Abstract

The Subjective visual vertical is considered to be a functional measure of otolith-mediated verticality perception. This study aims to detect normative data of SVV and to analyze SVV changes in peripheral vestibular disorders. Forty-five adult patients with chronic peripheral vestibular disorders endolymphatic hydrops, vestibular neuritis (VN) & benign paroxysmal positional vertigo (BPPV)) and 20 normal subjects were included. After full history taken, SVV deviations, caloric tests, posturography, cervical and ocular vestibular evoked myogenic potentials were completed. The normative data of SVV ranged from −0.2° to 1.26° in clockwise direction and from−0.04° to 0.95° in the counterclockwise direction. SVV in counter clockwise direction was significantly deviated among the three groups of PVD patients when compared with controls. It revealed a significant deviation in counterclockwise tilt between left diseased ears in relation to controls. Comparing PVD by computerized dynamic posturography it revealed that in absence of vestibular input, endolymphatic hydrops patients rely on visual and somatosensory input, VN patients rely on somatosensory input while BPPV patients rely on visual cues to maintain balance. Abnormal VEMP results were more likely obtained in endolymphatic hydrops group than in VN and BPPV groups. SVV test alone can't differentiate between different PVD.

Key Words: Subjective visual vertical, peripheral vestibular disorders, verticality, vestibular evoked myogenic potentials and computerized dynamic posturography.