

Direct application of dexamethasone for the treatment of chronic eustachian tube dysfunction

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Abstract

We undertook a prospective study to determine the safety and effectiveness of the direct administration of a steroid to the eustachian tube via the Silverstein MicroWick in 11 patients with chronic eustachian tube dysfunction, including two who had Samter's triad. All patients had previously been treated with medical therapy and surgical middle ear ventilation without resolution. The MicroWick was placed directly in the eustachian tube orifice through a pressure-equalization tube. Patients received 3 drops of dexamethasone 4 mg/ml three times a day. The drops were discontinued after 4 weeks, and the MicroWick and ventilation tube were removed after 3 months. At study's end, eight patients (72.7%) reported subjective improvement in terms of a reduction in aural pressure and fullness. Audiometric testing demonstrated a 55% reduction in the mean air-bone gap and a 3% increase in the mean speech discrimination score. Bone pure-tone averages remained stable. Tympanometry showed that five patients (45.5%) converted from type B or C tympanograms to type A. Four patients (36.4%) had persistent perforations. Both patients with Samter's triad improved with therapy. These preliminary results suggest that direct dexamethasone administration to the eustachian tube is safe and effective for the treatment of chronic eustachian tube dysfunction. Long-term studies to confirm these findings are under way.