Sensitivity and Specificity of the Amer Dizziness Diagnostic Scale for Detecting Vestibular System Abnormalities

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[15,16]. Also, in 1990, Jacobson and Newman designed and validated a specific questionnaire for dizziness, the Dizziness Handicap Inventory (DHI), which evaluated the self-perception of the incapacitating effects on quality of life caused by dizziness. The DHI is a useful tool for physiotherapists and professional rehabilitation teams, enabling them to list patients' problems, define intervention goals, and plan and evaluate treatment and/or rehabilitation programs [17]. Even though both these scales are used in dizziness patients, they are primarily used for those who have been already diagnosed, to establish the intensity of dizziness and the functional impact of dizziness in life. But before using any of these tests and scales, it is always preferable to provide direction for the clinician as to how to proceed with further assessment and examination of a patient who presents with a complaint of dizziness so that unnecessary diagnostic procedures can be avoided.

The wide variation in patient symptoms and the lack of knowledge

question, which relates to all previous vestibular disorders, in addition to Cervicogenic Dizziness (CGD), is about the dizziness episodes.

Questions 1 to 16 are in YES or NO format, but question 17 is designated only for dizziness episodes. The scoring criteria for the seventeen questions are as follows; NO always equals ZERO. Questions 1 through 7 have no score, whereas Questions 8-10, will be given one point for every YES answer. Questions 11-12 are given five points for every YES answer and questions from 13-16 are given twenty points for every YES answer. For the final question, if the dizziness lasts seconds it is given 1 point, if it lasts minutes it is given 5 points and if it lasts hours it is given 20 points. The interpretation of the ADDS total score is as follows: if the total score is 0, the diagnosis is probably a Cervicogenic Dizziness problem (CGD). Dizziness can be diagnosed as Unilateral Vestibular Hypofunction (UVH) if the total score lies between 1 and 4. Scores from 5 to 19 are interpreted as Benign Paroxysmal Positional Vertigo (BPPV), while if the score is 20 or higher, it can be interpreted as a Centrally Mediated problem. The scale is designed in such a way that at the end of the interview, the clinician is able to differentially diagnose the exact pathology and the patient can be directed to the specific diagnosis and the treatment required. The scale is of benefit for both clinicians and patients, because it avoids unwanted and expensive diagnostic procedures and saves a lot of time.

On their first visit to the clinic, all the patients who participated in the present study were evaluated with the Amer Dizziness Diagnostic Scale (ADDS) just once, followed by routine testing of clinical signs and symptoms, audiometry, and a neurological examination, coupled with tests of VOR function, w]™T®xN ʿ ʃioud Ḩ st 20 ʿ prʿ Po

16. Zainun Z, Zakaria MN, Sidek D (2010) Development of Malay Version of Vertigo Symptom Scale (MVVSS) for Clinical Use. Malays J Med and Health Sci 6: 31-39.
17. Jacobson GP, Newman CW (1990) The development of the Dizziness Handicap Inventory. Arch Otolaryngol Head Neck Surg 116: 424–427.
18. Stone J, Carson A, Sharpe M (2005) Functional symptoms and signs in Neurology: assessment and diagnosis. J Neurol Neurosurg Psychiatry 76: i2-i129.
19. Di Fabio RP (1995) Sensitivity and Specificity of Platform Posturography for Identifying Patients with Vestibular Dysfunction. PhysTher 75: 290-305.
20. Lalkhen AG, McCluskey A (2008) Clinical tests: sensitivity and specificity. J Cont Edu Anaes. 8: 221-223.
21. Hornibrook J (2012) A Balance Test for Chronic Perilymph Fistula. Intl J Otolaryng 1: 8-16.
22. Landel R (2005) Dizziness: A Screening Examination and Differential Diagnostic Decision-Making Process for Physiotherapists. Physioth Sing 3: 46-50.