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MORPHOLOGICAL CONSIDERATION OF VARICOSE VEIN IN AYURVEDA – AN OBSERVATIONAL STUDY

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ABSTRACT

Background: Venous insufficiency is the most common disorder of venous system and is usually manifested as Varicose Vein. Due to fast life style people get affected because of various type of jobs that affect the physical, mental state of health and socially also. The swollen, bulging and twisted bluish veins that become visible just beneath the skin surface and filled with blood are known as Varicose Vein which may be superficial or deep. This commonly affects both in lower limbs and happens because of defective venous valves. The Varicose Vein is very common disorder in the society. The prevalence is 15 – 20% of total Indian population. In Ayurveda, Sirajaganthi and Siragatavata bears a similarity with the Varicose Vein. **Objective:** Assessment of morphological alteration in Varicose Vein in relation to Sirajagranthi and Siragatavata. **Materials and Methods:** Total 27 Varicose Vein patient is observed in all the morphologicall abnormality along with physical changes. Assessment has done by 2 parameter- CEAP Classification and Duplex ultrasound. **Results:** Total 27 patient of varicose vein registered in the age group of 20-70 years with majority of patient in age group of 51 -60 years(33.33%) where female shows maximum 15(55.55%) comparatively than male 12(44.44%). In relation to segment involvement great saphenous vein involve maximum in 15 cases (55.6%). Pain is a character of Siragatavata, found pain in 24 patients (88.9%). Sampidana a character of Sirajaganthi can be understood with cramping, which present in 14

cases (51.9%) Sopha character a Siragatvata understood with swelling or oedema in involving of Varicose vein and found in 21 patients (77.8%). Dilatation of superficial vein is found in 13 cases i.e. (48.10%) can be understood with bakrikritya which is found in Sirajagranthi. Tortousness is found in 12 patient (44.44%) can be understood with vrittam i.e circular localisation or unnatai. eraised of surface area. Mahatya is seen in anatomical distribution where in 16 patient (62.96%) deep vein involvement are present. **Conclusion:** By Doppler study out of 27 cases shows venous incompetency seen in 22 cases at different level. Sula, Sampidana, Sankocha, Vakrikritya, Unnata are the character of Sirajagranthi and Siragatavata which can be incorporated with pain, cramping , contraction, dilatation of prominence of superficial vein, tortuosity of Varicose Vein respectively and found in different percentage.

KEYWORDS: *Varicose Vein, Sirajagranthi, Siragatavata.*

INTRODUCTION

Varicose Veins are dilated, tortuous, superficial veins that result from defective structure and function of the valve of the saphenous veins, from intrinsic weakness of the vein wall, from high intraluminal pressure or rarely from arterio venous fistulas.

It can be categorized primary or secondary. Primary varicose veins originate in the superficial system and secondary varicose veins result from deep venous insufficiency and incompetent perforating veins or from deep venous occlusion causing enlargement of superficial vein that are serving as collaterals.[1]

This commonly affects both in lower limbs and commonly happens because of defective venous valves. The varicose vein is very common disorder in the society. The prevalence is 15 to 20% of total Indian population.[2]

Varicose Veins can caused by several patho-physilogical mechanisms, common among them are venous hypertension, incompetence of valves, changes in vein structure, inflammation and sheer stress venous outflow obstruction or calf pump failure.[3]

Incompetence of valve in lower extremity leading to tortuous, dilate, elongated vein near the surface of skin in legs which are painful, heaviness, cramping, swelling, sensation of burning, itching, dilatation of superficial veins and skin changes occur.[4]

In Ayurveda, Sirajagranthi and Siragatavata bear similarity with the morbidity occurs in Varicose Vein.

Sirajagranthi

If a person undertake excessive exercise, his network of veins get effected due to aggravation of vatadosha, which in turn sampida (cramping), sankocha (contraction), visosya (roughness and hardness of vein) and produces granthi (protruded nodule) like structure which is unnata (raised), ashu (rapidly) and vrittam (circular) is known as Sirajagranthi.

When this granthi is piḍayukta (painful) and chala (movable) then krcchasadhy and if it is piḍarohita (painless), achala (immobile), mahan (large) and involvement of marma pradesha (situated at vital spot) then it is asadhya.[5]

Siragatavata

When vitiated vata affects Sira then produces sula, akunchana (kutila) and purana (engorgement) of Sira.[6]

Acharya Vagbhata has describe Siragata vata having symptom adhman (Distension) and rikta –ta (Emptiness) of Siras.

