

# Clinical Evaluation and Treatment Outcomes in Patients with Chronic Venous Disorders

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## DESCRIPTION

Chronic Clinical evaluation and treatment outcomes in patients with Chronic Venous Disorders (CVD) represent a cornerstone of vascular medicine, addressing a spectrum of conditions from varicose veins to venous ulcers that affect millions worldwide. Effective management hinges on systematic assessment and evidence-based interventions, yielding measurable improvements in symptoms, quality of life, and complication rates.

Evaluation begins with a detailed history, capturing symptoms like leg heaviness, swelling, pruritus, and skin changes, often exacerbated by prolonged standing. Risk factors such as obesity, prior Deep Vein Thrombosis (DVT), pregnancy, or family history guide suspicion. Physical examination, performed with the patient standing in a warm room to engorge veins, reveals telangiectasias, reticular veins, varicose dilation, edema, pigmentation, and ulcers classified via the CEAP system (Clinical-Etiological-Anatomical-Pathophysiological). C1 denotes telangiectasias, progressing to C6 for active ulcers. Duplex ultrasound serves as the gold standard, noninvasive imaging that maps reflux duration (>0.5 seconds pathologic), obstruction, and segmental involvement (superficial, deep, perforators). It employs B-mode for anatomy, color Doppler for flow direction, and spectral analysis for velocity, achieving >95% sensitivity. Adjunctive tools include plethysmography for volume changes and venous pressure measurements, though reserved for complex cases. Severity scoring via Venous Clinical Severity Score (VCSS; 0-30) and patient-reported Aberdeen Varicose Vein Questionnaire (AVVQ) quantify burden, correlating CEAP stage with disability.

First-line therapy emphasizes compression 20-30 mmHg stockings reduce edema in 80% of C3-C4 cases, healing 60-70% of ulcers within 12 weeks when combined with elevation and exercise. Venoactive drugs like micronized purified flavonoid fraction alleviate pain (50% response rate). Lifestyle modifications, including weight loss, yield sustained benefits, with adherence preventing progression in 75% of early-stage patients. Endovascular ablation dominates for reflux: Endovenous Laser Ablation (EVLA) or Radiofrequency Ablation (RFA) achieves 95-98% occlusion at 5 years, with VCSS dropping 5-10 points and AVVQ improving 70%. Recurrence remains 10-15%, lower than

surgery's 30%. Ultrasound-guided foam sclerotherapy suits tributaries, closing 80-90% at 2 years with minimal downtime. For deep disease or recurrence, stenting iliac veins restores patency in 85% of nonthrombotic iliac vein lesions, slashing pain scores by 60%. Surgical options like ligation/stripping, now less common, report 80% success but higher morbidity (10% infection). Ulcer care integrates skin grafts and extracellular matrix, healing 85% refractory cases.

Prospective studies show CEAP C2-C3 patients post-ablation enjoy 90% symptom resolution at 1 year, versus 50% with compression alone. C5-C6 cohorts face 20-30% recurrence, tied to non-compliance, obesity (OR 2.5), and residual reflux. Quality-of-life gains persist 5 years, with ulcer-free rates >80% under surveillance. Multivariate analysis identifies duplex-confirmed reflux closure as the strongest outcome predictor. Multidisciplinary follow-up duplex at 3-6 months, then annually optimizes durability, reducing reinterventions by 40%. Emerging metrics like wound healing trajectories and biomarkers (e.g., MMP-9) refine prognostication.

In perspective, evolving paradigms shift toward personalized, minimally invasive strategies, bolstered by CEAP/VCSS stratification. Outcomes underscore early intervention's value: 5-year ulcer prevention exceeds 90% in treated cohorts, transforming CVD from debilitating to manageable, though equity gaps in access persist.

## CONCLUSION

In conclusion, chronic venous disorders are prevalent conditions that significantly impact patient well-being. Comprehensive clinical evaluation, including detailed history, physical examination and diagnostic imaging, is essential for accurate diagnosis and treatment planning. Management strategies range from conservative measures and pharmacologic therapy to minimally invasive and surgical interventions, modified to disease severity and patient factors. Treatment outcomes are generally favorable when interventions are timely and individualized, with significant improvements in symptoms, quality of life and prevention of disease progression. Ongoing research and advances in venous therapies continue to enhance

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