



MODERN ASPECTS AND UNANI CONCEPT OF VARICOSE VEINS

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MODERN ASPECT OF VARICOSE VEINS AND UNANI CONCEPT OF VARICOSE VEINS (VAREED E DAWALI)

DEFINITION: Dilated, Tortous and Elongated Superficial veins of the limbs are called as Varicose veins.

Examples of Varicosities:

Long Saphenous Varicosity. Short Saphenous Varicosity. Primary Varicose Veins:

They occur as a result of congenital weakness in the vein wall due to defective connective tissue and smooth muscles.

It can also be due to the congenital absence of valves.

Very often valve of the Saphenofemoral junction is incompetent/ absent. The valves can also be absent when the Superficial veins joins the deep veins.

Klippel Trenuanay Syndrome is congenital venous abnormality wherein Superficial and deep veins do not have any valves. It is also called valveless syndrome.

Primary Varicosity can also be genetic. Some patient in addition to prolonged standing (agriculturist, traffic police, hotel workers) contribute to the development of Varicose veins.

Secondary Varicose Veins:

Women are more prone for varicose veins because of the following reasons:

-Pregnancy and pelvic tumours cause proximal obstruction to the blood flow.

-Pills (oral contraceptive pills) alter the viscosity of blood.

-Progesterone dilates vessel wall.

Congenital arteriovenous (AV) Fistula increases venous pressure.

Deep vein thrombosis can occur as a result of road traffic accidents, postoperatively, etc and can result in destruction of valves resulting in varicose veins.

Venous Drainage of Lower Limbs:

The saphenous veins can be "easily seen" in the I leg. The varicose veins, if occur, look quite ugly under the skin. Venous drainage acquires importance as blood has to flow up against the gravity. This is aided by a number of local factors, the failure of which gives rise to varicose veins.

Factors Helping Venous Return:

General factors:

- (1) Negative intrathoracic pressure, which is made more negative during Inspiration;
- (2) Arterial pressure and overflow from the capillary bed;

- (3) compression of veins accompanying arteries by arterial pulsation; and

- (4) The presence of valves which support the long column of blood, and maintain a unidirectional flow.

Local factors: These are venous, muscular and fascial.

- (1) Venous: The veins of the lower limb are more muscular than the veins of any other part of the body. They have greater number of valves. Superficial veins are connected to deep veins by perforators.
- (2) Muscular: When the limb is active, muscular contraction compresses the deep veins and drives the blood in them upwards.
- (3) Fascial: The tight sleeve of deep fascia makes muscular compression of the veins much more effective by limiting outward bulging of the muscles.

CLASSIFICATION OF THE VEINS OF LOWER LIMBS:

Veins of Lower Limb The veins may be classified into three groups.

Superficial system _ long saphenous veins and short saphenous veins and their tributaries. Perforators.

Deep system of veins.

Superficial Veins: They include the great and small saphenous veins, and their tributaries. They lie in the superficial fascia, on the surface of the deep fascia. They are this because of the presence of smooth muscle and some fibrous and elastic tissues in the walls. Valves are more numerous in the distal parts of these veins than in their proximal parts. A large proportion of their blood is drained into the deep veins through the perforating veins.

Deep Veins: These are the anterior and posterior tibial, peroneal, popliteal, and femoral veins, and their tributaries. They accompany the arteries, and are supported by powerful surrounding muscles. The valves are more numerous in deep veins than in superficial veins. They are more efficient channels than the superficial veins because of the driving force of muscular contraction.

Perforating Veins: They connect the superficial with the deep veins. Their valves permit only one way flow of blood, from the superficial to the deep veins. There are about five perforators along the great saphenous vein, and one perforator along the small saphenous vein. The relevant details of these veins are given below.

Long Saphenous Vein: Its centre lies 4 cm below and 4 cm lateral to the pubic tubercle. It is about 2.5 cm long and 2 cm broad, with its long axis directed downwards and laterally.

Surface Marking of Great or Long Saphenous Vein It can be marked by joining the following points, although it is easily visible in living subjects.

- (a) First point on the dorsum of the foot at the medial end of the dorsal venous arch.
- (b) Second point on the anterior surface of the medial malleolus.
- (c) Third point on the medial border of the tibia at the junction of the upper two-thirds and lower one-third of the leg.
- (d) Fourth point at the adductor tubercle.
- (e) Fifth point just below the centre of the saphenous opening.

