Invited commentary on 'Infrainguinal bypass using varicose veins with external scaffolding', by N. Montelione, et. al.

External scaffolding of vein grafts for infrainguinal bypass

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The article of Montelione et al.[1] reports on results of 63 infrainguinal bypasses performed with autologous varicose vein, in 51 patients with great saphenous vein. To reinforce the diseased segments of the vein graft, external scaffolding was used for support (Provena or FRAME^{TM}). Two early and 3 late thromboses was reported, 8 stenoses needed revision. Crude primary patency was 62.8%, assisted primary patency was 76.3% and amputation free survival was 78% at an average follow-up of 54.6 months. No graft infection was reported. The authors concluded that varicose veins, protected with external scaffold, can be used for bypass, with reasonable patency rates and no infection. They also advocate saving the saphenous vein during varicose vein surgery for potential use of the vein later, for bypass.

We have known from earlier works from Melliere et al.[2] and others, referenced in this article, that external support of dilated and varicose veins with a prosthetic graft is a useful alternative to saphenous vein for bypass. No hyperplasia or stenosis developed in the reinforced zones and there were no dilations or ruptures in the non-reinforced segments. External support makes sense also when we use vein grafts in children or young adults, since long-term follow-up of these vein grafts show dilation or false aneurysms[3]. External prosthetic support for vein grafts, provided now by two manufacturers and used in this article, show a potential market for this procedure. We know from the Best-CLI study that single segment great saphenous vein is the very best conduit we can have for below the knee popliteal or tibial bypass[4]. We also know from recently published data that autologous vein is better than prosthetic or biological grafts for patients who require infra-inguinal bypass for chronic limb-threatening ischemia (CLTI)[5]. The experience of Montelione and colleagues[1] is therefore most valuable and should stimulate further research to compare long-term outcome of reinforced varicose saphenous vein grafts to those obtained with prosthetic grafts. If this is confirmed, we have more strong reasons to argue that in patients with varicose veins the great saphenous vein with no or non-pathologic reflux should never be ablated, as recommended in our society guidelines[6]. In addition, in varicose vein patients with pathological saphenous reflux, who are potential candidates for coronary or infra-inguinal bypass, saphenous-sparing interventions should seriously be considered.

References

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