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Low-concentration hypochlorous acid nasal irrigation for chronic sinonasal symptoms: a prospective randomized placebo-controlled study.

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Abstract

Low-concentration hypochlorous acid (HOCl) is an endogenous antibacterial and antiviral agent. The purpose of this study was to evaluate the effectiveness of HOCl irrigation in patients with chronic rhinosinusitis (CRS) refractory to medical therapy. Forty-three adult patients (mean age 45.5 years) were enrolled in this study. They were randomly chosen to receive nasal irrigation with either low-concentration HOCl generated by a Salicid device (n = 21), or a placebo (saline; n = 22) for 8 weeks. The outcome measures were scores on the 20-Item SinoNasal Outcome Test (SNOT-20), rhinosinusitis disability index (RSDI), nasal endoscopic score, and bacterial cultures. The SNOT-20 scores were significantly lower in the HOCl group than in the placebo group after 2 weeks of treatment ($p < 0.05$) and remained lower after 4 weeks of treatment. With respect to the RSDI scores, there was a significant improvement in the HOCl group at 1 week after treatment and in both groups at 2 weeks after treatment ($p < 0.05$). There were no significant differences in the endoscopic scores between the two groups after the treatment. The bacterial culture rates were lower in the HOCl group than in the placebo group after 4 weeks of treatment, but this was not significant ($p > 0.05$). Our results showed that low-concentration HOCl irrigation resulted in a greater improvement in CRS symptoms as compared to saline irrigation.

KEYWORDS:

Chronic rhinosinusitis; Double blind method; Hypochlorous acid; Nasal irrigation; Placebo controlled

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