Acharya Charaka has mentioned, aggravation of vatadosha in Siras give rise to manda ruka (mild pain), sopham (oedematous), sushyate spandayate (emaciation with throbbing pain), suptaastabyo (thinning venous wall and no pulsation) and mahatya (enlargement of vein) these all may occur in Siragatavata.

Siraja Granthi		Siragatavata			Varicose Vein[4]
Susruta[5]	Vagbhata[7]	Charaka[8]	Susruta[6]	Vagbhata[9]	
Sampidana (cramping) Sankocha (contraction) Vishosya (roughness and hardness of vein) Unnata (raised) Ashu(rapidly) Vrttam (circular)	Sampidana Sankocha Bakrikrtya (irregular suaface of venous position) Vishosya (roughness and hardness of vein)	Manda ruka (mild pain) Sopham (oedematous) Shushyataspandayate (emaciation with throbbing pain) Suptaastabya (thining venous wall and no pulsation) Mahatya (enlargement of vein)	Sula (pain) Akunchana (contraction) Purana (engorgement)	Adhman (distension) Rikta (emptiness)	Symptoms – Aching Heaviness Cramps Itching Sensation of burning Swelling Dilatation or prominence of superficial veins. Skin changes Signs – Telangiectasia Reticular or varicose vein Oedema Skin changes such as pigmentation, lipodermato sclerosis, eczema and ulceration

AIM AND OBJECTIVE

Assessment of morphological alteration of Varicose Vein in relation to Sirajagranthi and Siragatavata.

MATERIALS AND METHODS

For the present Study of 27 Varicose vein patient observed in all the morphological abnormality along with physical changes of Varicose Vein specially tortuous, pain, cramping, dilatation of prominence of superficial vein, contraction, incompetency of valve and reflux.

Sample size –27 cases has studied.

Criteria for selection

A. Inclusion criteria

Age between 20 – 70 years.

B. Exclusion criteria

1. Patients suffering from metabolic disorders like diabetes mellitus, hypertension, hypothyroidism were excluded.

2. Chronic venous diseases.
3. Pregnant women.

Assessment criteria

Assessment of Varicose Vein has done in 2 parameter.

1. Clinical involvement

It has been done by CEAP classification.[10]

2. Laboratory investigation

Duplex Ultrasound is the gold standard method for the diagnonis of Varicose Vein. Here lower limb will be consider for vein involvement. Great Saphenous Vein, Small Saphenous Vein, Perforator Vein were assessed with findings like tortuosity, incompetency of valve and reflux.

RESULT AND OBSERVATION

Total 27 patients were enrolled for the present study. The general observation of 27 cases of varicose vein are tabularised and calculated below.

Table 1: Demographic profile.

Parameters	Numbers	Percentage
Age group		
21-30	2	7.4%
31-40	6	22.22%
41-50	3	11.11%
51-60	9	33.33%
61-70	7	25.92%
Sex		
Male	12	44.44%
Female	15	55.55%
Occupations		
Manual Labours	9	33.3%
Farmer	7	25.9%
House Wife	5	18.6%
School Teacher	1	3.7%
Shopkeeper	2	7.4%
Driver	1	3.7%
Vendor	2	7.4%

Out of 27 patients has found in the age group of 51-60 years i.e 9 (33.33%) and only 2 patients (7.4%) remains in the age group of 21-30 years .Among the 27 patients female are

15 (55.55%) and male are 12 (44.44%) .In 27 cases maximum are 9 (33.3%) labours while 1 (3.7 %) patient is driver and 1 patients (3.7%) is school teacher.

Clinical profile

The clinical study is carried out by giving importance on CEAP classification. Here, C is for Clinical classification (C), E is for Etiologic classification (E), A is for Anatomic classification (A) and while P is for Pathophysiologic classification (P). The present work observed clinical, etiologic, anatomic and pathophysiologic alteration in different Varicose vein patients.

Table 2: Distribution in clinical classifcation (c).

