Stitchless fibrin glue-aided facial nerve grafting after cerebellopontine angle schwannoma removal: technique and results in 15 cases.

Authors: Ramos DS, Bonnard D, Franco-Vidal V, Liguoro D, Darrouzet V

Publication Date: 2015

Abstract:

AIM OF THE STUDY: To evaluate the results of facial nerve (FN) grafting using great auricular cable graft and fibrin glue without suturing to palliate FN disruption after removal of large cerebellopontine angle (CPA) vestibular schwannoma (VS) or facial nerve schwannoma (FNS). To assess whether tumor size and origin influenced the results.

STUDY DESIGN AND SETTING: Retrospective review of all patients having undergone removal of FNS/VS and needing intraoperative FN repair between 2001 and 2011.

INTERVENTION: FN was rehabilitated using great auricular nerve cable graft and fibrin glue (Tisseal) without stitching suture.

MAIN OUTCOME MEASURES: All data recorded were reviewed to access age, sex, tumor type, and tumor size according to the Koos classification and presenting symptoms. FN function was evaluated preoperatively and at 18 months using the House-Brackmann (HB) grading system.

RESULTS: Among the 595 patients operated for CPA schwannomas in this period, 15 patients (2.5%) underwent FN repair, including 7 cases of FNS and 8 cases of VS. Tumor removal was total in all cases. FN recovery was HB3 in 13 cases (86.7%) and HB4 in 2. The mean time to the first clinical signs of facial reinnervation was 10 months (6-12 mo). No significant relation was found

between postoperative facial function and tumor size or type, even if all cases of preoperative FP were noted in FNS.

CONCLUSION: Immediate FN reconstruction with fibrin glue-aided greater auricular nerve graft can effectively restore FN function with excellent outcomes. The results seem better than those observed by other authors using sutured grafts or delayed hypoglossal-facial nerve anastomosis.