Balance dysfunction

Evidence is emerging for a significant clinical and neuroanatomical relationship between balance and anxiety. Research has suggested a potentially priming effect with anxiety symptoms predicting a worsening of balance function in patients with underlying balance dysfunction.

Many vestibular schwannoma (VS) patients complain of balance dysfunction; however, validated standardized assessments are lacking. The relative contribution of imbalance and factors like anxiety to disability is unknown. Because imbalance significantly affects quality of life in this group and vestibular rehabilitation may improve outcomes, determining the severity of balance dysfunction is important to understand long-term rehabilitation needs.

To assess functional balance (Vertigo Symptom Scale-Vertigo [VSS-VER] and Functional Gait Assessment [FGA]) and the relative contribution of symptom severity (VSS-VER), ambulant posture (FGA), and anxiety symptoms (Vertigo Symptom Scale-Anxiety [VSS-SA]) to disability in untreated patients.

Patients not exposed to surgery completed the VSS, Vertigo Handicap Questionnaire (VHQ), and FGA. VSS scores were compared with migrainous vertigo (MV) patients, a mixed neuro-otological group, and healthy controls.

A correlation was found between decreased FGA and increasing age (r = - 0.35; p < 0.01), female sex (r = 0.42; p = 0.001), increasing handicap (r = - 0.55; p < 0.001), and symptom severity (r = - 0.52; p < 0.001). In 12 of 21 patients (57%) > 60 years of age the FGA score was \leq 22 suggesting increased falls risk. VSS-VER scores were higher than in healthy controls (p < 0.001) but lower than MV (p < 0.001) and mixed neuro-otology controls (p < 0.001). VSS-SA scores in VS patients with balance symptoms were higher than normal controls (p < 0.05) and correlated with handicap (r = 0.59; p < 0.001) and symptom severity (r = 0.74; p < 0.001). After controlling for age and sex, the VSS-VER, VSS-SA, and FGA explained 47% of the variation in VHQ scores. Conclusion Older VS patients are at significant risk of falls. Balance symptoms are more severe than in healthy controls but less than other neuro-otological patients. Balance symptom severity, anxiety symptoms, and ambulant posture were significant contributors to disability and should be the focus of vestibular rehabilitation strategies ¹.

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