It contains about 10-20 valves. There is one valve that lies just before the vein pierces the cribriform fascia and another at its termination into the femoral vein.

Tributaries:

At the commencement: Medial marginal vein from the sole.

In the leg: It communicates freely with the small saphenous vein and with deep veins. Just below the knee:

- (1) The anterior vein of the leg runs upwards, forwards and medially, from lateral side of the ankle.
- (2) The posterior arch vein is large and constant. It begins from a series of small, venous arches which connect the medial an perforators, and runs upwards to join the great saphenous vein just below the knee.
- (3) A vein from the calf: This vein also communicates with the small saphenous vein. In the thigh:
 - (1) The accessory saphenous vein. drains the posteromedial side of the thigh. It may communicate with the small saphenous vein.
 - (2) The anterior cutaneous vein of the thigh, drains the lower

part of the front of the thigh. Just before piercing the cribriform fascia:

- (1) Superficial epigastric,
- (2) superficial circumflex iliac, and
- (3) superficial external pudendal.

Just before termination: Deep external pudendal

The thoraco epigastric vein runs along the anterolateral wall of the trunk. It connects the superficial epigastric vein with the lateral thoracic vein. Thus it is an important connection between the... veins of the upper and lower limbs.

Small or Short Saphenous Vein:

Surface Marking: It can be marked by joining the following points, although this vein is also easily visible in its lower part.

- (a) A point on the dorsum of the foot at the lateral end of the dorsal venous arch.
- (b) Second point behind the lateral malleolus.
- (c) Third point just lateral to the tendocalcaneus above the lateral malleolus.
- (d) Fourth point at the centre of the popliteal fossa.

Just before piercing the popliteal fascia, it may give a communicating branch to the accessory saphenous vein. Sometimes, the whole of the small saphenous vein opens into the great saphenous vein through the accessory saphenous vein. Occasionally, the small saphenous vein ends below the knee either in the great saphenous vein, or in the deep muscular veins of the leg.

Perforating Veins: They connect the superficial with the deep veins These are classified as follows.

Indirect perforating veins: Indirect perforating veins connect the superficial veins with the deep veins through the muscular veins.

Direct Perforating veins: Direct perforating veins connect the superficial veins directly with the deep veins. The great and small saphenous veins are the large direct Perforators. The small direct perforating veins (Fig. 11.5) are summarised below.

- (A) In the thigh: The adductor canal perforator connects the great saphenous vein with the femoral vein in the lower part of the adductor canal.
- (B) Below the knee: One perforator connects the great saphenous vein or the posterior arch vein with the posterior tibial vein.
- (C) In the leg:
 - (1) A lateral perforator is present at the junction of the middle and lower thirds of the leg. It connects the small saphenous vein, or one of its tributaries with the peroneal vein.

Medially there are three perforators which connect the posterior arch vein with the posterior tibial vein.

- (2) The upper medial perforator lies at the junction of the middle and lower thirds of the leg.

- (3) The middle medial perforator lies above the medial malleolus.
- (4) The lower medial perforator lies posteroinferior to the medial malleolus. **DEEP VENOUS SYSTEM :**
This comprises the femoral and the popliteal veins, veins of venae comitantes accompanying anterior tibial, posterior tibial and peroneal arteries and peroneal arteries and valveless veins draining the calf muscles (soleal venous sinus)

EPIDEMIOLOGY

Varicose veins is now a days a common problem affecting humankind. Exactly how common, is difficult to determine, because relatively little epidemiological research has been conducted in this area. This is perhaps venous condition have a very low public health priority.

In British study comparison of questionnaire with examination findings for a self- selected group of subjects revealed a sensitivity of 76% and specificity of 86% for the questionnaire.

Only 56% of women in a departmental store in Czechoslovakia had themselves noticed the varicose veins which were diagnosed on examination.

In a study from Israel, the sensitivity of interview was 47% and 95% in men and 85% in women respectively when the prevalence of varicose veins from interview date was compared with clinical examination data.

Approximately 23% of US adults have Varicose veins. If spider telangiectasias and reticular veins are also considered, the prevalence in areas to 80% of men and 85% of women.

In UK, Assessment and treatment of varicose veins comprises a significant fact of the surgical workload. In the UK, National health service waiting list suggest that there is still considerable unmet need.

In India, Dr.Malhotra (Chief medical Officer, South eastern railway, Calcutta in India) carried an epidemiological study of Varicose veins in Indian Railroad workers from the south and north of India, with special reference to the causation and prevention of varicose veins.

