

Table XXX. Radiofrequency ablation versus cyanoacrylate embolization

6 articles, 1 RCT

Reference underlined in color means same RCT

Operative procedure	Reference	Summary
<p>RFA versus cyanoacrylate embolization (CAE)</p>	<p><u>Morrison N, Gibson K, McEnroe S, Goldman M, King T, Weiss R et al. Randomized trial comparing cyanoacrylate embolization and radio frequency ablation for great saphenous veins (VeClose). J Vasc Surg 2015,61:985-994</u></p>	<p>Multi-center study 222 patients with symptomatic GSV incompetence. No data on SSV. No previous DVT. CEAP clinical classification C2-C4 Multi-center study Group I (n=108): CAE no anesthesia <i>versus</i> Group II (n=114): RFA tumescent anesthesia Results During the procedure. <i>Pain similar in both groups. On 10 points VAS scale</i> CAE= 2.2 <i>. P=0.11</i> RFA =2.4 At day 3 to 3 months of follow-up: <i>. At 3 days less ecchymosis in CAE compared to RFA. (P<0.01).</i> <i>. At 3 months closure rate</i> CAE 99% RFA 96%</p>
	<p><u>Kolluri R, Gibson K, Cher D,</u></p>	<p>Multi-center study</p>

	<p>Madsen M, Weiss R, Morrison N. Roll-in phase analysis of clinical study of cyanoacrylate closure for incompetent great saphenous veins. <i>JVS Venous and Lymph Dis.</i> 2016;4:407-15.</p>	<p>222 patients with symptomatic GSV incompetence. No data on SSV. No previous DVT. CEAP clinical classification C2-C4 Multi-center study The first two subjects at each participating site (n. 20) were roll-in cases (ie, not randomized but instead treated with CAE) to ensure the physician's familiarity with the procedure. Group I (n=108): CAE no anesthesia <i>versus</i> Group II (n=114): RFA tumescent anesthesia Results Mean procedure time was longer in the roll-in group (31 minutes) compared with the randomized groups (24 minutes for CAE and 19 minutes for RFA. P < 0.0001 There was no difference in intraprocedural pain between the roll-in and randomized groups as well as others clinical assessments, including quality of life improvement and adverse events.</p>
	<p>Morrison M, Gibson K, Vasquez M, Weiss R, Cher D, Massen M et al. VeClose trial 12-month outcomes of cyanoacrylate closure versus radiofrequency ablation for incompetent saphenous veins. <i>JVS, V&L</i> 2017;3;322-31</p>	<p>Multi-center study 222 patients with symptomatic GSV incompetence. No data on SSV. No previous DVT. CEAP clinical classification C2-C4 Multi-center study Group I (n=108): CAE no anesthesia <i>versus</i> Group II (n=114): RFA tumescent anesthesia Results at 12 months: (N=95 CAE, N= 97 RFA) . <i>Occlusion rate</i> Group I = 97.2% Group II= 97.0%</p>

		<p>. <i>Symptoms and quality of life</i> improved equally in both groups. Most adverse events were mild to moderate and not related to the device or procedure.</p>
	<p>Gibson K, Morrison N, Kolluri R, Vasquez M, Weiss R, Cher D, Madsen M, Jones A. Twenty-four month results from a randomized trial of cyanoacrylate closure versus radiofrequency ablation for the treatment of incompetent great saphenous veins. J Vasc Surg Venous and Lym Dis 2018; 6:607-13</p>	<p>Multi-center study 171 patients with symptomatic GSV incompetence. No data on SSV. No previous DVT. CEAP clinical classification C2-C4 Multi-center study Group I (n=87): CAE no anesthesia <i>versus</i> Group II (n=84): RFA tumescent anesthesia Results at 24 months: . <i>Occlusion rate</i> Group I = 95.3% Group II = 94.0% . <i>Symptoms and quality of life</i> improved equally in both groups. . <i>Most adverse events</i> were mild to moderate and not related to the device or procedure.</p>

	<p>Morrison N, Kolluri R, Vasquez M, Madsen M, Jones A, Gibson K. Comparison of cyanoacrylate closure and radiofrequency ablation for the treatment of incompetent great saphenous veins: 36-Month outcomes of the VeClose randomized controlled trial. <i>Phlebology</i> 2019;36:380-90</p>	<p>Multi-center study 222 patients with symptomatic GSV incompetence. No data on SSV. No previous DVT. CEAP clinical classification C2-C4 Multi-center study Group I (n=72): CAE no anesthesia <i>versus</i> Group II (n=74): RFA tumescent anesthesia Results at 36 months: . <i>Occlusion rate</i> Group I = 94.4% Group II= 91.9% . <i>Symptoms and quality of life</i> improved equally in both groups. . Most <i>adverse events</i> were mild to moderate and not related to the device or procedure.</p>
	<p>Morrison N, Gibson K, Vasquez M, Weiss , Jones A. Five-year extension study of patients from a randomized clinical trial (VeClose) comparing cyanoacrylate closure versus radiofrequency ablation for the treatment of incompetent great saphenous veins . <i>JVS V&L</i> 2020;8:978-89</p>	<p>Multi-center study 222 patients with symptomatic GSV incompetence. No data on SSV. No previous DVT. CEAP clinical classification C2-C4 Multi-center study Group I (n=72): CAE no anesthesia <i>versus</i> Group II (n=74): RFA tumescent anesthesia Results at 60 months: 89 patients Group I (n=47) Group II (n=33) 9 CAC roll-in patients . <i>Occlusion rate</i> Group I = 91.4% Group II= 85.2%. Symptoms and quality of life improved equally in both</p>

		groups.(VCSS,AVQQ,EuroQol-5,EQ-5D)
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Abbreviations:

AVQQ=Aberdeen varicose vein questionnaire; CAE= cyanoacrylate embolization; DVT=deep venous thrombosis; EQ-5D=euroQol-5dimension; GSV = great saphenous vein; RFA= radiofrequency ablation; SSV=small saphenous vein; VCCS=Venous clinical severity score