CHANGES IN ENMG INDICATORS IN PATIENTS USING RPMS IN MUSCLE HYPOTONIA SYNDROME

Shamansurov Shaanvar Shamuratovich
Professor, MD, head of the Department of "Nervous Diseases of childhood" of the Center for the development of professional qualifications of medical workers, doctor of medical sciences, professor

N. A. Mirsaidova
Candidate of Medical Sciences, pediatric neurologist

D. B. Akhmedjanova
The base of doctoral student of the Department "Nervous Diseases of childhood " of the Center for the development of professional qualifications of medical workers
Tashkent, Uzbekistan

Abstract

The purpose of the research. Study of changes in electroneuromyography indicators in patients using repetitive peripheral magnetic stimulation in muscle hypotonia syndrome.

In the period of 2022-2023, 110 children of early age (0-3) with muscle hypotonia syndrome were comprehensively examined in the department of "Childhood Nervous Diseases" of the 1st Children's Clinical Hospital of Tashkent City. In our research, we divided the patients with muscle hypotonia syndrome, that is, the representatives of each group (group 1,2,3,4) into 2 groups.

Representatives of the 1st group (47 people): traditional medical treatments, i.e. medical treatment ± rehabilitation. Medicinal treatment includes nootropic, blood circulation improving, acetylcholinesterase drugs and group B vitamins. Representatives of the 2nd group (63 people): rPMS ± rehabilitation. Treatment procedures were continued 10 days every month from 3 to 6 months. Patients underwent ENMG examination before and after treatment. In our patients who received rPMS + rehabilitation, ENMG indicators were significantly higher than in patients who received conventional treatment.

Keywords: ENMG, rPMS, the muscle hypotonia syndrome

The purpose of the research. Study of changes in ENMG indicators in patients using repetitive peripheral magnetic stimulation in muscle hypotonia syndrome.

Material and test methods. During 2022-2023, 110 children with muscle hypotonia syndrome at an early age (0-3) were comprehensively treated in the Department of "Childhood

Nervous Diseases" of the 1st Children's Clinical Hospital of Tashkent City. Our study included 57 (51.8%) boys and 53 (48.2%) girls. All children were carefully examined clinically and neurologically according to the generally accepted method. The examined patients were divided into 4 groups according to the results of clinical and anamnestic, ultrasound, dopplerographic and electrophysiological examination.

Children with muscle hypotonia of central type (group 1) had 32 (29), children with MGS of peripheral type (group 2) had 25 (23), children with mixed, that is, MGS with damage of both central and peripheral type (3 -group) accounted for 43 (39%) and chromosomal diseases with muscle hypotonia (group 4) accounted for 10 (9%).

In our research, we divided the patients with muscle hypotonia syndrome, that is, the representatives of each group (group 1,2,3,4) into 2 groups. Representatives of the 1st group (47 people): traditional medical treatments, i.e. medical treatment ± rehabilitation.Medicinal treatment includes nootropic, blood circulation improving, acetylcholinesterase drugs and group B vitamins. Representatives of the 2nd group (63 people): rPMS ± rehabilitation. Treatment procedures were continued 10 days for every month from 3 to 6 months. Patients underwent ENMG examination before and after treatment. The results were entered into the patient's medical history.

According to the results of pre-treatment ENMG examination of patients who received traditional medical treatment, the mean response amplitude of n.peroneus motor fiber M in group 1 patients was 4.25±0.11 (right) 3.7±0.16 (left) R<0.01, 2.46±0.1 (right) 2.24±0.1(left) P<0.01 in group 2 , 2.58±0.1 (right), 2.62±0, 12 (left) P<0.01, 2.6±0.21 (right) 3±0.47 (left) P<0.01 in group 4, after treatment in group 1 were 4.25±0.11 (right) 3.7±0.16 (left) , 2.55±0.2 (right) 2.46±0.1(left) in group 2, in group 3 were 2.61±0.1 (right), 2.91±0.12 (left) P<0.01, in group 4 were 2.6±0.21 (right) 3±0.47 (left) P<0.01

By the 2nd method, that is, when rPMS+ rehabilitation was applied to the patients, according to the results of the ENMG examination before the treatment, the average indicator of the amplitude of the motor fiber of the n.peroneus M-response were 3.26±0.11 (right) 3.12±0.16 (left)) R<0.01, in group 2 were 1.99±0.1 (right) 2±0.1(left), in group 3 were 2.32±0.1 (right), 2 ,34±0.12 (left), in group 4 were3.1±0.21 (right) 2.4±0.47 (left), after treatment in group 1 were 4.65±0.15 (right) 4.5±0.13 (left), in groiup 2 were 3.8±0.2 (right) 4.2±0.1 (left), 3.8±0.1 (right), 4.15±0.12 (left) in group 3 , 3.72±0.12 (right), 3.59±1.1 (left) in group 4.

According to the results of pre-treatment ENMG examination of patients who received traditional medical treatments, the mean index of the amplitude of M-response of n.tibialis motor fiber in group 1 were 8.22±0.2 (right), 9.3±0.17 (left) , in group 2 were 6.5±0.2 (right), 7.1±0.19 (left) , in group 3 were 9±0.17 (right), 8, 9±0.21 (left) (P<0.01), in group 4 were 6.64±0.5 (right), 7.6±0.29 (left), after treatment in group 1were 8.5±0.5 (right side), 9.5±0.2 (left side) , in group 2 were 6.58±0,1 (right), 7.2±0.12 (left) P<0.01, in group 3 were 9 ± 0.14 (right), 8.9±0.15 (left) , in group 4 were 6.8 ± 0.34 (right), 7.8±0.12 (left). According to the

ENMG examination results of our patients in group 2 before treatment, the average index of M-response amplitude of n.tibialis motor fiber in group 1 were 8.9±0.2 (right side), 9.2±0.17 (left side), in group 2 were 5.9±0.2 (right side), 6.2±0.19 (left side), in group 3were 11.3±0.17 (right side), 11.6±0.21 (left side), 7±0.5 (right side), 7.3±0.29 (left side) (P<0.01) in group 4 , after treatment in group 1 it was 11±0.5 (right side), 12.3±0.2 (left side) P<0.01, in group 2 it was 10.6±0.1 (right side), 10.2±0.12 (left side) P<0.01, in group 3 it was 11.3±0.14 (right side), 11.6±0.15 P<0.01 (left side) (P <0.01), in group 4 it was 10.8 ± 0.34 (right side), 10.2 ± 0.12 (left side) (P<0.01)

In conclusion, our patients treated with rPMS + rehabilitation had significantly higher ENMG scores than those treated with conventional treatment.