A survey to determine the prevention of Varicose veins among railway men of identical socio-economic status and doing identical work of sweepers in the North and South of India showed, that overall prevalence was significantly higher among south Indian sweepers (25.08%) than among North India Sweepers (6.%) The survey included 323 men from Indians in South and 354 men from Ajmer in the north of India.

ETIOPATHOGENESIS

A number of etiologic and pathogenetic factors are involved in causing varicose veins. These are as follows:

- I) Familial weakness of vein walls and valves is the most

common cause.

- II) Increased intraluminal pressure due to prolong upright posture e.g. in nurses, policeman, surgeons etc
- III) Compression of iliac veins e.g. during pregnancy, intravascular thrombosis, growing tumour etc
- IV) Hormonal effects on smooth muscle.
- V) Obesity.
- VI) Chronic constipation.

PATHOLOGIC CHANGES

The affected veins especially of the lower extremities, are dilated, tortuous, elongated and nodular. Intraluminal thrombosis valvular deformities are often found. Histologically, there is variable fibromuscular thickening of the wall of the veins due to alternate dilatation and hypertrophy. Degeneration of the medial elastic tissue may occur which may be followed calcific foci. Mural thrombosis is commonly present, which may get organised and hyalinised leading irregular intimal thickening.

EFFECTS

Varicose veins of the legs result in venous stasis which is followed by congestion, oedema, thrombosis, stasis, dermatitis, cellulitis and ulceration, secondary infection results in chronic varicose ulcers.

SYMPTOMS AND DEFINITIONS

The severity of symptoms and signs may bear little relationship to the gravity of the underlying pathology and the physical signs. Life-threatening deep vein thrombosis may be asymptomatic, while apparently trivial varicose veins may be associated with significant complaints. There are four cardinal symptoms of lower limb venous disease:

- pain
- swelling
- discoloration
- ulceration. Pain:

Patients with uncomplicated varicose veins (dilated, tortuous veins from incompetent valves in the vein) may have an aching discomfort in the leg, itching and a feeling of swelling. Symptoms are aggravated by prolonged standing and towards the end of the day. The pain of established deep vein thrombosis is deep-seated and associated with swelling below the level of obstruction. Superficial venous thrombophlebitis ilk produces a red, painful rea overlying the vein involved. Varicose ulcer ay be painless; if it is painful, this may be relic • limb elevation.

Swelling:

Swelling (or oedema) may be associated with varicose veins, deep venous reflex and deep vein thrombosis.

Discoloration

Chronic venous insufficiency causes pigmentation due to deposition of hemosiderin (from breakdown of extravasated blood) in the skin, leading to lipodermatosclerosis. This varies in colour from deep blue/black to purple or bright red. It affects the medial aspect of the lower third of the leg, but may be lateral if superficial reflux predominates in the short saphenous veins.

Ulceration

Venous ulceration is usually seen above the medial malleolus. It only occurs with severe venous disease and patients may not seek medical attention for years. Venous ulceration is always associated with lipodermosclerosis.

CLINICAL EXAMINATION OF A CASE OF VARICOSITY OF THE LEG

Symptoms

Majority of the patients present with dilated veins in the leg. They are minimal to start with and at the end of the day they are sufficiently large because of the venous engorgement.

Dragging pain in the leg or dull ache is due to heaviness. Night cramps occur due to change in the diameter of veins. Aching pain is relieved at night on taking rest or elevation of limbs.

Sudden pain in the calf region with fever and oedema of the ankle region suggests deep vein thrombosis (DVT). Some patients with DVT may be asymptomatic.

Patients can present with ulceration, eczema, dermatitis and bleeding. • Symptoms of pruritus/itching and skin thickening.

Signs

Inspection (should be done in standing position)

- Dilated veins are present in the medial aspect of leg and the knee. Sometimes they are visible in the thigh also (refer next page for clinical classification).
- Single dilated varix at SF junction is called saphena varix. It is due to sacculated dilatation of the upper end of long saphenous vein at the saphenous opening.
- Veins are tortuous and dilated.
- A localised, dilated segment of the vein, if present, is an indication of a blowout. It signifies underlying perforator.
- Ankle flare is a group of veins near the medial malleolus.
- Complications such as ulceration, bleeding, eczema and dermatitis may be present.
- Healed scar indicates previous ulceration.

