



오 선 영

전북대학교 의학전문대학원 신경과학교실¹, 전북대학교병원 신경과²

Vestibular-evoked Myogenic Potentials

Sun-Young Oh, MD, PhD

Department of Neurology, Chonbuk National University College of Medicine

Vestibular stimulation by air-conducted sound (ACS), bone-conducted vibration (BCV) or by electrical galvanic stimulation elicits vestibular evoked myogenic potentials (VEMPs) that are now widely used to assess otolith function. Myogenic Potentials are distinctly different from neural potentials and they represent a modulation of the background firing of muscle. Without a baseline level of activation, a myogenic potential cannot be recorded.

Conventional cervical VEMP (cVEMP), which is a manifestation of the vestibulocollic reflex, involves measuring electromyographic (EMG) activity from surface electrodes placed over the tonically-activated sternocleidomastoid (SCM) muscles. VEMPs can also be recorded from the extraocular muscles using surface electrodes placed over the inferior oblique and inferior rectus muscles and these are called ocular VEMPs (oVEMPs). This lecture describes the development and neurophysiological properties of the cVEMP and oVEMP and outline the known VEMP characteristics in common central and peripheral disorders encountered in neuro-otology clinics.

To sum up, VEMPs are otolith function tests, and complement the information from calorics/rotational VOR when assessing vestibular disorders. Cervical VEMPs test *vestibulo-collic* pathways and Ocular VEMP tests the *vestibulo-ocular* pathways. Both can be easily established by adapting an evoked potential system.

Key Words: Vestibular-evoked myogenic potential (VEMP), Cervical VEMP, Ocular VEMP, Otolith, Saccule, Utricle, Vestibulo-colic reflex, Vestibulo-ocular reflex (VOR)

Sun-Young Oh, MD, PhD

Department of Neurology, College of Medicine, Chonbuk National University, Gumam-dong, Jeonju 561-180, Korea

Tel: +82-63-250-2286, FAX: +82-63-251-9363

E-mail: ohsun@jbnu.ac.kr