

USE OF AN ELECTROSTIMULATING DEVICE FOR MANAGING HALITOSIS IN XEROSTOMIC PATIENTS: TWO CASE REPORTS

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Clinicians regularly encounter patients with both complaints of halitosis and xerostomia (dry mouth complaint). Left untreated, hyposalivation can lead to both conditions that usually cause psychosocial distress and impaired quality of life. Current therapies to increase patients' salivary flow rate rely on gustatory and mechanical stimulants, which are somewhat limited by their short-term efficacy, and cholinergic stimulants such as pilocarpine and cemiveline. These may improve salivary flow but have mixed results in improving patients' assessments of symptoms or other quality-of-life measures, besides frequently reported intolerable side effects. Oral mucosal electro-stimulation increases salivary secretion. Therefore, intra-oral electronic devices have been developed and their effect is obtained by means of stimulation of the lingual nerve, in whose proximity the electrodes of the apparatus are placed.

This report details two patients with both halitosis and xerostomia complaints. Daily basis bad breath episodes with moderate intensity were confirmed by close relatives. One was diagnosed with Sjögren's syndrome and the other was on antidepressive medication for the last 5 years. Both presented unstimulated salivary flow rate of ≤ 0.1 mL/minute and low volatile sulphur compounds (VSCs) levels. No other relevant medical data was found. Electro-stimulation devices were made. On a monthly basis total VSCs was assessed on both patients before and after cysteine challenge, as well as organoleptic scores and Visual Analogue Scales (VASs) to report self-perceived halitosis, taste, oral dryness, oral comfort and quality of life. In addition, two close relatives reported perceived halitosis from the patients during the before and during the assessment period.

Electro-stimulation resulted in a decrease of total VSCs challenged by cysteine and in a significant beneficial effect on patients' and close relatives' VAS scores. No significant side-effects were observed. Intraoral electro-stimulation seems to be a safe non-chemical treatment of both halitosis and xerostomia related to hyposalivation.
