

Treating veins with EVRF monopolar radiofrequency- 5 years follow-up results

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Objective:

EVRF® is a monopolar radiofrequency system for the endothermal treatment of teleangiectasias, tributaries, perforators and truncal veins. We evaluated the effectiveness of EVRF® treatment and analyzed the 5 years results using the EVRF® device.

Methods and result for saphenous veins:

From July 2011 to January 2017 we treated patients (49 years of average age, 313 men, 879 women) with saphenous reflux and varicosity using EVRF®. The procedures were performed on 1192 limbs - 976 GSV, 185 SSV, 31 GSV+SSV; 1110 patients belonged to CEAP 2,3, 82 patients to CEAP 4-6; 1073 primary cases, 119 recurrent varicosity. The mean diameter of the GSV was 6,9 and of the SSV 5,2 cm consequently. The length of the treated vein segment ranged from 15 cm to 82 cm, using an amount of 7200 Joules total energy emitted on average.

Complete occlusion was found in 99 % at the one month ultrasound control, 1 year ultrasound control showed 97,2 %, 3 years data proved 96,8% occlusion rate and after 5 years 94,9% of the treated veins are occluded. Postoperative pain reported by the patients on a visual analogue scale was under 2,3/10, VCSS scores showed significant improvement of the QOL of the patients after 1 and 12 months. There were no cases of deep vein thrombosis, skin burns, neuritis or bleeding, we found minimal bruising at the treatment site of the tributaries in some cases, 5 patient had mild inflammation, treatable conservatively. In the last 2 years we treated the enlarged tributaries with foam sclerotherapy immediately after the RF ablation or a few month later – the omission of physical varicectomy resulted in lower pain scores, less bruising and haematomas.

The CR45i EVRF® catheter is excellent until 8-10 mm of vein diameter with the standard procedure, more energy must be used in case of bigger veins or heavy weight patients.

Introduction of perforator treatment with the CR40i catheter:

We have just started the treatments of enlarged, insufficient perforators with the new CR40i catheter. Through a 17G veinflow the RF catheter is inserted in the treatable perforator. The treatment happens in local anesthesia and can be clearly seen on ultrasound. The procedure is very simple, safe and can be performed ambulatory.

Conclusion:

The EVRF® endovenous ablation is a safe, painless procedure for the treatment of the GSV and/or SSV, enlarged tributaries and perforators - high patient acceptance and minimal postoperative discomfort allows the quick return to work and normal life. The procedure under local tumescent anesthesia is simple, the disposable devices are easy to use. In our practice the EVRF® treatment with CR45i and CR40i catheters was superior to conventional varicectomy or to laser ablation using a 808 nm device with bare laser fiber.