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Medical Treatment of Varicose Veins

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Risk factors for varicose veins include increased intraabdominal pressure as chronic cough, constipation, family history of venous disease, female sex, obesity, older age, pregnancy, and prolonged standing. The exact pathophysiology is debated, but it involves a genetic predisposition, incompetent valves, weakened vascular walls, and increased intravenous pressure. A heavy, achy feeling; itching or burning; and worsening with prolonged standing are usual symptoms of varicose veins. Potential complications include infection, leg ulcers, stasis changes, and thrombosis. Some conservative treatment options are avoidance of prolonged standing and straining, elevation of the affected leg, exercise, external compression, loosening of restrictive clothing, medical therapy, modification of cardiovascular risk factors, reduction of peripheral edema, and weight loss. More aggressive treatments include external laser treatment, injection sclerotherapy, endovenous interventions, and surgery. Comparative treatment outcome data are limited. There is little evidence to preferentially support any single treatment modality. Choice of therapy is affected by symptoms, patient preference, cost, potential for iatrogenic complications, available medical resources, insurance reimbursement, and physician training.

Lifestyle changes include avoiding standing or sitting for long periods without taking a break. When sitting, avoid crossing your legs. Keep legs raised when sitting, resting, or sleeping. Do physical activities to get legs moving and improve muscle tone. In overweight or obese, try to lose weight. This will improve blood flow and ease the pressure on veins. Avoid wearing tight clothes, especially those that are tight around waist, groin and legs. Avoid wearing high heels for long periods. Lower heeled shoes can help tone calf muscles.

External compression devices (e.g., bandages, support stockings, intermittent pneumatic compression devices) have been recommended as initial therapy for varicose veins. Typical recommendations include wearing 20 to 30 mm Hg elastic compression stockings with a gradient of decreasing pressure from the distal to proximal extremity. Inelastic, elastic, intermittent pneumatic is the standard of care and is associated with a decreased rate of ulcer recurrence. Although compression therapy is of proven benefit, the effect of intermittent pneumatic therapy is less evident. It reduces oedema and pain, improves venous circulation and enhances ulcer healing. Lifelong maintenance of compression therapy after ulcer healing reduces the rate of recurrence. However, in the presence of eczematous dermatitis, obesity, pain and discharging ulcer, strict adherence to the regime of compression therapy becomes cumbersome. Clinically significant arterial insufficiency and heart failure are contraindications to compression therapy. Elastic compression sustains pressure during both ambulation and rest. In ulcerations, a pressure of around 35–40 mmHg is necessary. In the absence of ulcer, a pressure between 25 and 30 mmHg may suffice. Elastic bandages or stockings may be used. The latter is more useful as it provides a graded pressure from below upwards, highest being at the ankle. It should be taken off at night and changed usually after 6 months as pressure is reduced by regular washing. Multilayered elastic bandages have proved to be more effective than single layered ones, but require skilled application and frequent change in the presence of discharge.

DRUGS

Pentoxifylline (400 mg three-times daily) has been shown to be of additive beneficial effect to compression. It acts by action on leucocyte metabolism, inhibition of platelet aggregation, reduction in viscosity of blood and consequent improvement in microcirculation. But its effect as monotherapy has not been shown to be cost effective. Micronised purified flavanoid fraction-Daflon 500 mg and prostaglandin E1 analogue-are used due to their action on leucocyte metabolism. These drugs are most effective when used in conjunction with compression. Aspirin (300 mg daily) is effective when used with compression therapy. It acts by reducing platelet adhesion. Antibiotics are used in case of suspected cellulitis, and its routine use is not recommended. Oral zinc, despite having an anti-inflammatory effect, has not been shown to be useful. Various ayurvedic preparations have been used as. Apple Cider Vinegar, Olive Oil, Cayenne Pepper, Garlic, Butcher's Broom, , Hawthorn berries, blueberries, blackcurrants, blackberries, horse chestnut, Gotu kola, Bromelain has been tried. Other drugs as levamisole, doxycycline, hydroxyethylrutosides, calcium dobesilate has also been tied with variable results.

Laser machines that deliver various wavelengths of light through the skin and into the blood vessels are available to treat varicose veins. The light is absorbed in the vessels by hemoglobin, leading to thermocoagulation. Types of lasers include pulsed dye, long pulsed, variable pulsed, neodyxiumdoped yttrium aluminum garnet (Nd:YAG), and alexandrite lasers. Potentially, any small, straight vein branch is amenable to external laser ablation. However, laser therapy has typically been used on

telangiectasias and smaller vessels rather than on larger veins. Long-pulsed lasers have been shown to completely clear veins with diameters less than 0.5 mm. For veins with diameters of 0.5 to 1.0 mm, improvement but not clearance is achieved.

Sclerotherapy involves injecting superficial veins with a substance that causes them to collapse permanently. The substance displaces the blood and reacts with the vascular endothelium, sealing and scarring the vein. A variety of products are used, including hyperosmotic solutions (e.g., hypertonic saline), detergent solutions (e.g., sodium tetradecyl sulphate/polidaconol), and corrosive agents (e.g., glycerin). Injections typically work better on small (1 to 3 mm) and medium (3 to 5 mm) veins; however, a precise diameter used to make treatment decisions is lacking. Although sclerotherapy is a clinically effective and cost-effective treatment for smaller varicose veins, concerns about the development of deep venous thrombosis and visual disturbances, and the recurrence of varicosities have been noted.

CONCLUSION

Varicose veins are treated with lifestyle changes and medical procedures. The goals of treatment are to relieve symptoms, prevent complications, and improve appearance. Lifestyle changes often are the first treatment for varicose veins. These changes can prevent varicose veins from getting worse, reduce pain, and delay other varicose veins from forming. Compression stockings create gentle pressure up the leg. This pressure keeps blood from pooling and decreases swelling in the legs. Many of the patients with varicose veins will require active intervention in form of Surgery, Endovenous ablations etc. and medical treatment may be adjunct to that.