

LETTERS TO THE EDITORS

Regarding "Does surgical correction of the superficial femoral vein valve change the course of varicose disease?"

To the Editors:

We read with interest the article by Lurie et al (*J Vasc Surg* 2001;33:361-8). We agree with the conclusion that the presence of superficial femoral vein (SFV) incompetence is associated with a more severe chronic venous insufficiency, and we believe that a primary deep venous insufficiency (PDVI) is involved in the pathogenesis of a relevant number of both primary and recurrent varicose veins. In the control group, the authors found 11% recurrent varicosities, and we found a PDVI in 28% of 246 extremities affected by recurrent varicose veins.¹

Concerning the discordance about the observations that superficial venous surgery abolishes the deep venous reflux, we feel that this finding is correlated above all to the reflux grade. In our experience a third- to fourth-grade reflux cannot be abolished by saphenous surgery, but a first- to second-grade can, which is in accordance with the overload theory.² In this paper the authors do not refer to the reflux grade (even if in 86 patients a retrograde venography was performed). However, the affirmation that only 12 extremities demonstrated popliteal vein incompetence makes us think that the majority of patients were only affected by a second-grade reflux. With this hemodynamic pattern, an internal valvuloplasty seems to have been excessive, requiring a venotomy and anticoagulant therapy. The technique for deep vein reconstructive surgery is related to an intraoperative milking maneuver.³ Valvular prolapse is probably a multiphase process: in the first stages, a correction may be obtained by a banding and external valvuloplasty, which are easier and more rapid procedures and do not need venotomy or anticoagulant therapy.⁴

Moreover, I disagree with the authors' view that it was not necessary to examine the profunda femoris vein (PFV) for valvular dysfunction: the PFV incompetence could prejudice the results of an SFV valvuloplasty.^{5,6}

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Reply

We have read with interest the letter of Dr Guarnera regarding our article "Does surgical correction of the superficial femoral vein valve change the course of varicose disease?" (*J Vasc Surg* 2001;33:361-8). He expresses his concerns and opinion regarding several points of our report.

First, he sees agreement between the incidence of recurrent varicose veins reported in our study and his own findings of 28% primary deep venous insufficiency (PDVI) in extremities with recurrent varicose veins. Although we did not address this issue in the study, the incidence of recurrent varicosities after the correction of deep reflux in our patient group was less than half of that in the control group (4.8% and 11.3%, respectively).

Dr Guarnera's major concern appears to be that we did not grade the reflux on a four-grade scale and that the majority of our patients might have second-grade reflux.

One of the limitations of our study is due to the state of knowledge and available technology at the time when the trial was started (1983). In order to maintain the integrity of the study, we believe it is necessary to retain exactly the same techniques throughout all phases of the trial, including the reflux assessment. Venography was used in this study only during initial enrollment of the patients as a means to validate ultrasound data (very new at that time). After 86 venographies confirmed high accuracy of ultrasound results, we continued with ultrasound as the definitive technique.

Our studies before and during the first 2 years of the trial showed that ultrasound estimation of reflux in the popliteal vein is not reliable for the following reasons:

1. The only provocative maneuver that is not affected by the status of the proximal valves is distal decompression. The placement of the pneumatic cuff is distal to the popliteal vein, because of the size of the ultrasound probe and the necessity to maintain a 2- to 5-cm distance between the probe and the cuff. In this situation, competent distal valves create a false impression of competent popliteal vein.
2. The use of reflux time (RT) is limited to identification of reflux at one time point. In our pilot study, we found the repeatability of this parameter to be poor.¹ We subsequently confirmed these findings in a different group of patients.² Proximal segments of greater saphenous and lesser saphenous veins and the superficial femoral vein were the only sites demonstrating an acceptable repeatability of reflux time in our study. The reflux volume index (RVI) is much more reliable, but is a poor identifier of pathological reflux.²

Because of low reliability, we did not use the information on segments other than the SFV and proximal GSV in our final analysis. The 12 cases, in which the popliteal reflux was undoubtedly demonstrated by both ultrasound and venography, were identified in the first 86 venographies and were followed as a sep-