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Treatment strategies of iliac vein stenosis

We read with interest the article by Guo et al[1] entitled "Effectiveness of iliac vein stenting combined with high ligation/endovenous laser treatment of the great saphenous veins in patients with Clinical, Etiology, Anatomy, Pathophysiology class 4 to 6 chronic venous disease." Lower extremity chronic venous disease and venous leg ulcers are important health problems in terms of labor loss and cost. Iliac vein compression syndrome may be accompanied by superficial venous system reflux. Dedicated stents should be used for severe iliac vein lesions, but choice of treatment for superficial reflux is at the surgeon's discretion.[2]

We have some questions about the study of Guo et al. What about assessment of perforator veins—did the authors exclude patients with severe perforating venous insufficiency? In addition to presence of superficial and deep venous insufficiency, perforating venous reflux is an important cause of venous ulcers in the lower extremity. Current treatment strategies recommend ablation of both the incompetent superficial veins and pathologic perforating veins if the incompetent perforating vein (size >3.5 mm and a reflux duration of >0.5 second) is located under the bed of an ulcer.[3]

In the manuscript, the authors performed high ligation of saphenous vein before the endovenous ablation procedure. In the literature, endovenous thermal ablation is currently recommended as the first-choice treatment of superficial venous insufficiency without any open surgical procedure.[4] Why did the authors perform both procedures for these patients?

Moreover, there are no detailed data about the endovenous ablation procedure, such as tumescent anesthesia use and great saphenous vein diameters. Saphenous veins wider than 5 mm are more likely to cause symptoms,[5] so the main reason for symptoms may be the iliac vein compression in patients with smaller (<5 mm) saphenous veins.

Finally, four patients had stent restenosis during follow-up, as seen in Table II. Did the authors perform any endovascular procedures for these patients or follow with medications alone?

We congratulate Guo et al for their valuable and safe treatment methods for iliac vein stenosis. We would like to hear the authors' opinions on these matters.

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Reply

We appreciate the interest of Dr Kocaaslan in our recently published study of treatment strategies of patients with nonthrombotic iliac vein compression syndrome and severe chronic venous disease (Clinical, Etiology, Anatomy, and Pathophysiology clinical class >4).[1] Pathologic perforating veins are known to be crucial in the development of advanced venous disease.[2] A study by Lin et al[3] revealed that the degree of iliac vein compression correlated with the number and diameter of perforating veins. Therefore, we did not exclude patients with severe perforating venous insufficiency from our study. The patients had undergone color flow duplex ultrasound before the procedure to check for incompetent superficial veins, deep veins, and perforating veins. In addition, intraoperative ultrasound monitoring was performed to check for incompetent perforating veins under the ulcer and to guide endovenous laser ablation (EVLA). In our study, treatment of perforating veins followed the guidelines of the American Venous Forum.[2]

Whether to combine EVLA with high ligation (HL) of the great saphenous vein (GSV) is still controversial. A clinical study comparing EVLA with and without HL for the treatment of varicose GSVs found no major difference in clinical outcomes during a 6-year follow-up period. However, the HL/EVLA group had fewer clinical recurrences, less reflux, and fewer side branches compared with the EVLA-alone group.[4] In our study, another HL/EVLA was performed to reduce the recanalization of the GSV and to decrease the risk of pulmonary embolisms. Endovenous ablation procedures were detailed previously.[5]

As noted in our original publication, four patients had stent restenosis during the follow-up period. One patient with asymptomatic restenosis rejected further interventions. The other three patients received percutaneous transluminal balloon dilation to deal with in-stent stenosis.

Varicose veins are a multifactorial disease without definitive stepwise deterioration from Clinical, Etiology, Anatomy, and Pathophysiology classes 2 to 6.[6] GSV diameters were not recorded during our study, and hence the main reason for symptoms remains elusive. Many factors contributing to the development and clinical features of iliac vein compression syndrome need further investigation, especially related to the hemodynamic changes and the natural progression of clinical symptoms.

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