**Intratympanic latanoprost for Menière’s disease - A prospective, randomized, double-blind, placebo-controlled, parallel group study**

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Two previous placebo-controlled cross-over studies in patients with long-standing Meniere have shown positive effects on hearing, tinnitus and vertigo after intratympanic injections of latanoprost, a F2α-prostaglandin analogue commonly used to treat glaucoma, but the low number of patients made firm conclusions difficult.

100 patients were recruited at 13 ENT-departments in Sweden. Inclusion criteria were unilateral definite Meniere´s disease of stage II-IV, speech discrimination < 85% and > 2 vertigo attacks during the previous 3 months. Patients were randomized to receive 1 injection of latanoprost 0.005% (n= 27), 1 injection of placebo (n=13), 3 injections of latanoprost 0.005% (n=40) or 3 injections of placebo (n=20) on 3 consecutive days. Before treatment start there was a run-in period of 4-6 weeks.

Primary endpoint was speech discrimination score in noise (SDSN) at day 14 after first injection. Secondary endpoints were total number of vertigo and drop attacks during 3 months, SDSN, pure tone audiometry, Tinnitus Handicap Inventory (THI), subjective assessment of tinnitus, hearing and vertigo by Likert scales at Days 28, 42, 56 and 84.

There were no statistically significant differences between placebo and latanoprost in any of the endpoints. There were, however, trends of an improvement in hearing following 1 intratympanic injection measured both as (1) pure tone audiometry (at all frequencies; 250 - 8 KHz) and (2) SDSN. There was also a trend of an improvement in THI-score following 3 injections.