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## Ligation of GSV in sclerotherapy with foam: Technical notes - personal experience



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**Statement of the Problem:** The specific complications after treatment of the incompetent GSV with foam are early recanalization (13%) and superficial thrombophlebitis (7.4%).

**Methodology & Theoretical Orientation:** From 1 January 2016 to today, in 79 patients (CEAP C2-C3), 85 sclerofoam treatments of GSV were performed for varicose veins of the lower limbs with: saphenofemoral reflux >3 sec, saphenous diameter >8 mm and at least 2 varicose thigh/leg collateral. To obtain the GSV, local surgical anesthesia was performed with a surgical access localized to the thigh, always above the end of the Hunter perforator and of the varicose collateral. The GSV is bound and sectioned and finally cannulated with an Arteriofix 8 mm catheter, through which, after washing with physiological solution, the sclerofoam with TDS 3% (ratio 1:4) for a maximum of 4 cc of foam according to Tessari's technique. The remaining saphenous veins are removed with the Muller technique. Controls with ecocolor Doppler are expected at 1, 3, 6 months and 1 year.

**Findings:** Only in 4 patients (4.7%), however very thin, was found, in the first month, a superficial phlebitis of the thigh, between the surgical incision and the

inguinal fold. Recanalization occurred after 1 year in only 8 patients (9.4%). In any case the diameter of saphenous veins was reduced by more than 50%, the saphenous walls were thickened, there was no reflux at the saphenofemoral junction and clinically the patients reported no disturbances. In all other patients, GSV presented with obliterated and reduced caliber.

**Conclusion & Significance:** From these first results we can state that this technique that includes the ligation of the GSV makes the foam more stable than that which occurs with the direct injection of the GSV. Furthermore, a smaller amount of foam is sufficient, with no local and general phenomena and complications

### Recent Publications:

1. Bountouroglou D G et al. (2006) Ultrasound-guided foam sclerotherapy combined with saphenofemoral ligation compared to surgical treatment of varicose veins: early results of a randomized controlled trial. Eur J Vasc Endovasc Surg 31(1):93-100.
2. Cavezzi A and Tessari L (2009) Foam sclerotherapy techniques: different gases and methods of preparation, catheter versus

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direct injection. *Phlebology* 24:247-51.

3. Perrin M et al. (2016) **Venous symptoms: The sym vein consensus statement developed under the auspices of the european venous forum.** *Int. Ang.* 35(1):371-98.
4. Rasmussen L H et al. (2011) **Randomized clinical trial comparing endovenous laser ablation, radiofrequency ablation, foam sclerotherapy and surgical stripping for great saphenous varicose veins.** *Br J Surg* 98:1079-87.
5. Shadid N et al. (2012) **Randomized clinical trial of ultrasound-guided foam sclerotherapy versus surgery for the incompetent great saphenous vein.** *Br J Sur* 99(8):1062-70.

### Biography

Paolo Valle is the Professional of Phlebology at Unit of General Surgery S.Eugenio Hospital of Rome. 2000-2003: Director Day Surgery of Phlebology of Hospital S.Eugenio of Rome. 2004-2010: Director Unit of Day Hospital Vascular Pathology of Hospital S.Eugenio of Rome. 2011-2015: Director Unit of Multidisciplinary Day Surgery of Hospital S.Eugenio of Rome. In 1988 he translated the chapters of vascular pathology of Davis's "Textbook of Surgery" di Davis-Christopher. Ed. Piccin Nuova Libreria Padova. "MASTER" of Phlebology with votes 30/30 e Lode (1988/1989) of the Order of the Doctors of Rome. Member of NATIONAL COMMISSION ESTABLISHED BY THE MINISTRY OF HEALTH ON "DAY SURGERY AND OUTPATIENT SURGERY (D.D. 4 Sett. 2012). Chair, speaker and discussant at the National Conferences of the Italian Society of Surgery, of the Italian College of Phlebology and of the Italian Society of Clinical and Experimental Phlebology. He has participated in various national and international phlebology congresses.

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