The skull vibration induced nystagmus test is fast and easy procedure to assess as a bedside examination a vestibular asymmetry in child.

Principles of SVIN test measurement on the vertex and each mastoids at 100 Hz

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Introduction: Vibration of the mastoid can induce a nystagmus termed skull vibration induced nystagmus (SVIN). This recent first-line indicator of asymmetrical vestibular function, quickly reveals a vestibular asymmetry in unilaterally vestibular lesioned patients and is used as a vestibular Weber Test.

The goal: to assess the usefulness of the SVIN test (Dumas’ test), a fast easy and low cost test, in children with moderate to profound sensorineural hearing loss.

Methods: A prospective monocentric study of children from 7 months to 14 years of age with middle to profound single-sided or bilateral deafness, was conducted from October 2017. The VIN test was performed on each mastoid and vertex, first and double-blind by a senior and a fellow separately; then, Modified Clinical Test of Sensory Interaction in Balance (CTSIB-M), rotary chair, video Head Impulse Test (VHIT), cervical Vestibular Evoked Myogenic Potentials (cVEMP) were proceeded the same day, blinded from the VIN test result. The parents’ written consent was collected.

Results: A total of 21 children, aged 7 month to 14 years were included: 4 had single-sided deafness, 17 bilateral deafness. The main etiologies were genetic (4), CMV (2), pneumococcal meningitis (1), syndromic (4) , malformation (5), unknown (5). Sensibility was 40%, specificity 93.3%, kappa coefficient of Cohen was 1, Negative predictive value was 82.4%, and Positive predictive value was 67%. Clinical tolerance was excellent even in young children.

More patients have to be included for increasing the study's power. Dumas’ test should be compared to videonystagmography and posturography as well. SVIN test is low sensitive but very specific.