

## 2016: The year of Phlebological Olympic Games

Paolo Zamboni

Department of Morphology, Surgery, and Experimental Medicine; Vascular Diseases Center and Section of Translational Medicine and Surgery, University of Ferrara, Italy

Summer 2016, the Summer of the Olympic Games, reserves challenging news also in the field of venous and lymphatic diseases. The editorial would make the point, while updating friends and colleagues.

The market increasingly pushes the endovascular handling of varicose veins. Stripping is killed and even CHIVA shows a tendency to move forward intravascularly.<sup>1,3</sup> Thermal laser or radio - frequency techniques have now been able to supplant the traditional surgical techniques and turn the preference of surgeons toward them.<sup>1,2</sup> They are ablative techniques that do not involve the surgical incision and overcome any previous problem stripping-related by the means of standardized tumescence anesthesia. In addition, the office independent feasibility of tumescent thermal ablation makes both approaches preferable to stripping.<sup>1,2</sup>

However, even the tumescence is likely to be overcome by the surgical glue, leading to a scenario unthinkable only few years ago. Summer 2016 introduces to the phlebological community the WAWES study, very exciting for everybody who are fanatic of the 1000 ways to cook the saphenous vein. Recent introduction of the endovascular glue will lead toward office saphenous vein ablation, non-thermal, non-tumescent, non postoperative compression. Certainly a big achievement in the field, something like the new Olympic record in varicose veins treatment.

The WAVES trial is a single-centre study evaluating the VenaSeal system in the treatment of one or more incompetent N2 veins (greater saphenous vein, small saphenous vein or anterior accessory saphenous vein) with no postoperative compression stockings. The trial enrolled 50 patients and data were presented at the EVF meeting in London last July.<sup>4</sup>

Medtronic and the PI Gibson have not had the patience to wait for a more prolonged and significant follow-up for a chronic disease, and in London we were informed that at one month they recorded 100 % of successful procedures, equaling the world record set by all the competitors procedures.

One of the funniest aspects introduced by the use of intravenous techniques are represented by the recommendation for their proper

use. For example, it should not be used when the saphenous vein has a diameter between that of a python and that of an anaconda, is twisted like a sleeping rattlesnake, and it is even complicated by an ulcer.

From this point of view WAVES trial differs from the VeClose trial, which compared cyanoacrylate embolization and radiofrequency ablation for incompetent great saphenous veins. In the WAVES trial the human limits were abundantly passed, veins up to 20mm were allowed, compared to 12mm for VeClose, and also multiple segments were treated in the same session, and no compression stockings were used postoperatively. In the WAVES trial even the challenging CEAP clinical class 5 was allowed to be treated.<sup>4</sup>

The mirage of treating varicose vein intravascularly without any anesthesia has prompted numerous phlebologists to propose other personal techniques. Then here Frullini proposes Holmium laser technology that delivers a so lower energy that do not require tumescent anesthesia.<sup>5,6</sup> Given that this technology respects endothelium and does not obliterate the saphenous vein, this author proposes to finally obtain the obliteration using the Tessari foam. Just the latter together with Zini, quite the contrary, proposes to use at the beginning of the procedure the endovascular-vapplication of foam sclerotherapy followed by the boiled interaction of Holmium laser.<sup>7</sup> Anyway, both procedures are cheaper respect to current cyanoacrylate market cost, and lead to minimally thermal non-tumescent, success-

Correspondence: Paolo Zamboni, Vascular Diseases Center, University of Ferrara, AO S. Anna, via Aldo Moro 8, 44124 Loc. Cona, Ferrara, Italy.  
E-mail: paolozamboni@icloud.com

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fully office saphenous vein closure.

What no one openly confesses in these studies is that varicose veins, which are the main problem, continue to be complementary treated with two old office based techniques, both always non-thermal and non tumescent: the Muller technique and/or foam sclerotherapy. All the technological effort is focused on how to take out the saphenous vein without anyone feel pain and pretend to remain too long in the vicinity of our operating room, as well.

However, the main point still remains the fact that at least 50 % of varicose patients exhibit a competent saphenous terminal valve (Figure 1).<sup>8</sup> In these cases, an accurate preoperative ultrasound study allows to efficiently

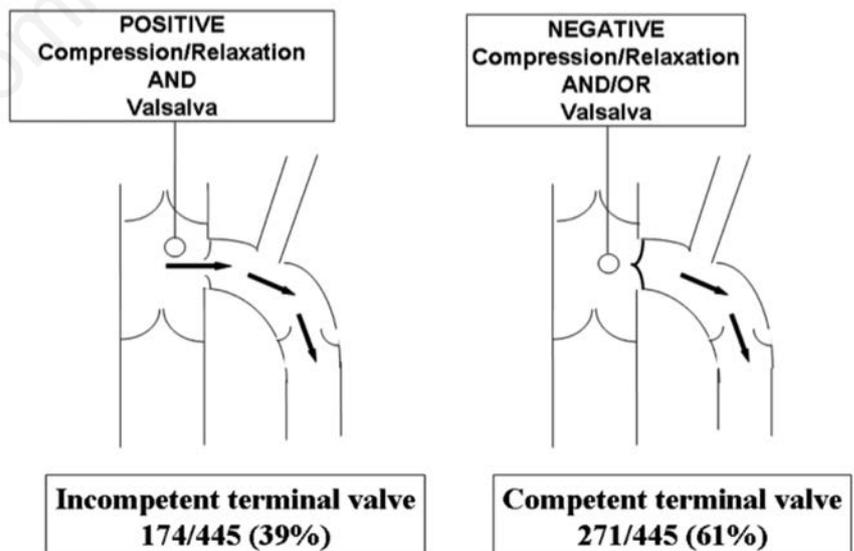


Figure 1. Ultrasound preoperative assessment of the saphenous terminal valve, as described in reference 8. Doppler sample volume herein represented by a circle, have to be placed on the femoral side of the junction. Evaluation requires both Valsalva and squeezing reflux elicitation manoeuver. Sixty-one percent of patients exhibited no reflux at both or at one of the two manoeuvres and were considered with competent terminal valve. The same patients when examined with squeezing at the saphenous side of the valve showed reflux in 100% of cases. Reflux at both manoeuvres at both sides of the terminal valve were detected in the remaining 39% of patients with valve incompetence.

select patients for office-based saphenous vein sparing techniques, like CHIVA2 or Muller/ASVAL. Correct preoperative ultrasound selection permits to sparing surgery to be absolutely competitive at 3 years in terms of recurrences.<sup>8</sup>

There are also ethical considerations in the overtreatment of the saphenous vein, a vessel that can potentially be saved not only for limb drainage but also for its potential use as a vascular graft. It has been recently shown that surgical correction of the bidirectional flow that characterizes the phenomenon of reflux, alone is able either to efficiently reduce the cross sectional area of the vein or especially to correct the inflammatory phenotype that distinguishes chronic venous disorders.<sup>9</sup> In addition to this there are economic considerations. The use of techniques such as Muller/ASVAL or CHIVA 2 in about 50% of patients is certainly less expensive than endovascular treatments, with great benefit for patients and also for the economic management of the surgical activity both in private practice and in Countries with NHS. This means that saphenous ablation is unfair and

expensive in approximately half the cases. Is this a good Science?

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