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Varicose Vein of Bilateral Lower Limb: A Review

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ABSTRACT

Varicose veins are tortuous, winded veins in the subcutaneous tissues of legs. These veins are visible and can be easily diagnosed clinically. The varicose veins are usually incompetent and may result in the reflux of blood and ultimately venous hypertension. Varicose veins are usually found asymptomatic however it may result in local pain, heaviness in the limb, change in the color, itching, dryness and may develop ankle swelling including cramps. Conditions that increase pressure on leg veins such as obesity, sedentary life style, lack of activity or exercise, hormonal fluctuations during pregnancy, menopause, smoking, heavy weight lifting may lead to varicose veins.

Keywords: - Varicose, Reflux, Vein, Incompetent.

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INTRODUCTION

The great saphenous vein is a large, subcutaneous superficial vein of the leg. It is the largest vein in the body running along the length of the lower limb, returning blood from the foot, leg and thigh to the deep femoral vein at the femoral triangle. Veins have one-way valves that prevent blood from flowing backwards. When the walls of a vein become weak especially near a valve, the valve becomes leaky and malfunctioning. The blood then begins to flow backwards instead of towards the heart. Once this happens, it puts a lot of pressure on the vein which can cause the vein to widen and the occurrence of more leaky valves. Varicose veins often affect the legs. Varicose veins are more common in women than in men and are linked with heredity,[1] other related factors are pregnancy, obesity, menopause, aging, prolonged standing, leg injury and abdominal straining. Varicose veins are unlikely to be caused by crossing the legs or ankles.[2] More recent research has shown the importance of pelvic vein reflux (PVR) in the development of varicose veins. Hobbs showed varicose veins in the legs could be due to ovarian vein reflux[4] .Whiteley and his team reported that both ovarian and internal iliac vein reflux causes leg varicose veins and that this condition affects 14% of women with varicose veins or 20% of women who have had vaginal delivery and have leg varicose veins[6].Varicose veins could also be caused by hyperhomocysteinemia in the body, which can degrade and inhibit the formation of the three main structural components of the artery.Homocysteine permanently degrades cysteine disulfide bridges and lysine amino acid residues in proteins, gradually affecting function and structure. Simply put, homocysteine is a 'corrosive' of longliving proteins, i.e. collagen or elastin, or lifelong proteins, i.e. fibrillin. These longterm effects are difficult to establish in clinical trials focusing on groups with existing artery decline.[10]

MATERIAL AND METHODS

The databases used to get information from journals and articles are Google, Pub Med, Science Direct, Scopus and Google Scholar. For the search of primordial and current Unani Classical literature author visited Library of Regional Research Institute of Unani Medicine (RRIUM), Srinagar, J & K, India.

Incidence

A study in UK population shows that it affects 40 % in men and 32% in woman, however women are found more in clinics for treatment.[11] Varicose veins often appear first in

pregnancies can make them more worse. Varicose veins can also be found in teen age and also shows positive family history in it occurrence.[12] The risk of varicose vein increase with aging. The vein becomes weak with age and eventually wear and tear can occur which many cause the valvular malformation to malformation.

Precaution

- To avoid the prolonged standing.
- Maintain the body weight as per medical recommendation.
- Try to check and regulate the hormone levels.
- Post-menopausal care.
- Management of life style during pregnancy.
- Avoid sedentary work.
- Avoid heavy weight lifting.
- Precaution and prophylactic care for genetically predisposed family.
- Elevating the leg .
- Wearing the intermittent pneumatic compression devices have been shown to reduce swelling and regulate circulation.

Treatment

The immediate treatment for varicose veins is compression stockings which will squeeze the legs and ultimately squeezing the veins to let the blood flow easily towards the heart. Certain exercises may be good for varicose veins such as swimming, Yoga, and Pilates. Regimental therapy like massage, steaming, cupping and leeching also helps in the management of the varicose veins. The other modalities of treatment are

- Laser surgeries for varicose veins.
- Catheter assisted procedures using radiofrequency or laser energy.
- High ligation and vein stripping.
- Endoscopic vein surgery in severe cases.

