

Improvement of rehabilitation activities in treatment of post-injection mono-neuropathies in children

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Abstract

The aim of our research was to improve rehabilitation measures in children with a disease of the neuro-motor sphere. To conduct research, 100 children aged 3 to 18 years who were in stationary and outpatient areas in the Republican Children's Rehabilitation Center were examined. Tashkent. Rem-Ex created on the Android platform.

Relevance. Among the diseases of the peripheral nervous system in children accompanied by pain syndromes, post injection mononeuropathies of the lower extremities are most prevalent, with trauma of the peripheral nerves in children in second place. The prevalence of diseases of the peripheral nervous system (PNS) in children and adolescents under the age of 14 in Uzbekistan is 140 cases per 100,000 population, the primary incidence is 64 per 100 thousand population

Therefore, the question of modern principles of rehabilitation of children with diseases of the neuromotor sphere is acute, since step-by-step rehabilitation methods have not been developed and this issue is still relevant today.

Objective The aim of our study was to improve rehabilitation measures in children with diseases of the neuromotor system.

Materials and methods. For the study, we examined 100 children aged 3 to 18 years who were inpatient and outpatient treatment at the Republican Children's Rehabilitation Center for Diseases of the Musculoskeletal System of Tashkent. Of the 100 children examined, 80 practically healthy children with various types of neuropathy from the use of NSAIDs (injections), 10 children with neuropathies as a result of prolonged use of orthoses, 10-monoparesis of the lower extremities of various etiologies. Depending on the treatment methods used, all patients were divided into groups (table 1).

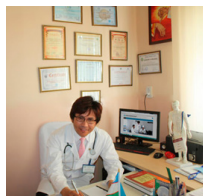
Table 1. The division into groups depending on the methods of treatment used (n = 100).

Groups	Quantity and age	Rehabilitation Methods
Basic	36 (36%) children 10,05±0,27	Traditional treatments
Comparison group	64 (64%) children, 9,8±0,25	Developed rehabilitation methods

The comparison group used the mobile application (Rem-Ex) developed by us.

Results. The developed software (Rem-Ex) was created on the platform and includes visualization, assessment and step-by-step comprehensive rehabilitation depending on the age of the child and individual gender differences.

According to a neurological examination, statistically significant results were obtained: in 57.3 ± 4.0% of children, tremor of the lower extremities was stopped (p≤0.05); the number of children with no restrictions on manual functions in the main group was 61.6 ± 5.8% compared with the control group (21.8 ± 3.4%, p≤0.05). The severity of muscle hypotrophy (feet, legs) decreased in 68.5 ± 7.2% in the main group, compared with the control (24.3 ± 3.8%, p≤0.05). The function of movement without assistive devices improved in 73.2 ± 8.6% in the main group versus 42.3 ± 4.4% (p≤0.05) in the control group. The frequency of gross movement disorders decreased from 67.3 ± 4.5% to 13.8 ± 2.4% (p≤0.05) in the main group versus 44.6 ± 3.7% in the control group (p≤0, 05). The ability to stand (walk) on toes was normalized in 65.7 ± 7.6% of children (p≤0.05) compared with the control group (34.4 ± 4.7%, p≤0.05). The ability to walk on the heels improved in 55.2 ± 6.4% in the main group versus 29.6 ± 4.7%, p≤0.05 in the control group. The severity of steppage decreased from 45.8 ± 4.9% to 10.3 ± 2.4% in the main group versus 21.6 ± 4.3% in the control group (p≤0.05).



Biography

Zohidjon Nurmanovich Ismailov is working as pediatric neurologist and Chairman of the Commission for information Communication Technology at Republic Children's Rehabilitation Center with diseases of bearing –movable system and pediatric neurologist in the « International Trade and Production» CITY MED clinic.

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