Sulphurous-arsenical-ferruginous (thermal) water inhalations reduce nasal respiratory resistance and improve mucociliary clearance in patients with chronic sinonasal disease: preliminary outcomes.

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CONCLUSIONS: In order to confirm these preliminary results, a prospective double-blind study has been instituted in Padova University ENT Section to compare the efficacy of sulphurous-arsenical-ferruginous thermal water nasal irrigations vs isotonic sodium chloride solution nasal irrigations after functional endoscopic sinus surgery for chronic sinusitis.

OBJECTIVES: Despite their widespread use, much uncertainty exists about the indications and therapeutic mechanisms of nasal thermal water inhalations in the treatment of sinonasal chronic disease. The aim of the present study was to evaluate the effects of sulphurous-arsenical-ferruginous thermal water inhalations on nasal respiratory flow, mucociliary transport, nasal cytology, and chemo-physics of nasal mucus in a group of consecutive patients with chronic sinonasal disease. PATIENTS AND METHODS: Thirty-seven patients with chronic sinonasal disease underwent a 12-day course of sulphurous-arsenical-ferruginous thermal water warm vapour inhalations (38 degrees C) followed by nasal aerosol of the same thermal water (7 microns micelle). RESULTS: This preliminary study showed that a course of sulphurous-arsenical-ferruginous thermal water inhalations determined a significant improvement in nasal flow and reduction of nasal resistance; a statistically significant reduction of mean mucociliary transport time, from pathologic to physiologic values, has also been shown. Statistical analysis of our data confirmed that the presence of nasal bacteria was significantly reduced by thermal water inhalations.

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