

# **Intracranial facial nerve grafting after removal of vestibular schwannoma.**

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## **Abstract:**

**OBJECTIVE:** The objectives of this study were to evaluate outcomes from facial nerve (FN) cable grafting in patients who experienced FN transection during vestibular schwannoma removal and to compare the FN outcomes of patients who underwent FN grafting by using fibrin glue with those of patients who underwent FN grafting by using microsuture.

**MATERIAL AND METHODS:** We retrospectively evaluated a series of 33 patients in whom FN grafting was achieved either by using microsuture (8 cases) or fibrin glue (25 cases). Immediate repair of the FN was performed in all cases at the time of initial resection. The patients FN function was assessed preoperatively, in the immediate postoperative period, and at 3, 6, 9, and 12 months or more postoperatively using the House-Brackmann grading system. All patients had at least 1-year follow-up.

**RESULTS:** At 12 months, a House-Brackmann grade III was achieved in 75% of those who underwent cable nerve graft interposition by using microsuture and in 76% of those who underwent cable nerve graft interposition by using fibrin glue. Analysis of final FN function outcomes demonstrated no statistically significant difference in FN outcomes between the 2 groups ( $P = .891$ , Mann-Whitney U test;  $P = .1$ , Fisher exact test).

**CONCLUSIONS:** The functional results after FN cable grafting by using fibrin glue exclusively were

equivalent to those obtained with microsuture. However, the technique of FN repair by means of fibrin glue is technically simple, less time-consuming, and imparts less trauma on the nerve than does the traditional suture method.