Class	Characteristics	Lower Extremity	Percentage (%)
C0	No visible	-	-
C1	Telengiectases or Reticular veins	-	-
C2	Varicose veins	27	100%
C2A	Asymptomatic	-	-
C2S	Symptoms pain, acheTightness, skinIrritation, heavinessMuscles cramps	27	100%
C3	C2s + Oedema	11	40.7%
C4	C2S + Skin damage due to Varicose Veins or Hidden Varicose Veins(venom reflux)	1	3.7%
C5	C2S + Healed ulcer	8	29.6%
C6	C2S + Active ulcer	3	11.1%

The above table shows all the 27 (100%) patients has suffering from varicose vein and symptomatic 11(40.7%) patients shows association with oedema, while 8 (29.6%) and 3 (11.1%) patients are association with healed ulcer and active ulcer respectively.

Table 3: Distribution of symptoms of varicose vein.

Symptoms	N	Percentage (%)
Pain	24	88.9%
Heaviness	14	51.9%
Cramping	14	51.9%
Swelling	21	77.8%
Skin irritation	6	22.2%
Superficial Vein Dilatation	13	48.10%
Skin changes	7	25.90%
Tortousness	12	44.44%

Above table shows out of 27 cases pain occurs maximum in 24 cases (88.9%), swelling in 21 cases (77.8%), heaviness and cramping in 14 cases (51.9%), superficial vein dilatation found in 13 cases (48.10%), tortousness found in 12 cases (44.44%) and skin changes occurs in 7 cases (25. 90%)

Table 4: Anatomic Classification (A).

Anatomical	N	Percentage (%)
Superficial	7	25.92%
Deep	16	62.96%
Perforator	23	70.37%
No venouslocation	5	18.51%

Above table shows out of 27 cases involvement of perforator vein found in 23 cases (70.37%) however in 5 cases (18.51%) no venous location has identical by color Doppler.

Table 5: Pathophysiologic classification (P).

Classification	N	Percentage (%)
Reflux	12	44.44%
Thrombosis	1	3.70%
Reflux and obstruction	0	0%
No venous Pathophysiologic identified	5	18.51%

The above table shows reflux is present in 12 cases i.e (44.44%) and thrombosis is present in only 1 case I.e (3.70%)

Table 6: Site of incompetence.

Site of incompetence	N	Percentage (%)
Saphenofemoralincompetence	13	48.1%
Saphenopopliteal	3	11.1%
IncompetenceAbove kneePerforator	-	-
Below kneeperforator	9	33.3%
Ankle perforators Above ankle	1	3.7%
Perforator	5	18.5%
Lateral perforator	2	7.4%
Mid leg	3	11.1%
Mid-thigh	3	11.1%

Above table shows saphenofemoral incompetence seen in maximum 13 cases (48.1%) and ankle perforators seen in only 1 case (3.7%).

Table 7: Modalities of Segment involvement.

Side	Segment	Patients	Percentage (%)
Right	Great saphenous Vein	8	29.6%
	Small saphenous Vein	4	14.8%
Left	Great saphenous Vein	15	55.6%
	Small saphenous Vein	3	11.1%
Both	GSV & SSV	1	3.7%

Above table shows involvement of different segment in 27 cases. Here, maximum i.e 15 (55.6%) in Great saphenous vein involve on left side while Great saphenous vein also more i.e 8 (29.6%) in the right side. Small saphenous vein are 4 (14.8%) on right and 3 (11.1%) on right and limb respectively

Table 8: Complication of varicose vein.

Complication	N	Percentage (%)
Haemorrhage	4	14.81%
Thrombophlebitis	0	0%
Varicose eczema	1	3.70%
Venous Ulceration	7	25.92%

Venous ulceration complication occurs in maximum 4 cases (14.81%) and varicose eczema is seen only 1 case (3.70%).

DISCUSSION

Varicose Vein in applied study where CEAP classification is used to degree of varicose vein. Studying inner surface of Vein Duplex ultrasound has carried out. Total 27 patient of Varicose Vein registered in the age group of 20-70 years with majority of patient in age group of 51- 60 years(33.33%). Female shows maximum 15 (55.55%) comparetively than male 12 (44.44%). Varicose veins are a known occupation disease, found in people required to stand for prolonged periods. In present study 9 are labours (33.3%) who admitted that their occupation required standing for long intervals.

