

RIGHT VESTIBULO-OCULAR REFLEX DYSFUNCTION IN MAJOR DEPRESSION

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Objectives: Activity-inactivity cycles are regulated by the Suprachiasmatic Nucleus(SCN). Vestibular system registers the amount of motor activity. The objective of this work is to compare the vestibulo-ocular reflex (VOR) between depressed patients and healthy control people. Slow phase velocity of the VOR was analyzed. **Methods:** The post caloric nystagmus was registered by electronystagmography at 30 and 44°C stimulus, in 9 depressed patients volunteers and 10 healthy control people volunteers.

Results: The slow phase velocity (SPV) was statistically diminished in both ears at 30 and 44°C in depressed volunteers comparing with corresponding ears in healthy ones. The symmetry of the reflex in each patient was measured by the right/left SPV ratio at 30°C and 44°C. It was a significant diminution of this ratio in the depression group compared with the control group people at 30°C stimulation. At 44°C stimulation there wasn't significant differences.

Conclusions: 1.-Depressed people have bilateral diminished SPV comparing with the control group. 2.-SPV RE/LE ratio is significantly diminished in depressed people at 30°C compared with control people. 3.-In all of the depression group people the slower velocity was at the same side: Right Ear. The SPV of the VOR is integrated principally at Vestibular Nuclei. It is proposed that there is a diminished vestibular nuclei activity of the right side in depressed people. There are some evidences of afferents from raphe nuclei's to vestibular nuclei. Raphe nuclei also sends afferents to SCN and vice versa There has been described echogenic alterations of this structure in depression also. It is suggested that dysfunction of right vestibular nuclei afferents, like raphe nuclei, could be responsible of diminished velocity of SPV at right side. Dysfunction of right SCN afferents, like raphe nuclei, could be responsible of altered pattern of rhythms in depression group, or altered activity of right SCN could be responsible of raphe nuclei and vestibular nuclei dysfunction.

Keywords: Depression, Brain asymmetries, Vestibular nuclei, Nystagmus, VOR, SCN, Raphe nuclei



