Fractionated microneedle radiofrequency for treatment of primary axillary hyperhidrosis: A sham control study.

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Abstract

BACKGROUND/ OBJECTIVE:

Primary axillary hyperhidrosis (PAH) creates social stress in patients. Although there are several options for treating PAH, only surgical modalities have conferred a permanent solution. This study evaluated the clinical effectiveness of fractionated microneedle radiofrequency (FMR) treatment for PAH.

METHODS:

This study is based on a single-blind, sham control comparative design. In all, 25 patients with severe PAH underwent three sessions of FMR at 3-week intervals. One side was treated with FMR while the other was sham controlled. Efficacy was evaluated using the hyperhidrosis disease severity scale (HDSS), sweating intensity visual analogue scale (VAS) and patient satisfaction at baseline, 3 weeks after each session and at 3 months after the last. Skin biopsies were obtained from two enrolled patients.

RESULTS:

The HDSS and VAS demonstrated significant improvement after treatment on the treated side in comparison with the control side. The mean ± SD of the HDSS after 21 weeks were 1.87 ± 0.61 and 3.38 ± 0.49 (P < 0.001) for the treated and the controlled side, respectively. The follow-up evaluation revealed that 79% of the patients showed a 1 or 2-score decrease in HDSS. In total, 80% of patients reported more than 50% satisfaction at the end of the study. Histopathological findings showed a decrease of the number of the sweat glands in the treated side, confirming the above findings.

CONCLUSIONS:

Treatment of PAH with FMR as a non-invasive modality can be a safe option with positive therapeutic effects on HDSS without any long-lasting side effects.

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KEYWORDS:

fractionated microneedle radiofrequency; hyperhidrosis disease; primary axillary hyperhidrosis