

Iatrogenic injury of the Chorda Tympani nerve during Otosclerosis surgery

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Abstract

Otosclerosis surgery is one of the most standardized procedures in ear surgery. It is a highly functional surgery aimed at restoring hearing. The chorda tympani nerve is often located within the surgical field, making it susceptible to multiple manipulations that may lead to various postoperative complications, particularly taste disturbances.

Objectives:

The aim of our study is to determine the frequency of taste disturbances secondary to chorda tympani nerve manipulation during otosclerosis surgery.

Methods:

We conducted an exhaustive, monocentric, prospective observational cohort study from 2022 to 2024, performing 345 chemical gustometry tests using taste strips on 69 patients who underwent otosclerosis surgery .

Results:

The overall frequency of postoperative taste disturbances was 73.9%, as assessed by chemical gustometry using taste strips. Chorda tympani nerve stretching was the most common lesion, occurring in 52.2% of cases (36 out of 69 patients). The creation of the Rosen notch during otosclerosis surgery was associated with postoperative taste disturbances in 83.6% of cases (51 out of 61, $p = 0.00$). The recovery rate of taste function after chorda tympani nerve manipulation was 78.4% (40 out of 51 patients). The recovery rate after nerve stretching was 72.7% at 6 months (23 out of 33 patients), whereas it reached 92.9% when the chorda tympani nerve was not manipulated (13 out of 14 cases).

Conclusion:

Taste disturbances secondary to chorda tympani nerve manipulation during otosclerosis surgery are highly underestimated. Chemical gustometry using taste strips is a simple yet reliable test for detecting these iatrogenic taste disorders.

Keywords: Otosclerosis surgery, Chorda tympani.