LETTER TO THE EDITOR

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THE DOUBLE STITCH EVERTING TECHNIQUE IN END-TO-SIDE VASCULAR ANASTOMOSES

Dear Editor,

A wealth of modifications of the original end-to-side technique[1] are described in the literature, but so far no human randomized study has shown the superiority of one technique over another.[2]

To answer the needs of reduced time and increased efficiency, we devised the "double stitch everting technique." Leaving the needle in situ in the vessel wall in order to help with the tying of the final two knots, also known as the "modified Harashina procedure" has already been described.[3]

For this technique, the two corner sutures are placed first. The needle is then inserted in order to perform the third knot and instead of deploying it on a surgical patty in the area of the anastomosis, as common in our practice, the needle is then reinserted parallel to the third knot, which is not yet tied and left in place (Fig. 1A).

The knot is then tied in usual microsurgical fashion keeping in mind the eversion of the edges and intima-to-intima contact. Care should be taken not to entangle the needle in the knot. The needle can be picked up and reinserted without difficulty in an optimal position inside the needle holder (Fig. 1B). We find that performing the sutures from left to right for right-handed people poses an advantage (Fig. 1C). The technique works just as well for fish-mouthed and nonfish-mouthed donor vessels.

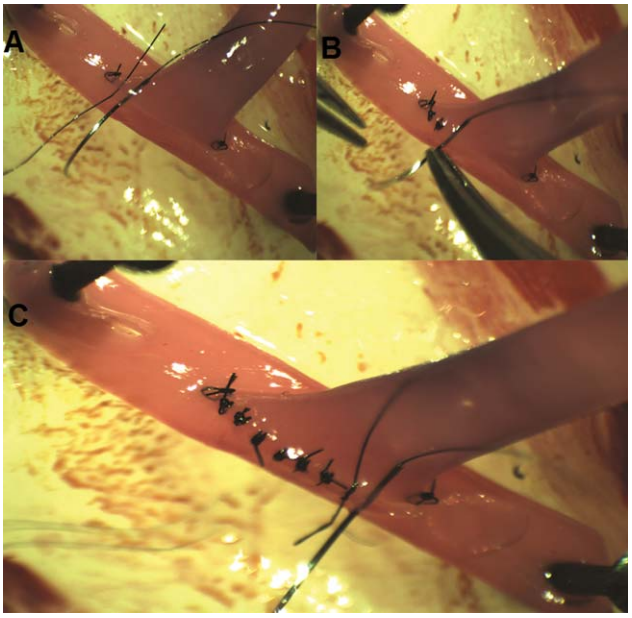

*Figure 1. The needle is inserted parallel to the previous stitch, for at least two-thirds of its length in order to reinforce the eversion of the vessel wall and aid in intima-to-intima contact (**A**). The anterior wall can be easily sutured (**B**) with regard to bite size and symmetrical placing of knots (**C**). Euromex StereoBlue Trino Zoom© microscope at 15x magnification; 9-0 suture Ethilon, Ethicon, Johnson and Johnson©; Muaranaka Medical Instruments Co., Ltd., Tokyo, Japan © silicone elastic vessel 1.5 mm.*

The double stitch everting seeks to accomplish several other objectives: shortening the time spent manipulating the needle, while ensuring wall eversion especially in venous anatomoses and improving symmetrical spacing and proper bite size.

Further studies and validation in the rat femoral model are underway and are the subject of a large validation project. The double stitch everting technique

*Correspondence to: Victor Volovici, M.D., Department of Neurosurgery, Erasmus MC University Medical Center, Erasmus MC Stroke Center, Room H-703, 's-Gravendijkwal 230, 3015 CE, Rotterdam, The Netherlands. E-mail: v.volovici@erasmusmc.nl

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strives to ensure speed (shortening ischaemia time) without compromising the quality of the anastomosis.

VICTOR VOLOVICI, M.D.* AND
RUBEN DAMMERS, M.D., Ph.D.
Department of Neurosurgery
Erasmus University Medical Center
Erasmus MC Stroke Center
Rotterdam, The Netherlands
DRAGOS G. ZAMFIRESCU, M.D., Ph.D.
Department of Reconstructive Microsurgery
"Zetta" Clinic of Reconstructive Microsurgery and Plastic Surgery
Bucharest, Romania
University of Medicine and Pharmacy "Carol Davila"
Bucharest, Romania

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