

Chronic Venous Insufficiency with Emphasis on Its Clinical Features Diagnostic Evaluation and Treatment Strategies

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DESCRIPTION

Chronic Venous Insufficiency (CVI) is a long-term condition that affects the normal flow of blood through the veins, most commonly in the lower limbs. It occurs when the valves inside the veins, which normally ensure that blood flows upward toward the heart, become damaged or weakened. As a result, blood pools in the veins of the legs, leading to increased pressure and a range of symptoms. CVI is a common vascular disorder, particularly among older adults, people with a history of deep vein thrombosis, individuals who stand or sit for prolonged periods and those with obesity or a family history of venous disease. Although it is not usually life-threatening, CVI can significantly reduce quality of life if not properly managed.

The clinical features of chronic venous insufficiency develop gradually and often worsen over time. One of the earliest and most common symptoms is leg swelling, especially around the ankles and lower legs, which tends to increase after long periods of standing or sitting and improve with leg elevation. Patients may also experience a feeling of heaviness, aching, throbbing, or fatigue in the legs. Skin changes are another important feature of CVI and may include dryness, itching and discoloration, particularly a brownish or purplish pigmentation around the ankles caused by the leakage of blood components into surrounding tissues. Over time, the skin may become thickened and hardened, a condition known as lipodermatosclerosis. In more advanced cases, painful venous ulcers can develop, usually near the medial ankle, which are slow to heal and prone to recurrence.

Diagnosis of chronic venous insufficiency is based on a combination of clinical examination and diagnostic tests. A healthcare provider will assess symptoms, examine the legs for swelling, varicose veins and skin changes and review the patient's medical history. Duplex ultrasound is the most commonly used diagnostic tool, as it allows visualization of blood flow in the veins and helps identify valve dysfunction or venous obstruction. Accurate diagnosis is essential to determine the severity of the condition and guide appropriate treatment.

Treatment of chronic venous insufficiency aims to reduce symptoms, improve venous blood flow, prevent complications and enhance the patient's quality of life. Conservative management is often the first line of treatment and includes lifestyle modifications and compression therapy. Compression stockings are a cornerstone of CVI management, as they apply graduated pressure to the legs, helping to reduce swelling and promote upward blood flow. Lifestyle changes such as regular physical activity, especially walking, weight management, leg elevation and avoiding prolonged standing or sitting can also significantly improve symptoms. Patients are often advised to practice good skin care to prevent dryness, irritation and infection.

When conservative measures are insufficient, medical and interventional treatments may be considered. Medications such as venoactive drugs can help reduce symptoms like swelling and discomfort, although they do not cure the underlying condition. In cases involving significant varicose veins or severe venous reflux, minimally invasive procedures may be recommended. These include endovenous thermal ablation, sclerotherapy, or radiofrequency treatment, which aim to close or remove damaged veins and redirect blood flow to healthier veins. Surgical options, though less commonly used today, may be necessary in advanced or complicated cases.

CONCLUSION

In Long-term management of chronic venous insufficiency requires ongoing care and patient adherence to treatment recommendations. Early recognition and intervention are important in preventing disease progression and complications such as venous ulcers. With appropriate treatment and lifestyle adjustments, many individuals with CVI can effectively control symptoms and maintain an active, healthy life. Understanding the clinical features and available treatment options empowers patients and healthcare providers to work together in managing this chronic but manageable condition.

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