

Quantification of Cognitive Dysfunction in Dizzy Patients Using the Neuropsychological Vertigo Inventory

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Abstract

Objective: Currently available patient reported outcomes questionnaires for dizzy patients give limited insight into the cognitive dysfunction patients often report. Using the newly developed English version of the neuropsychological vertigo inventory (NVI), we aimed to quantify the cognitive impairment of dizzy patients.

Study design: Prospective cohort study.

Setting: Tertiary neurotology clinic.

Patients: Adults with vestibular diagnoses seen between June 2018 and October 2018. Patients with neurologic disorders affecting cognition were excluded.

Interventions: None.

Main outcome measure: NVI score. Secondary measures: dizziness handicap inventory (DHI) score, cognitive failure questionnaire (CFQ) score, 20-item short form health survey scores (SF20).

Results: Of 67 subjects, 13 had BPPV, 11 had Menière's disease (MD), and 20 had vestibular migraine (VM). VM patients were significantly younger (43.5 versus 61.1 yrs, $p = 0.016$), and had significantly higher NVI (67.5 versus 51.0, $p = 0.040$) scores than BPPV patients. MD patients had significantly higher CFQ scores (44.8 versus 23.4, $p = 0.015$) than BPPV patients. NVI scores were similar between MD (67.3) and VM (67.5) patients ($p = 1.000$). DHI scores were similar for all patients ($p = 0.102$). NVI scores were highly correlated to CFQ scores ($r = 0.864$, $p < 0.001$).

Conclusions: VM patients have levels of cognitive dysfunction similar to MD patients, but greater than BPPV patients. A lack of difference in DHI scores among these patients reflects its limitation in assessing the cognitive domain.