SUMMARY
Abnormalities in the ocular-motor reflex recorded in electronystagmography may indicate central vestibular system impairment. Multiple sclerosis (MS) is the most common chronic, debilitating disease characterized by focal demyelination that develops throughout the central nerves system at varying time. The aim of the study was to apply the quantitative analysis of ocular-motor tests to evaluate the degree of the central system impairment in MS patients.

Material and methods: The study was carried on 60 MS patients consulted in Balance Division, Otolaryngology Clinic, Medical University of Lodz, from 2002 to 2004, and 50 healthy persons as the control group. Clinical otoneurolaryngological examinations and electronystagmography tests (smooth pursuit, optokinetic, saccades) were performed in all patients. We applied the quantitative Z score analysis for gain in smooth pursuit test, slow phase velocity in optokinetic, maximal velocity of the saccades. Depending on Z score value the patients were qualified into one of three scale dysfunctions.

Results: Statistical correlation was found between results of all ocular-motor tests outcome in MS patients and control group. In smooth pursuit test most often second degree (35.0%), in OKN test first degree (28.3%) and in saccades the third degree (31.6%) of dysfunction was observed. The higher the values of Z score, the more abnormal results of ocular-motor reflex were observed.

Conclusion: Application of the quantitative Z score analysis of the ocular-motor tests results demonstrating the degree of central ocular-motor system dysfunction in MS patients. This method may assist in monitoring the central vestibular system impairment and in evaluating the course of the disease and degree of neurological disability.

Hasła indeksowe: testy wzrokowo-okoruchowe, stwardnienie rozsiane, elektronystagmografia

Key words: ocular-motor tests, Multiple Sclerosis, ENG