An update on the diagnosis and treatment of vestibular schwannoma.

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Vestibular schwannomas (VS) account for approximately 85% of tumors in the cerebello-pontine angle, with a lifetime incidence of approximately 1 in 1000. Most are sporadic, with approximately 5% related to the tumor predisposition syndrome Neurofibromatosis Type 2 (NF2). The mainstays of management strategies are: observation, surgery, radiosurgery/radiotherapy and, for patients with NF2 and rapidly growing tumors or deteriorating neurologic function the targeted therapy bevacizumab. While morbidity and mortality rates related to treatment of VS have improved dramatically over the last decades, there are still significant improvements that could be made, in particular with regards to long-term facial nerve and hearing outcomes. Areas covered: The epidemiology and diagnosis of VS are discussed, followed by the different management strategies and outcomes of those for both sporadic and NF2 related tumors. An extensive literature review has been performed to inform this review article using PubMed and Google Scholar. Expert commentary: The future direction of VS management lies in obtaining longer-term follow-up data for patients with treated VS, and in improved understanding of cellular pathways and targeted therapies.

KEYWORDS: Long-term outcomes; neurofibromatosis type 2; observation; radiosurgery; surgery; targeted therapy; vestibular schwannoma

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