Headache after removal of vestibular schwannoma via the retrosigmoid approach: A long-term follow-up-study.

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Abstract:

OBJECTIVE: Our goal was to study the occurrence and source of origin of postcraniotomy headache syndrome after removal of vestibular schwannoma via the retrosigmoid approach. METHODS: A retrospective chart analysis was conducted of all patients with headache at 3 months after removal of vestibular schwannoma from January 1981 through March 1997 and with a minimum of 24 months of follow-up. Diagnosis was made according to the headache classification and was graded using the HARNER scale. Recovery outcome was compared in selected groups of patients with and without headache. A descriptive statistical analysis was used to analyze differences between groups. RESULTS: Of the patients who underwent retrosigmoid craniotomy for removal of vestibular schwannomas, 52 of 155 patients (34%) reported having severe headache of requiring medication every day and/or feeling incapacitated 3 months after surgery. Headache was more prevalent in those who had the bone flap replaced (94% versus 27%), if there was duraplastic or direct dura closure (0% versus 100%). Laboratory-proven aseptic meningitis, most likely due to the use of fibrin glue and drilling of posterior aspect of the internal auditory canal, was mainly associated with postoperative headache (81% versus 2%). In 75% of these cases, calcifications along the brainstem had been noted. CONCLUSION: The origin of postoperative headaches after retrosigmoid vestibular schwannoma resections is not yet fully understood. Different factors may play a role in preventing or reducing headache: dural adhesions to nuchal muscles or to subcutaneous tissues and dural tension in the case of direct dural closure may explain postoperative headache from dural tension. Intradural drilling and the use of fibrin glue may be the

source of aseptic meningitis as the etiology of persistent postoperative headache. Prevention of postoperative headache may include the replacement of bone flap at the end of surgery, duraplastic instead of direct dural closure, and prevention of the use of fibrin glue or extensive drilling of the posterior aspect of internal auditory canal.