

Chapter 4

COMPARISON OF ENDOVASCULAR LASER ABLATION WITH NONTUMESCENT N-BUTYL CYANOACRYLATE VENA SAPHENA MAGNA ABLATION

Orhan RODOPLU¹

INTRODUCTION:

Chronic venous insufficiency and varicose vein disease is an important venous pathology responsible for significant morbidity. It may present a series of findings including lower extremity edema, pigmentation and venous ulcers.(Bergan, Schmid-Schönbein & Smith, 2006)

Venous insufficiency treatment has changed dramatically in the last decade. Traditional methods are being introduced to modern invasive-endovenous methods and new technologies are introduced every year. Traditional methods such as ligation and stripping are associated with many complications including hematoma and paresthesia. (Almeida & *et al.*, 2009) Long recovery times associated with conventional methods reduce the popularity of these methods.(Winterborn, Foy & Earnshaw, 2004) Foam sclerotherapy is the most widely used minimally invasive technique for the treatment of venous insufficiency and varicose vein disease worldwide, but high recurrence rates have been observed. (Jia & *et al.*, 2007) Side effects such as air embolism, headache, pulmonary embolism and deep vein thrombosis (DVT) are the major disadvantages of this therapy. (Jia & *et al.*, 2007)

Endovascular ablation techniques such as laser (EVLA) and radiofrequency ablation are widely used and proven therapies. The results are basically similar, and both reach approximately 90% of long-term success rates. (Puggioni & *et al.*, 2005, Rasmussen & *et al.*, 2013)Although thermal ablation has less complication compared to open surgical methods, the need for side effects such as edema, burns, pigmentation, paresthesia and the need for anesthesia are inevitable. (Puggioni & *et al.*, 2005- Almeida & *et al.*, 2015)

Although the current techniques are successful, the search for new innovative techniques with the goal of increasing the success rate, improving the patient's

¹ MD, Private Yalova Hospital, orhanrodoplu@yahoo.com.tr

4. Almeida JJ & *et al.* (2015) Two-year follow-up of first human use of cyanoacrylate adhesive for treatment of saphenous vein incompetence. *Phlebology*, 30,397-404.
5. Bergan JJ, Schmid-Schönbein GW & Smith PD. (2006). Mechanism of disease: chronic venous disease. *N Engl J Med*, 355, 488-98.
6. Jia X & *et al.* (2007) Systematic review of foam sclerotherapy for varicose veins. *Br J Surg*,925-36,
7. Morrison N, & *et al.*(2015).Randomized trial comparing cyanoacrylate embolization and radiofrequency ablation for incompetent great saphenous veins (VeClose). *J Vasc Surg*, 61, 985-94.
8. Proebstle TM & *et al.*(2015)The European multicenter cohort study on cyanoacrylate embolization of refluxing great saphenous veins. *J Vasc Surg Venous Lymphat Disord*, 3, 2-7
9. Puggioni A & *et al.*(2005) Endovenous laser therapy and radiofrequency ablation of the great saphenous vein: analysis of early efficacy and complications. *J Vasc Surg*, 42, 488-93.
10. Rasmussen & *et al.*(2013a)Randomized clinical trial comparing endovenous laser ablation, radiofrequency ablation, foam sclerotherapy and surgical stripping for great saphenous varicose veins. *J Vasc Surg Venous Lymphat Disord*, 1(4),349-56.
11. Rasmussen L & *et al.*, (2013b) Randomized clinical trial comparing endovenous laser ablation and stripping of the great saphenous vein with clinical and duplex outcome after 5 years, *J Vasc Surg*, 58, 421-26.
12. Winterborn RJ, Foy C & Earnshaw JJ (2004) C. Causes of varicose vein recurrence: late results of a randomized controlled trial of stripping of the long saphenous vein *J Vasc Surg*, 40, 634-39.