

Post headshake nystagmus: Further correlation with other vestibular test results

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Statement of the problem: Head shake nystagmus (HSN) is common in patients with vestibular disorders. In recent years, a lot of studies have been published regarding the origin, sensitivity, and specificity of this test. Previous studies showed significant correlation between HSN and canal paresis. Limited reports emphasized how HSN correlates with more recently tests for vestibular function evaluation in dizzy patients. The Video – head impulse testing (vHIT) evaluates the high frequency (velocity/acceleration) vestibular function. HSN is thought to relate to high frequency vestibular function. Vestibular evoked myogenic potentials (VEMPs) evaluate the otolith function. The purpose, in this study, is to evaluate the correlation between HSN and unilateral weakness on caloric testing, high frequency (velocity/acceleration) vestibulo- ocular reflex (VOR) function on video head impulse testing (vHIT) and otolith function determined by vestibular evoked myogenic potentials (VEMPs), both cervical and ocular. **Methodology & Theoretical Orientation:** A retrospective study of all patients (n=1499) who underwent complete vestibular function testing at the University Health Network Center for Advanced Hearing and Balance Testing from 2016 to 2019 was performed. **Demographic data, clinical diagnosis, results of Video- nystagmography, vHIT and VEMPs were evaluated. Findings:** 101 patients (6.7%) had HSN. Vestibular test abnormalities were more common in patients with positive HSN. The sensitivity of HSN compared to other vestibular testing appeared low. HSN however demonstrated a high specificity rate. **Conclusion & significance:** HSN is likely more complex in its generation than caloric- induced nystagmus, rendering to more variables within the vestibular system. HSN might provide clinicians with additional information concerning high frequency VOR function involving semicircular canal and otolith function.

Biography

Since 1990 Mordechai Kraus is a senior staff member of the ENT department in Soroka Medical Center, Israel. He is active in vestibular testing and otologic procedures. The Center serves the entire southern section of Israel including the military. In 1997 he was a neurology fellow in the department of Otolaryngology, Toronto General Hospital. During his sabbatical period time in Toronto General Hospital with Prof John Rutka, he conducted a research on Post head shake nystagmus test and evaluated the presence of HSN in patients with unilateral paresis on caloric testing, high frequency vestibular test (vHIT) and otolith dysfunction on VEMPs testing. It will help better evaluate and interpret its significance in the dizzy patients.