

Suppression head impulse testing is recommended for vestibular testing of patients with untreated unilateral vestibular schwannoma.

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Introduction:

Suppression head impulse testing (SHIMP) is a new vestibular method capable of quantifying vestibular function. The aim of this study was to evaluate the feasibility of this test in patients with existing or newly diagnosed vestibular schwannoma (VS) patients by comparing the results with the traditional video head impulse test (vHIT or HIMP).

Methods:

Fifty-five patients with unilateral VS underwent extensive audiological and vestibular testing. HIMP results were evaluated using newly introduced objective guidelines based on trace evaluation of pathological saccades. The sensitivity and specificity of HIMP and SHIMP were evaluated and compared. A new SHIMP-parameter is presented; the anticompany saccade amplitude ratio (ASAR).

Results:

We found a significant increase in specificity in HIMP testing using the objective guidelines. SHIMP testing revealed a gain threshold of 0.7 to be optimal in terms of achieving high specificity and sensitivity in relation to HIMP testing. Significant correlations were found between a low ASAR and a high degree of vestibular pathology.

Discussion:

The SHIMP test is a viable addition to the standard HIMP test in patients with VS, especially with the addition of the ASAR, which could prove useful in monitoring the residual vestibular function. If only a single vestibular test should evaluate this cohort of patients, we recommend SHIMP testing to be done with a concomitant evaluation of the ASAR.

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