

Physician - Venous and Lymphatic System Diseases and Surgery/Endovenous Interventions

[MSB-37]

Comparison of Radiofrequency Ablation and Cyanoacrylate Closure for Large-Diameter Great Saphenous Vein Insufficiency

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Türk Gogus Kalp Dama 2024;32(Suppl 2):MSB-37

Doi: 10.5606/tgkdc.dergisi.2024.msb-37

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Received: September 13, 2024 - Accepted: September 29, 2024

Objective: This study aimed to compare radiofrequency ablation (RFA) and cyanoacrylate closure (CAC) for large-diameter great saphenous vein (GSV) insufficiency between diameters of 12 and 16 mm.

Methods: This single-center retrospective study was conducted with 142 patients who underwent endovenous treatment with RFA (Group A; n=71) or CAC (Group B; n=71) for GSV insufficiency between June 2015 and June 2021. The patients who were followed for at least two years were included in the study. Patients who had a 12- to 16-mm target vessel diameter and two with grade 3 or 4 reflux were included. During follow-up, patients were evaluated with duplex ultrasonography and the Venous Clinical Severity Score (VCSS) at 1, 6, 12, and 24 months.

Results: The mean GSV diameter was 13.21 ± 1.00 for Group A and 13.51 ± 0.97 for Group B. The groups did not differ in terms of age, sex, body mass index, clinical, etiological, anatomic, and pathophysiologic classification, GSV diameter, reflux grade, target GSV length, preoperative VCSS, complications, postoperative 24-h pain status, and postoperative 14-day patient satisfaction scale. The procedure time was significantly shorter in Group B. At one and six months, duplex ultrasonography revealed partial closure, and patency rates in Group B were significantly higher than those in Group A. At 12 and 24 months, closure rates did not show a statistically significant difference between the groups. Preoperative and one-month VCSS measurements did not show a statistically significant difference between groups. The 6-, 12-, and 24-month VCSS measurements of Group A were significantly higher than those in Group B.

Conclusion: The complication rates were similar between the two techniques. Cyanoacrylate closure had a shorter procedure time. Although the closure rates in the early postoperative period were better in the RFA group, long-term follow-up demonstrated similar patency rates. The functional results in the long-term follow-up were better in the RFA group.

Keywords: Nonthermal endovenous ablation, radiofrequency ablation, saphenous vein.

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