

MEDICAL SCIENCES

EARLY REHABILITATION MEASURES AFTER ISCHEMIC STROKE IN HOSPITAL

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<https://doi.org/10.5281/zenodo.10815190>

Abstract

We studied and analyzed data on the prevalence of ischemic stroke in Almaty (stroke center of the clinic) from January 2022 to January 2023. During this period, 423 patients with a clinical diagnosis of "Acute cerebrovascular accident" applied to the stroke center, of which 126 patients were diagnosed with cerebral infarction. We selected 78 cases where ischemic stroke developed. The Rankin, Ashworth, Rivermead scale involves the use of data obtained as a result of examining the neurological status of a patient with a stroke using the NIHSS scale. Early recovery of movement disorders depends on the correct and consistent initiation of such measures as positional treatment, passive and active therapeutic exercises, and verticalization. Rehabilitation specialists, relatives and friends can help restore impaired functions after an ischemic stroke and adapt to social activity.

Relevance

Stroke still remains the most important cause of morbidity and mortality in the population. According to expert estimates from the World Health Organization (WHO), stroke is the second leading cause of death in the world. Every year, cerebral stroke affects 5.6 to 6.6 million people and claims 4.6 million lives. In addition to its absolute medical and social significance, stroke also causes significant economic damage, developing in people of working age. Disability due to stroke ranks first among all causes of primary disability. The medical and social significance is significantly increasing due to a clear trend towards the aging of the population and an increase in the proportion of elderly people, in whom the frequency of chronic progressive forms of cerebrovascular accident (CVA), primarily ischemic, is increasing [1].

Disability due to stroke ranks first among all causes of primary disability. According to WHO expert estimates, the creation of an adequate system of care for patients with stroke will make it possible in the coming years to reduce mortality during the 1st month of the disease by 20% and ensure independence in everyday life after 3 months. after its initiation in at least 70% of surviving patients [2]. The quality of life in ischemic stroke (IS) depends on the severity and course of the stroke, the duration and complexity of the stages of rehabilitation treatment. To improve the quality of life of patients with IS, assessment of lost functions is necessary [3]. Stroke is a medical and social problem, which is why real efforts to organize effective preventive measures and improve the system of providing medical care to patients with a stroke are so significant and important.

Keywords: ischemic stroke, rehabilitation measures, early stage of rehabilitation, disability, rating scales.

Purpose of the study

To study effective rehabilitation measures at an early stage after ischemic stroke.

Research methods

We studied the materials of the stroke center of a multidisciplinary clinic in Almaty (Kazakhstan) for 2022 - 2023. 234 medical records of an inpatient with a diagnosis of "Cerebral infarction (I63)" were processed. The study included 78 patients (46 men and 32 women). The average age of the patients was 70.8 ± 6.8 (from 50 years to 80 years). The diagnosis was made based on the patient's complaints, clinical and neurological data on the NIHSS scales, changes identified by the results of CT (computed tomography) / MRI (magnetic resonance imaging) of the brain, ECG (electrocardiography), EchoCG (echocardiography), laboratory data and examination by doctors from a multidisciplinary team. Early recovery of movement disorders was assessed using the following scales: Ashworth spasticity, Rivermead Mobility Index, and Rankin Activities of Daily Living Index.

Patients stayed in the stroke center for 9-15 days. Received drug and syndromic therapy. Informed consent to participate in the study was obtained from all patients. Statistical processing of the research results was carried out using parametric and non-parametric statistics methods. Standard methods of descriptive statistics were used (calculation of means, standard deviations, standard errors, rank statistics, etc., as well as well-known significance tests χ^2 , Student's t -tests, etc.).

Research results

According to the Ashworth muscle spasticity assessment, movement disorders in patients with ischemic stroke revealed severe/severe hemiplegia – in 77.4%; mild/moderate hemiparesis – in 22.6%. The Rivermead index was detected in the examined patients with ischemic stroke - 5 points in 33.4%, 6 points in 41.6% and 7 points in 25%. Barthel Activities of Daily Living Index – 50 points for 32 (41.0%), 65 points for 28 (35.9%), 80 points for (23.1%).

From the first day of admission, all patients received positional treatment. From the third day, in order to reduce spasticity, patients were given passive therapeutic gymnastics, and active gymnastics and verticalization - from the 4-5th day of hospitalization.

Upon the start of early rehabilitation, patients showed significant improvement - in $42.9 \pm 4.0\%$, moderate improvements - in $34.0 \pm 3.8\%$ of patients, and in $23.1 \pm 1.51\%$ of patients no positive improvements were identified. changes.

Discussion

From the first days after the stroke, early rehabilitation was carried out, i.e. treatment by position in order to prevent the formation of stable pathological systems (contractures, pathological postures). To maintain movement in the joints and prevent contracture, passive gymnastics was performed in them. When the condition improved, the patients were given breathing exercises in combination with active exercises in the limbs and verticalization. Subsequently, patients were taught to eat and dress independently.

Conclusion

Based on the identified data from clinical diagnostic studies, a clinical diagnosis was made in the first days of the disease. Using neurological examination, motor syndromes were identified. Along with drug therapy, patients with acute cerebrovascular accident started treatment from the first days. The main task of early rehabilitation is to return the patient's ability to assume a vertical position earlier. After all, this is necessary to prevent pneumonia and bedsores. The joint efforts of rehabilitation specialists, family and friends make it possible to restore impaired functions and social activity after a stroke.

References:

1. Suslina Z.A. Cerebrovascular disorders: diagnosis, treatment, prevention / Z. A. Suslina, T. S. Gulevskaya, M. Yu. Maksimova, V. A. Morgunov. - Moscow: MEDpress-inform, 2016. – 536 p.
2. Epifanov, Vitaly Aleksandrovich Early rehabilitation after stroke / V.A.Epifanov, A.V.Epifanov, O.S.Levin. – 5th ed., revised. and additional - M.: MEDpress-inform, 2022 - 344 p.
3. Nurguzhaev E.S., Izbasarova A.Sh. Assessment of the quality of life in patients with ischemic stroke in the city of Almaty. Journal of Neurology and Psychiatry named after S.S. Korsakov. - 2019.- No. 5 (119).-P.344-345. Materials of the XI All-Russian Congress of Neurologists and the IV Congress of NABI. St. Petersburg.