Palpation

1. Cough impulse test (Morrissey's test): This test should be done in the standing position. The examiner keeps the finger at SF junction and asks the patient to cough. Fluid thrill, an impulse felt by the fingers, is indicative of saphenofemoral incompetence.

2. Trendelenburg test: This test is done in 2 parts

- Method: The patient is asked to lie on the couch in the supine position. The leg is elevated above the level of heart and the vein emptied. SF junction is occluded with the help of the thumb (or a tourniquet) and the patient is asked to stand. Trendelenburg I: Release the thumb or tourniquet immediately. Rapid gush of blood from above downwards indicates saphenofemoral incompetence.

Trendelenburg II: The pressure at the SF junction is maintained without releasing the thumb or tourniquet. The patient is then asked to stand. Slow filling of the long saphenous is seen. It is due to perforator incompetence (retrograde flow of blood). 3. Multiple tourniquet test: It is done to find out exact site of perforators.

- Method: The patient is asked to lie supine on the couch. The vein is emptied by elevation.

As the name suggests, 3-5 tourniquets (multiple) can be applied. However, if more tourniquets are applied the exact localisation of the perforators can be made, out. It is not practical. There are mainly ankle, knee and thigh perforators. Hence, four tourniquets can be applied at various levels as mentioned below:

- 1st tourniquet: At the level of saphenofemoral junction (SF junction).
- 2nd Tourniquet: At the level of middle of the thigh, to occlude perforator in the Hunter's canal.
- 3rd Tourniquet: Just below the knee.
- 4th Tourniquet: Palm breadth (lower third of the leg above medial malleolus/ankle. Ask the patient to stand and observe appearance of veins.

Inference: Appearance of veins between first and second tourniquets indicates incompetence of thigh perforators. Between second and third indicates incompetence of knee perforators and below the fourth tourniquet indicates incompetence of ankle perforators. Usually, below knee and ankle perforators are incompetent.

On releasing the tourniquets one by one from below upwards, sudden retrograde filling of the veins occurs.

4. Schwartz test: It is done with the patient in the standing position. Place the fingers of the left hand over a dilated segment of the vein and with the right index finger tap the vein below. A palpable impulse suggests superficial column of blood in the vein and it also suggests incompetence of the valves in between the segment of the vein
5. Modified Perthes test: It is done to rule out deep vein thrombosis. The patient is asked to stand, the tourniquet is applied at SF junction and he is asked to have a brisk walk. Inference: If the patient complains of severe pain in calf region or if superficial veins become more prominent, it is an indication of deep vein thrombosis and is a contraindication for surgery.
6. Fegan's method (test): It is done to detect the site of perforators. The patient is asked to stand. The varicosity is marked with methylene blue and he is asked to lie down. The leg is elevated to empty the vein and the vein is palpated throughout its course. The defects in the deep fascia have a circular, buttonhole consistency.

Examination of varicose ulcer: It should be done by inspection and palpation. Evidence of deep vein thrombosis: Homan's test and Moses' test (vide infra) must be done in chronic DVT.

DIAGNOSIS: Varicose Vein can be diagnosed by clinical examination and through Colour Doppler USG of the veins of the leg. Varicose veins are also diagnosed by CEAP Classification, VSSD and AVVQ.

DIFFERENTIAL DIAGNOSIS: Varicose veins can be differentiated with telangiectasis, Edema, Lumps, Stasis Dermatitis.

MANAGEMENT; Education about VV, reduction of pain, optimization and maintenance of physical function and attempts to prevent or slow the progression of structural damage, are all included under the aims for the management of VV.

NONPHARMACOLOGICAL THERAPIES

Exercise : Walking is a great way to improve circulation in the legs and thereby avoiding the stasis of blood in the legs giving chances to the varicosities.

Lose weight : Losing excess weight takes off the unnecessary pressure from the legs thereby reducing the pain, tightness and night cramps.

Elevate Legs : To improve the blood circulation in the leg take breaks in the day and elevate legs above the level of the heart. To elevate the legs lie down with the legs resting on 3 or 4 pillows.

Avoid long period standing or sitting: position should be changed frequently to encourage blood flow.

Compression stockings; Compression stockings work simply by squeezing the leg, thereby reducing the amount of blood and pressure in the veins.

Laser therapy: Spider veins and Small Varicose Veins can be treated with laser treatment applied for the surface of the skin. The laser applies the intense energy on the surface of the skin that essentially destroys the small blood vessels.

