

One hundred fifty-two patients with unilateral [vestibular schwannoma](#) (VS) were investigated using multiple auditory-vestibular function tests such as [audiometry](#), [sensory organization test](#) (SOT), [caloric testing](#), [cervical vestibular evoked myogenic potential](#) (cVEMP) test, and [ocular vestibular evoked myogenic potential](#) VEMP (oVEMP) test.

In this study, 89% of patients with unilateral VS had mild to severe [hearing loss](#) on the involved side. All patients showed higher threshold values or no response in the cVEMP and oVEMP tests, which both exhibited a lower response rate on the affected side than on the unaffected side. Patients with a tumor size  $\geq 30$  mm had significantly lower equilibrium scores for condition 5 and condition 6 of the SOT, which were associated with vestibular dysfunction, higher rates of canal paresis in the caloric test, and lower response rates in the cVEMP and oVEMP tests on the affected sides, compared with the results of patients with a tumor size  $\leq 14$  mm and patients with a tumor size of 15-29 mm.

A diameter  $> 30$  mm may be the critical threshold at which vestibular function is affected and vestibular compensation is interfered with by a VS tumor. Functional performance of the vestibular system can help clinicians predict the size of a tumor and provide a basis for the development of treatment protocols <sup>1)</sup>.

<sup>1)</sup>

Zhou Y, Zhao W, Tian L, Yu J, Yuan Y, Wang J. The prediction of the tumor size of a vestibular schwannoma by clinical performance and vestibular function tests. J Neurooncol. 2018 Dec;140(3):679-686. doi: 10.1007/s11060-018-2998-y. Epub 2018 Sep 20. PubMed PMID: 30238349.

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Last update: **2024/06/07 03:00**

