Ablate early the superficial reflux but don't neglect deep reflux or obstruction

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The results of the Early Venous Reflux Ablation (EVRA) trial reinforced the need for early ablation of superficial venous reflux for Clinical, Etiology, Anatomy, and Pathophysiology (CEAP) class 6 disease. The EVRA trial compared the effect of early (within 2 weeks) vs deferred (after 6 months) endovenous ablation of superficial venous reflux in addition to standard compression management. Early ablation was associated with a reduction in healing time and an increase in ulcer-free time along with improvement in quality of life.[1] These long-anticipated results have opened the way to early venous ulcer relief for many of our patients; but as vascular experts, we may have a lot more to offer to a much larger population that was not addressed by this trial: those with deep venous reflux or obstruction.

Real-world data indicate that variable combined patterns account for more than two-thirds of patients with venous ulcers, and isolated superficial reflux is seen in only 23%.[2] In the EVRA trial, the median ulcer duration of the participants was ~3 months, which may not be representative of the typical venous ulcer patient who has more long-standing disease. The most common reason for trial ineligibility was an ulcer that had been present for >6 months (1772/6555 screened patients).[1] Patients with deep venous obstruction were (appropriately) excluded from the EVRA trial, and 33% had deep vein along with the superficial reflux. Although the EVRA trial reported that the benefits of treating superficial venous reflux can be attained even in the presence of concomitant deep venous reflux, this was not supported by the analysis of the results, as the effect of concomitant deep venous reflux was not evaluated. The Effect of Surgery and Compression on Healing and Recurrence (ESCHAR) trial showed that at both 12 months and 4 years, the ulcer recurrence rate was significantly lower in the compression/surgery group in patients with superficial venous reflux and segmental deep venous reflux but not in patients with total deep venous reflux.[3]

Taking these into consideration, there is a large population of patients with chronic venous ulcers that may benefit from further investigation and treatment of their deep venous system.[4] The pelvic outflow is rarely routinely investigated in clinical practice, and normal findings on infrainguinal ultrasound scan cannot exclude the presence of a significant proximal obstruction. Apparently, iliac vein stenting on central stenosis seems to provide ulcer healing and symptomatic improvement irrespective of axial or multisegment reflux.[5] Raju et al,[6] in a consecutive series of 192 limbs with nonhealing venous leg ulcers that failed to respond to conservative management, investigated both the superficial and the deep venous system. Based on venography or intravascular ultrasound, there was a plausible reason to perform iliac vein stenting in 94% of studied cases, and this was combined with ablation of the superficial reflux when present. With only 19% of cases receiving saphenous ablation alone, small ulcers (<1 inch) had an 81% healing rate by 14 weeks, and the overall ulcer healing was 75% at 5 years.

In conclusion, if superficial reflux is identified, its treatment should be prioritized as it is much simpler, cheaper, and low risk and can be at least effective in symptom resolution and ulcer healing in patients with combined superficial and segmental deep venous reflux. The presence of a history of deep venous thrombosis, persistent ulcer despite saphenous ablation, significant leg swelling or pain disproportionate to reflux and the extent and size of the varicose veins, deterioration of lipodermatosclerosis, and pigmentation in patients with adequate treatment of superficial venous reflux are good indicators to pursue intravascular ultrasound and to consider iliac vein stenting if significant iliac vein stenosis is identified. Last but not least, there is a small group of patients with axial venous reflux in the absence of significant iliac vein stenosis. These patients could be considered for deep valve reconstruction if their symptoms persist in spite of adequate management of the superficial venous reflux.

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REFERENCES

1. Gohel MS, Heatley F, Liu X, Bradbury A, Bulbulia R, Cullum N, et al. A randomized trial of early endovenous ablation in venous ulceration. N Engl J Med 2018;378:2105-14.

2. Labropoulos N, Leon M, Geroulakos G, Volteas N, Chan P, Nicolaides AN. Venous hemodynamic abnormalities in patients with leg ulceration. Am Surg 1995;169:572-4.
3. Gohel MS, Barwell JR, Taylor M, Chant T, Foy C, Earnshaw JJ, et al. Long term results of compression therapy alone versus compression plus surgery in chronic venous ulceration (ESCHAR): randomised controlled trial. BMJ 2007;335:83.
4. Montminy ML, Jayaraj A, Raju S. A systematic review of the efficacy and limitations of venous intervention in stasis ulceration. J Vasc Surg Venous Lymphat Disord 2018;6:376-98.
5. Raju S, Darcey R, Neglén P, Flowood J. Unexpected major role for venous stenting in deep reflux disease. J Vasc Surg 2010;51: 401-8; discussion: 408.
6. Raju S, Kirk O, Jones T. Endovenous management of venous leg ulcers. J Vasc Surg Venous Lymphat Disord 2013;1:165-73.

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