PHARMACOLOGICAL THERAPIES

Oral Analgesic: Acetamorphens (paracetamol) are used for the mild to moderate pain in the legs .NSAIDS are commonly used for the severe pain.

Vitamin Supplements; Some vitamins are also used to strengthen the fragile vessel wall and consequently improving the blood circulation. vit C, K C E are commonly used.

Sclerotherapy; Sclerotherapy involves using a fine needle to inject a substance directly into the vein. This solution directly irritates the lining of the vein causing the vein to swell and blood to clot. This therapy is used for the treatment of uncomplicated varicose veins of the lower extremities showing simple dilation with competent valves.it is not used in the patients with deep vein and valvular incompetence Sclerosing Agents used in Sclerotherapy are Polidocanol , Sotradicol, Asclera, Varethena, Sodium tetrasulphate, morrhuate sodium etc.

SURGICAL INTERVENTIONS

Urgent surgical management of bleeding varicose veins Bleeding varicose veins may cause alarming and occasionally fatal haemorrhage. A varix ruptures through poor overlying skin. The leg must be elevated and bandaged. The bleeding always stops after this manoeuvre. Attempts to ligate the thin-walled and adherent vein are doomed to failure. The patient should be rested with the limb elevated for 24 hours and then mobilized with a firm supporting bandage encasing the whole limb. Rarely bleeding may resume as soon as the limb is lowered and it is necessary to under-run the varix with sutures placed through the skin. However, these sutures usually cause an increased area of dermal necrosis and are best avoided. thrombophlebitis, acute bleeding, eczema and ulceration.

Operations Available: The standard operations are the following.

1. Flush ligation and division of the long saphenous vein at the groin, together with stripping of the main trunks down to the upper calf and removal of the dilated and tortuous tributaries (LSV strip).
2. Flush ligation and division of the short saphenous vein at its termination, which is usually in the popliteal fossa, and stripping of its trunk and major tributaries (SSV strip).
3. Occasional exposure, ligation and division of ankle-perforating veins if they are grossly enlarged and incompetent.

UNANI CONCEPT INTRODUCTION

Vareed e Dawali is the disease in which swelling of the veins of the leg occur. the layers of the vein wall get paralysed which results in the swollen and nodular veins by the accumulation of the blood, Sauda and Balgham e Galeez. Because of this disease the nutrition of the leg (Ghiza E Tabayi) gets disturbed. The suffering person will be unable to walk fast or walk for long distance. The dilation of the vein walls leads to accumulation of the blood which may produce ulcers.

CAUSES

Disease is seen in the person who use to stand for long time or whose work requires standing for a long time like watchman, sales man, traffic police man, constable teachers etc.

According to Unani Concept the disease occur due to the excessive accumulation of the blood, sauda and Balgham in the veins of the legs.

The accumulated blood is more viscous but not infected. The disease is seen in men rather than women.

It is also seen in the patients with chronic constipation and liver disorders. It is rarely seen in children.

It occurs in the persons who utilizes more quantity of saudawi food.

It occurs in the persons living in hot and moist environment like Bengal.

In prone individuals it is commonly seen after the Acute diseases specially splenic disorders due to the Integumental Mawaad.

Symptoms

The swollen nodular vein appears visible on the legs which are green in colour and painful. Heaviness and tiredness of the effected limb occurs.

Difficulty In walking fast or walking for long distance.

UNANI MANAGEMENT

The effected leg should be kept in rest as long and as often as possible, it means the patient should not stand or walk for a long time.

The effected leg should be supported with the compression stockings (Asabah) while standing or walking.

The Asabah should be tied from heels to wards the thigh i.e. from below upwards.

In mild cases of vared e dawali the compression stockings gives relief but when it increases other treatment should be given like hot fomentation of the veins, General health and Nutrition of the patient should be improved. The leg should be kept at rest at the raised level from the body.

Blood purifying Medicines and laxatives should be used to avoid constipation. Munaffis e Balgham medicines and Muqrij e Sauda medicine should be used.

Venesection should be done in the engorged veins, the blood should be removed and the vein should be emptied. the massage should be done to remove accumulated blood from the veins and bandage should be applied to the leg from below upwards which may give a relief to the symptoms.

According to Jalinoos Varicose vein should not be incised, it may weaken the leg by interrupting the path of the blood circulation and nutrition.