In relation to segment involvement Great Saphenous Vein involve in maximum 15 cases (55.6%),11(40.7%) patient shows association with oedema, while 8(29.6%) and 3(11.1%) patients are association with healed ulcer and active ulcer respectively.

In Etilogic classification 27 cases are primary etiologic (EP) origin of varicose vein.

In anatomic classification involvement of perforator vein found maximum in 27 cases (70.37%).

In pathophysiologic classification reflux present in 12 cases(44.44%) and thrombosis present in only 1 case (3.7%). Site of incompetence has found maximum 13 i.e.(48.1%) in saphenofemoral junction followed by below knee perforator 9 i.e. (33.3%).

Siraja granthi and Siragatavata bears a similar character of Varicose Vein.

Pain is a character of Siragatavata as stressed by Susruta, is found pain in 24 patients i.e (88.9%). Sampidana a character of Siraja ganthi emphasized by Susruta and Vagbhata can be understood with cramping, which present in 14 cases i.e (51.9%) Sopha character a Siragatvata understood with swelling or oedema in involving of Varicose Vein which present swelling in 21 patients (77.8%). Heaviness is a sensation due to accumulation of blood in the vein which is found in 14 cases i.e (51.9%) In Siragata vata Susruta mention purana while mahatya mention by Charaka which can be understood with enlargement due to venous incompetency. Dilatation of superficial Vein is found in 13 cases i.e (48.10%) can be understood with bakrikritya which is found in Sirajaganthi by Vagbhata. Venous incompetency influence by venous insufficiency cousing venous wall dilatation followed by tortousness is found in 12 patients i.e (44.44%). This can be understood with vrittami.e circular localisation or unnata i.e raised of surface area .Mahatya is also seen in anatomical distribution where in 16 patient i.e (62.96%) deep vein involvement are present .

CONCLUSION

Varicose Veins are a frequent occurrence. Commonly affect in the age group of 51 – 60 years and higher incidence of females than males. The great saphenous vein are most commonly involved. Pain is the most common presenting symptom and venous ulceration the most common complication of the disease. By Doppler study out of 27 cases shows venous incompetency seen in 22 cases at different level. Sirajagranthi and Siragatavata bears a similarity with the Varicose Vein. Sula, Sampidana, Sankocha, Vakrikritya, Unnata are the character of Sirajagranthi and Siragatavata which can be incorporated with pain, cramping, contraction, dilatation of prominence of superficial vein, tortuosity of varicose vein respectively and found in different percentage.

REFERENCES

1. Don. I. Longham and et. al, Harrison's principle of internal medicine, 16.
2. Malay Patel, Epidemiology of Varicose Veins Ahmedabad, India, 11.
3. Bergan JJ, Schonbein. Gw, Smith PD, Nicolaides AN, Boisseau MR, Eklof B, Chronic venous disease, N Engl J. Med, 2006; 355: 488-98.
4. Hussein M. Atta, Varicose Veins: Role of Mechanotransduction of venous Hypertension, International Journal of Vascular Medicine, 2012.
5. Vaidya Jadavji Trikamji Acharya, Susruta Samhita with Nibandhasangraha commentary, Chaukhambha Orientalia, Ninth Edition, Nidan sthan, 2007; 11: 8-9.
6. Vaidya Jadavji Trikamji Acharya, Susruta Samhita with Nibandhasangraha commentary, Chaukhambha Orientalia, Ninth Edition: Nidan sthan, 2007; 1: 27.
7. Vaidya Yadunandana Upadhyaya, Astanga Hridayam of Vagbhata, Chaukhambha Publications, Reprint Edition Uttara Sthan, 2005; 29: 10 -11.
8. Vaidya Jadavji Trikamji Acharya, Charak Samhita by Agnivesa revised by Charaka and Dridhabala with Ayurveda Dipika commentary of Chakrapanidatta, Chaukhambha Publications Edition: Reprint, Chikitsasthan, 2004; 28-36.
9. Vaidya Yadunandana Upadhyaya, Astanga Hridayam of Vagbhata, Chaukhambha Publications, Reprint Edition: Nidan Sthan, 2005; 15: 13.
10. Shyam Krishnan, Stonhen C, Nicholls, Chronic Venous Insufficiency: Clinical Assessment and Patients Selection, 2005; 22.