RF-surgery versus placebo for turbinate reduction

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Bran G, Hünnebeck S, Hörmann K, Stuck BA

ENT Department, University Hospital, Mannheim/Germany

Aim of the study was to evaluate the efficacy and morbidity of bipolar radiofrequency (RF)-surgery in the treatment of nasal obstruction due to hypertrophy of inferior turbinates.

20 patients with isolated turbinate hypertrophy and nasal obstruction were included in this randomized, single-blind, placebo-controlled, cross-over trial. Patients were randomized into two groups. Group A received 2-3 lesions at the inferior turbinate under local anesthesia with a bipolar RF device followed by a placebo-intervention after six weeks. Group B received placebo surgery first consisting in the placement of the RFA needle without energy application followed by a RF intervention accordingly. At baseline, before second intervention and six weeks after second surgery patients underwent nasal endoscopy to assess side effects, anterior rhinomanometry to quantify nasal airflow and received a questionnaire to assess the degree of nasal obstruction (score from 0: mild to 4: severe), use of analgesics and patients' satisfaction (score from 0: low to 4: very high).

Anterior rhinomanometry airflow was increased by 128,81 ml/sec on average with RF and decreased by 71,63 ml/sec with placebo (p=00,3). Nasal obstruction score was reduced by 1.69 points on average after RF and by 0.31 points after placebo. Differences between the two groups were statistically significant for both measures ($p<0.005$). One patient needed analgesics for less than four days after RF. Patient satisfaction score was significantly higher after radiofrequency surgery (3.16) compared to placebo (0.5).

Bipolar radiofrequency surgery of the inferior turbinate is superior to placebo and highly effective in the treatment of nasal obstruction with minimal morbidity.

Note from Sutter Medizintechnik: The bipolar RF device used in the study was the Sutter CURIS® microsurgical radiofrequency generator. The probe used was the bipolar Binner probe.