Six-month mechanochemical ablation outcomes comparable to radiofrequency ablation with lower pain scores

Mechanochemical ablation produces similar clinical and quality of life improvements after six months as radiofrequency ablation, with “significantly less” patient pain, according to a presentation given at the European Venous Forum (7-9 July, London, UK). The data were presented by Roshan Bootun, Imperial College, London, UK.

NICE guidelines recommend endothermal ablation as first-line treatment for varicose veins, with radiofrequency ablation (RFA) being one such minimally invasive technique with efficacy of >90%. It improves the quality of life of patients and enables an earlier return to normal activities in comparison to surgery. However, this technique uses tumescent anaesthesia, which can be a source of patient discomfort.

Mechanochemical ablation (MOCA) is a hybrid system, the unit consisting of a rotating wire within the venous lumen that causes intimal injury at 3,500rpm, with simultaneous injection of sclerosant which act on the injured wall to produce fibrosis. Efficacy so far has been shown to be greater than 90%. It is a non-thermal, non-tumescent technique.

The VVCVV trial’s primary endpoint is pain experienced during the ablative procedure (but before any tributary treatment). From power calculations, the investigators needed 47 patients per group (treatment). From power calculations, the investigators needed 47 patients per group.

During the procedure, patient discomfort was assessed using a visual analogue scale (VAS) and a 0–10 scale. Time to return to normal activity and work were recorded, and quality of life was measured at one- and six-month follow-up. Baseline characteristics were similar across both groups, although the MOCA group was slightly older (55.1±18 years vs 50.6±17 years, p=0.091). The RFA group included more patients with CEAP class 2 than the MOCA group (25% vs. 18.5%), although the proportion of patients in the other CEAP classifications was similar. Sixty-nine MOCA and 60 RFA patients completed one-month follow-up, while 62 MOCA and 59 RFA patients completed six-month follow-up.

One-month complete/proximal occlusion was achieved in 92.7% of patients in the MOCA group and 91.7% in the RFA group (p=0.403). At six months, occlusion had been maintained in 87.1% of MOCA patients and 93.2% of RFA patients (0.483).

Bootun told delegates that the maximum pain score as measured by VAS was 24.3±5.1mm for the MOCA group and 35.4±5.7mm for the RFA group (p=0.005). The maximum median pain score on a 0–10 scale was also higher for RFA than for MOCA, at 4 compared with 3, respectively (p=0.028). Average VAS pain score was 17.8±4.9mm in the MOCA group and 24±4.1mm in the RFA group (p=0.053), while the average median pain scores were 3 for RFA and 2 for MOCA (p=0.021).

Secondary outcomes were similar across all clinical and quality of life scores for both groups.

Venous clinical severity scores (VCSS) at baseline were 6.4±3 for MOCA and 5.6±2. At one-month follow-up, MOCA VCSS was 2.7±3 and for RFA was 3±3, while at six months the scores were 2.4±2 for MOCA and 2.7±2 for RFA (all p=0.746). Baseline venous disability scores (VDS) were 1.4±0.5 and 1.3±0.5 for MOCA and RFA, respectively.

The rate of complications was low, with “significantly less” patient pain, according to a presentation given at the European Venous Forum (7-9 July, London, UK). The data were presented by Roshan Bootun, Imperial College, London, UK.

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