

## CORRESPONDENCE

**Re: “A Randomised Clinical Trial Comparing N-Butyl Cyanoacrylate, Radiofrequency Ablation and Endovenous Laser Ablation for the Treatment of Superficial Venous Incompetence: Two Year Follow up Results”**

We read with great interest the randomised clinical trial (RCT) by Eroglu and Yasim<sup>1</sup> regarding the use of N-butyl cyanoacrylate (NBCA) in great and small saphenous vein (GSV and SSV) reflux treatment.<sup>1</sup> The authors showed the non-inferiority of NBCA compared with radiofrequency (RFA) and endovenous laser ablation (EVLA) techniques, in terms of six month, one and two year saphenous occlusion rates. Furthermore, this RCT describes a quicker return to work in cases of NBCA treatment and non-inferiority in terms of patient comfort and decreasing venous clinical severity score during the follow up period among the three interventional methods. Finally, an RCT, specifically designed around the Variclose Vein Sealing System (Biolas, FG Group, Turkey) was published, increasing the quality of scientific evidence on NBCA results, irrespective of which device was used. In particular, occlusion rates remain quite similar to those seen in a recent systematic review including non-RCT studies (six month occlusion rate 97.3% in the systematic review vs. 98.1% in the RCT; one year occlusion rate 97.0% in the systematic review vs. 94.7% in this RCT).<sup>2</sup> Conversely, there were more post-operative complications in the RCT than in the systematic review (ecchymosis 5.4% vs. 0.8% and phlebitis 6.5% vs. 1.9%, respectively). Despite differences in results among studies, this RCT confirms encouraging outcomes for NBCA for uncomplicated (C2–C4) patients with GSV incompetence. Unfortunately, some topics remain to be clarified, for example, robust data regarding the use of NBCA in SSV incompetence, in C5 and C6 classes for ulcer healing, and data about differences in terms of NBCA volume, volume/venous diameter ratio, and volume/vein length ratio injected into the saphenous trunk. Published data about the use of NBCA in the SSV remain marginal (about 6% of patients), with no robust data on mid- and long-term recanalisation rates. Patients with trophic lesions may have a greater improvement with the use of a non-tumescent, non-thermal, minimally invasive, and minimally traumatic therapy for ulcer healing and recurrence.

Finally, the volume of NBCA used differs between studies (from 0.03 to 0.09 cc/cm, regardless of whether for the GSV or SSV). Conversely, in our personal experience, we observed the NBCA volume/vein length ratio may represent a valid tool to predict early or late recanalisation (unpublished data).

In conclusion, scientific and research improvements are required to determine whether NBCA can be an accessible and durable technique, becoming office based and minimally invasive.<sup>3</sup>

## REFERENCES

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