Hearing preservation in acoustic neuromas. A retrospective study on 25 cases with preoperative AAO-HS A and B (50/50) class, with reference to size of tumor and results.

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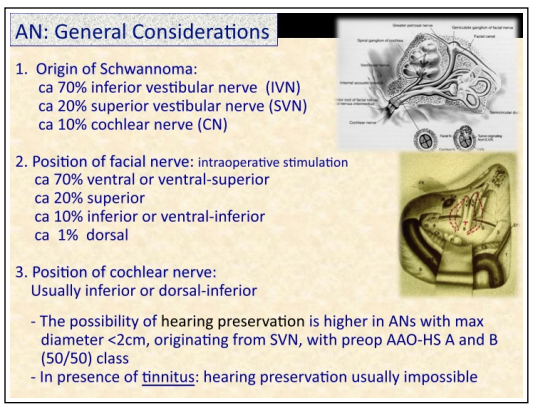
Learning Objectives

Serviceable hearing preservation depends on size of tumor. Microsurgery of AN offers high rate of HP, especially if maximum diameter is less than 2cm, identifying microsurgery as the first therapeutic option for small growing AN.

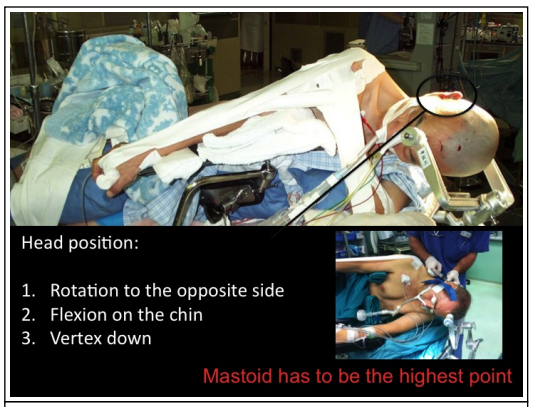


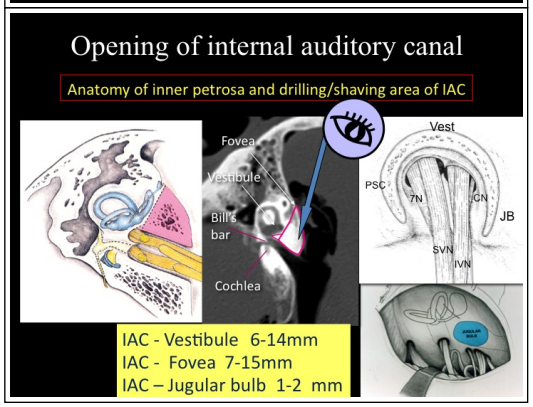
Introduction

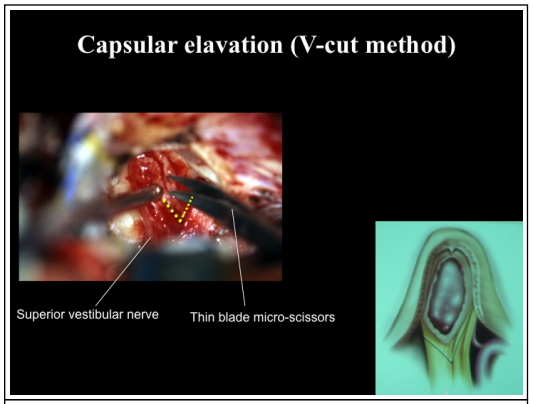
The goals of acoustic neuroma (AN) surgery are total tumor resection, facial nerve (FN) preservation, and –if possible- hearing preservation (HP). With advances in meticulous microtechniques, ***HP has become possible in many patients with acceptable preoperative hearing*** (A & B classes of AAO-HNS scale). This presentation deals with criteria for: patient selection for possible HP and evaluation of postoperative serviceable hearing, with reference to tumor size.

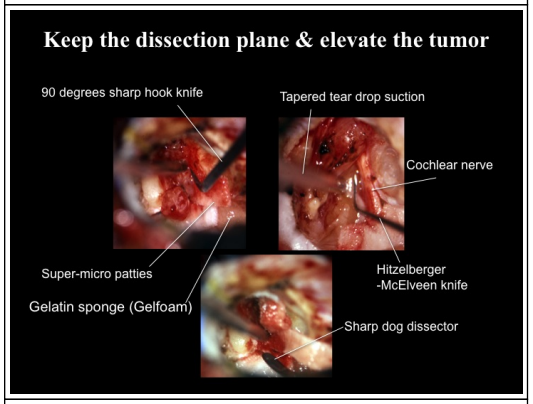
Methods

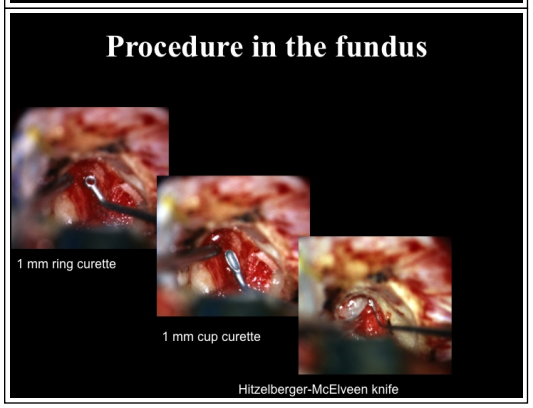
Twentyfive pts with socially useful hearing underwent AN surgery by retrosigmoid approach. Criteria for selection has been: pure tone audiogram better than 50dB loss and speech discrimination score better than 50% (50/50), namely A and B classes of AAO-HNS classification. Even if we attempted HP also in some patients with scores worse than 50/50 (class C), they were excluded from this study. In relation to maximum diameter, we identified 3 AN-groups: A) less that 2cm; B) 2-3cm; C) more than 3cm. In all cases surgery was performed with assistance of intraoperative BAER.





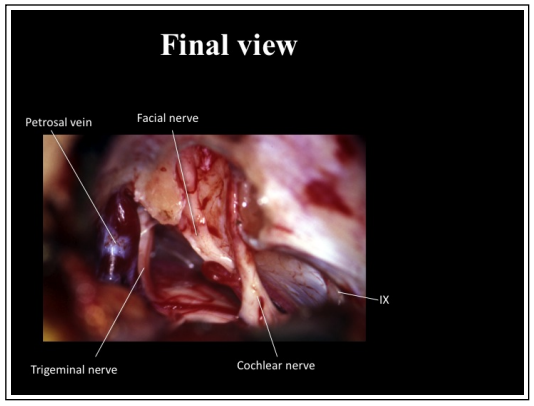






Results

Mean age was 47,2 and average maximal diameter 2cm. Total resection was possible in 19 cases (76%%), 88,2% of group A. In all cases FN was preserved; in 5 partial deficit was observed for maximum 6 months, recovering completely. HP was possible in 16 cases (64%%): 70,6% of group A, 50% B, and 50% C, respectively.



Conclusions

Compared to greater series, our data suggest that ***microsurgery*** of AN offers good rate of HP, ***especially if maximum diameter is <2cm***, and can be considered the first therapeutic option for small growing AN.