Some other picular methods of treatment

I. **Stripping**

II. **Chiva**

III. **Sclerotherapy**

IV. **Endovenous Thermal Ablation**

I-Stripping

Stripping consists of removal of all or part of the saphenous vein. The complications included deep vein thrombosis (5.3%) [13], pulmonary embolism (0.06%), and wound complications including infection (2.2%). There is evidence for the great saphenous vein regrowing after stripping.[14]In addition, since stripping removes the saphenous main trunks, they are no longer available for use as venous bypass grafts in the future .[15]

II- Chiva

Experimental evidence shows that the ambulatory conservative hemodynamic correction of venous insufficiency method (CHIVA), which intends saving the veins, decreases varicose veins and is safer than vein stripping in those with chronic venous insufficiency.[16] CHIVA comes from the French translation for the technique, *conservatrice et hémodynamique del'insuffisance veineuse en ambulatoire*. The operation involves performing one to four small incisions on average, under local anesthesia, to remove by precise ligatures abnormal blood flow due to valvular incontinence and responsible for varicose vein dilation. The patient returns home the same day. This method tends to correct the venous functions in order to cure the symptoms of venous insufficiency such as varicose veins, edema, and ulcers.[17] The superiority of the CHIVA treatment in recurrences has been demonstrated in several Randomized Controlled Trials judged to be of average quality.[18-26]

III- Sclerotherapy

A commonly performed non-surgical treatment for varicose and "spider" leg veins is sclerotherapy, in which medicine (sclerosant) is injected into the veins to make them shrink. The medicines that are commonly used as sclerosants are polidocanol, sodium tetradecyl sulphate (STS), Sclerodex (Canada), Hypertonic Saline, Glycerin and Chromated Glycerin. Foams may allow more veins to be treated per session with comparable efficacy. Sclerotherapy has been used in the treatment of varicose veins for over 150 years.Sclerotherapy is often used for telangiectasias (spider veins) and varicose veins that persist or recur after vein stripping.[28,29] Sclerotherapy can also be performed using foamed sclerosants under ultrasound guidance to treat larger varicose veins, including the great asphenous and small saphenous veins. [30,31] Complications of sclerotherapy are rare but can include blood clots and ulceration. Anaphylactic reactions are "extraordinarily rare but can be life-threatening," and doctors should have resuscitation equipment ready.[32, 33]

IV- Endovenous thermal ablation

There are three kinds of endovenous thermal ablation treatment possible: laser, radiofrequency, and steam.[34] The Australian Medical Services Advisory Committee (MSAC) in 2008 determined that endovenous laser treatment/ablation (ELA) for varicose veins "appears to be more effective.[35] Complications for ELA include minor skin burns (0.4%) and temporary paresthesia (2.1%).[36] Complications for ERA include burns, paraesthesia, clinical phlebitis and slightly higher rates of deep vein thrombosis (0.57%) and pulmonary embolism (0.17%). Steam treatment consists of injection of pulses of steam into the sick vein. This treatment which works with a natural agent (water) has similar results than laser or radiofrequency.[37]The steam presents a lot of post-operative advantages for the patient. [38]

V- Other

Other surgical treatments are: Ambulatory phlebectomy Vein ligation is done at the saphenofemoral junction after ligating the tributaries at the sephanofemoral junction without stripping the long saphenous vein provided the perforater veins are competent and absent DVT in the deep veins. With this method, the long saphenous vein is preserved. Cryosurgery- A cryoprobe is passed down the long saphenous vein following saphenofemoral ligation. Then the probe is cooled with NO_2 or CO_2 to -85 ^oF. The vein freezes to the probe and can be retrogradely stripped after 5 seconds of freezing. It is a variant of Stripping. The only point of this technique is to avoid a distal incision to remove the stripper. [27]

CONCLUSION

Varicose vein is a commonest manifestation due to change in life style and work culture. Various pharmacological

therapies where used like anticoagulant, Subcutaneous LDUH, LMWH and phlethysmography were later replaced by surgical intervention and superseded by venous sclerotherapy, endovenous laser ablation, radiofrequency ablation , ambulatory phlebotomy, foam sclerotherapy and cutaneous laser therapy. In Unani Medicine the intervention of Hirudotherapy proven highly efficacious in varicose veins.Leeches not only suck blood over the varicose veins but also inject the bioactive substances like Hirudin, Hylurinidase, Acetylcholine, Hirudin, Decorcin, Calin, Typtase inhibitors and natural steroids, which is observed to regulate the venous flow, improves the valvular functioning and thus preventing the back flow of venous blood. Hirudotherapy also balances deranged humoral level of the body which may help in improving the general body vascular tone and venous valvular physiology which prevents the predisposition of varicose vein in the subjects with history of recurrence or with positive family history.

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