

Xylitol nasal irrigation: A possible alternative strategy for the management of chronic rhinosinusitis

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Summary: Chronic rhinosinusitis (CRS), a condition that has been estimated to affect nearly 14% of the population, is associated with significant quality-of-life impairment for the patient and a perplexing therapeutic challenge for the clinician. Although saline irrigation has been shown to be beneficial for patients with rhinosinusitis, xylitol (XLT), a five-carbon sugar alcohol that displays antibacterial properties by enhancing the body's own innate bactericidal mechanisms, has been suggested as a possible alternative. These researchers evaluated the potential beneficial effect of XLT nasal spray (10% aqueous solution) in patients with CRS and found that it resulted in significant improvement of symptoms as compared to placebo. Their results suggest its use as an adjunct therapeutic agent in patients with chronic sinus disease, the researchers concluded.

Methods:

- In this 3-week prospective placebo open-control study, researchers evaluated 42 subjects ages 18-53 years with CRS, diagnosed based on published criteria, and randomized them to receive either XLT aqueous nasal spray, two puffs in each nostril twice daily (n=32), or placebo (n=10).
- They measured the efficacy of the treatment by evaluating changes from baseline using the sino-nasal outcome test 20 score (SNOT-20), and peak nasal inspiratory flow rates using rhinometry (Youlten rhinometer), over a 3-week period.

Results:

- All study subjects returned for evaluation on a weekly basis for 3 weeks.
- Utilizing analysis of variance (ANOVA) of study results, the researchers found that after 3 weeks of therapy, there was a significant amelioration of the XLT group as compared to the placebo group.
- The XLT group experienced a reduction of 25.3% in the SNOT-20 scores ($P<0.001$) and an increase of 35.6% in the nasal inspiratory peak flow ($P<0.001$) compared to the placebo group.