ABSTRACT

At the end of the twentieth century, the vestibular evoked myogenic potential (VEMP) test was proposed as a new method for assessing the individual vestibular function. If used sound stimulation, even though it is a test of the vestibular system.

The cervical VEMP (cVEMP) are recorded at the ipsilateral SCM, upper sternum and nasion-ground were used. Clicks (0.1 ms) at 110 dB nHL of intensity were used as acoustic stimuli, with a repetition rate of 5 Hz. Electromyographic (EMG) activities were amplified and bandpass-filtered (10-1.5 KHz). The time for analysis was 100 ms. Responses to 200 stimuli were averaged. To contract the SCM the subjects were asked to rotate the neck in the upright position.

Recording of cVEMP’s, surface electrodes were placed on the neck, just inferior to each eye (1 cm), with reference electrodes placed 1-2 cm below (Figure 1). The interocular distance was set at 50 mm. Responses to 100 stimuli were averaged. Subjects were asked to maintain an upward gaze during recording.

Recording vestibulography system was used. The tests included measurement of the saccades, smooth pursuit, optokinetic nystagmus and head impulses (30-44 °C).

Patients: a prospective study was conducted in our institution from January to November 2011. 126 patients were enrolled, 60 males (47%) and 66 females (53%).

RESULTS

The caloric test and the VEMP test must coexist and be used routinely in the evaluation of patients suffering from balance disorders. Both can help to determine the function of the vestibular system, as well as the origin of the dysfunction (superior vs inferior vestibular nerve).

The exact origin of the oVEMP is not clear yet and the extent of the contribution of the saccule and utricule is still controversial. However, the combined use of cVEMP’s and oVEMP’s is useful for assessing patients with vertigo and may be of help to detect lesions in the brainstem.

REFERENCES