by relieving the local congestion.

So, it brought down the local swelling by relieving the local congestion (which contains metabolic toxins, debris of the dead tissues) by removing vitiating blood first. Powder massage reduces the localized intravascular pressure and volume hence relieving pain and swelling. So a part of swelling is relieved in first phase. It improves venous blood circulation and decreases venous congestion and ultimately swelling and pain over the site of varicosity.

Why Guava leaves decoction drip?

- Type of *Mrudu drava sweda* (for vitiated *Vata* & *Rakta*)
- Improves the circulation due to its *ushna guna* and maintains the elasticity of veins and checks over *sthambha* (stasis of blood).
- Flavonoids and tannins maintains competency of valves by strengthening them
- Avoids swelling by removing stagnation of impure blood.
- Tortuosity was only partially relieved due to decreasing mechanical defect and the tension in the area.

*Sahacharadi Kashaya*¹⁸, *Mahamanjithadi kashya*¹⁹, *kaishorguggulu*²⁰, *Ksheerbala aavart*²¹ all have *Vata-kaphahara* and *Raktha prasadhana* property is said to be effective in *Sirajagranthi* and in its *Kashaya Kalpana* (Decoction types). It is mentioned that the *Kashaya* (Decoction) should be given along with oil. *Sahacharadi* oil and *ksheerbala* oil which has *Raktha prasadhana* and *Raktha shodhaka* (blood purification) property is also mentioned in the context of the *Sirajagranthi* treatment.

After *virechana* to avoid recurrence *Avipattikar choorna*²² is prescribed at regular basis to induce mild laxative, pacify *Pitta*, to avoid stasis of blood and for maintaining purity of blood.

Combined mode of action?

- ✓ *Vaivarnya* (discoloration) occurs due to stasis of blood in the veins. This leads to haemolysis of blood, leading to the deposition of haemosiderin pigment in the skin which manifests as the blackish discoloration noted in patients of varicose veins. The impure blood is drained out due to *virechana* and local treatment, followed by flow of normal blood. Since there is no further stasis of blood, there is no subsequent haemolysis, thereby, over all inventions reduces *Vaivarnya* (Blackish discoloration) and restoring

normal pigmentation of skin. It also reduces itching by *pittahara* (pacifying *pitta*) and *raktaprasadkar* properties of *Virechana*, *udawartana* of *varnya dravya* and massage with *dhara* as per Ayurveda claimed to have *pittahara* and *raktaprasadan* properties.

- ✓ Mild laxative is used to regularize *pitta*, which helps to avoid stasis of blood and also helps in maintaining purity of blood after purgation process to avoid recurrence.
- ✓ Tortuosity was only partially relieved in the study. The reason might be it's a mechanical defect and the tension in the area. It was seen often associated with swelling due to stagnation of impure blood. The same was relieved by applying modalities such as powder massage and local massage with oil drip.

Conclusion

It is important to prevent the occurrence of *Sirajagranthi*, treat it at an early stage or allows proper maintenance of signs and symptoms reduces the complications and support a better quality of life. The patient got significant relief in all symptoms with appreciable change in cramps, swelling, blackish discoloration of left leg, itching, pricking pain specifically after internal oleation with cow ghee. All signs & symptoms of *Sirajagranthi* reduced significantly after (*Snigdha Virechana*) purgation and palliative treatment for 3 months. There is partial recovery in venous color doppler reports after the follow up period of one month, the report showed no recurrence which highlights current treatment is effective remedy for varicose veins.

Conservative management with Ayurveda principle provides significant relief in varicose vein and improves quality of life.

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