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Successful management of a chronic venous ulcer via Varithena sclerotherapy for secondary saphenous vein reflux: A novel approach

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Abstract

Chronic venous ulcers are often treated with compression, debridement, and procedures targeting great saphenous vein reflux. This case highlights the successful use of Varithena foam sclerotherapy, stab phlebectomy, and excisional debridement to manage a refractory venous ulcer without great saphenous vein involvement. A 67-year-old man with chronic venous insufficiency and a 10-year non-healing medial ankle ulcer demonstrated secondary saphenous reflux with incompetent tributaries. This minimally invasive, multimodal intervention resulted in successful wound healing. The case underscores the potential role of targeting secondary venous pathways when great saphenous vein reflux is absent.

Keywords: Chronic venous ulcer, Varithena, foam sclerotherapy, saphenous reflux, venous insufficiency, phlebectomy

Introduction

Chronic venous ulcers are managed with compression, debridement, and procedural interventions, directed primarily at great saphenous vein (GSV) reflux. This case presents a novel procedural method with Varithena foam sclerotherapy, stab phlebectomy, and excisional debridement to successfully treat a chronic venous stasis ulcer that was refractory to standard therapies.

Case Presentation: A 67-year-old man with a history of chronic venous insufficiency (CVI) and varicose veins had a 10-year history of a non-healing right medial ankle venous stasis ulcer. The ulcer had gradually enlarged despite ongoing compression therapy and local wound management and was painful with intermittent drainage. Physical exam revealed a 13×10 cm ulcer with irregular borders, fibrinous slough, and extensive fibrosis. Venous duplex ultrasonography demonstrated secondary reflux of the saphenous vein with incompetent varicose tributaries feeding the ulcer but, notably, without GSV involvement. The ulcer was classified as CEAP C6, denoting chronic venous insufficiency with active ulceration. Given the failure of conservative management due to persisted venous hypertension and secondary venous reflux, a multi-modal procedural intervention was introduced which included Varithena foam sclerotherapy, stab phlebectomy, and excisional debridement of fibrotic ulcer tissue.

Discussion: Our experience suggests that minimally invasive techniques may have a more widespread role in the treatment of venous ulcers beyond GSV reflux. The GSV is responsible for most cases of superficial venous insufficiency, while small vein insufficiencies account for only about 10% of cases (1). Evaluating collateral circulation such as smaller vein insufficiencies offers an alternative approach to understanding and managing non-healing ulcers.

Varithena foam sclerotherapy is widely used for treating GSV reflux; however, its role in secondary saphenous vein incompetence remains underexplored. In a study by Rodrigo Oliveira, sclerotherapy was performed, and ultrasound imaging was used to assess small saphenous veins in addition to the GSV.

The study found that “all veins treated with sclerotherapy were non-compressible with the transducer, exhibited parietal thickening, and contained luminal content with a homogenous, predominantly hypoechoic appearance” (2). This underscores the importance of collateral vessels in sustaining chronic ulcer healing.

Alongside using the Varithena procedure for ablation of the secondary saphenous vein, the integration of stab phlebectomy for extraction of varicose tributaries, and excisional debridement for elimination of fibrotic ulcer tissue highlights the synergistic effects such procedures can have.

Together, these interventions target both venous insufficiency and the chronic wound environment, enhancing tissue oxygenation and expediting healing.

Conclusion

The case draws attention to the detection of secondary venous incompetence in chronic venous ulcers and justifies increased application of less invasive techniques like foam sclerotherapy as treatment. By combining innovative therapies with well-established practices, this comprehensive approach addresses the underlying cause of venous ulcers, minimizes the risk of recurrence, and ultimately improves long-term patient outcomes and quality of life.

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