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Abstract

O. I. Kolenko,

¹⁾**I. O. Chemerys,**

I. V. Chernetskyi,

*Sumy State University, 2, Rymko-
ho-Korsakova str., Sumy, Ukraine,
40007;*

¹⁾*Communal Institution of Sumy
City Council "City Clinical Hospi-
tal No.4", 3, Pratsi str., Sumy,
Ukraine, 40000*

EFFECTIVENESS OF EARLY REHABILITATION IN PATIENTS WITH ACUTE ISCHEMIC STROKE IN NEUROLOGY UNIT

Introduction. The theoretical grounding and solution of the scientific problem, which consist in the study of factors that contribute to the improvement of patients with ischemic brain stroke rehabilitation, are presented in this paper; it is a study of modern methods of rehabilitation and their effectiveness. The objective of the study was to find out reasons why the conducted research shows the significant importance of the use of kinesitherapy, transcutaneous electrical nerve stimulation, and psychotherapy in the system of early rehabilitation of patients.

Based on the study, we established that lateralization of brain lesions is an important factor that affects the rehabilitation potential of patients.

The signs of motor impairment and cognitive deterioration in patients with ischemic stroke requires the development of individual and intensive rehabilitation measures in order to restore brain function, and adequate treatment of all possible manifestations that impair the effectiveness of rehabilitation and the quality of patients' life after ischemic stroke. In addition, our task was to study the incidence of post-stroke depressive disorders and their relationship with psychosocial factors.

Material and methods. The empirical part was performed by collecting information about 60 patients who were treated and had initial rehabilitation in the early recovery period in the stroke unit. Patients were divided into 2 groups according to the timing of recovery to assess the likelihood of post-stroke depression and recovery against time. The analysis of data obtained after processing of materials was carried out using Microsoft Excel'16 program. Statistical processing of the results was carried out by the method of variational statistics using the Student's test. The data were collected from patients with cerebral circulation disorders of Communal Institution in neurology unit of Sumy City Council "City Clinical Hospital No.4".

Study results: It was established that gender is not a determining factor in the recovery of patients after ischemic stroke and does not significantly impact the rehabilitation prognosis. The most effective factors in recovering lost functions and skills after an ischemic stroke were complexity, phasing, and early start of rehabilitation measures.

Post-stroke depression is a common consequence of ischemic stroke

and 54 (90 %) patients ($p < 0.05$) have it. The characteristic feature of depression in post-stroke patients was the persistence of symptoms, mild and moderate degree of severity, criticism of their condition, etc. Depressive disorders were complex, polymorphic, and included signs of both organic depression and personal response to the development of a brain damage. The relationship of depression with the severity of neurological deficits, localization of the focus, as well as with psychosocial factors such as lonely living, loss of work, high social and professional status were shown. Further study of cognitive impairment and the role of specialists in solving the problem of their correction are required. Thus, a complete clinical-neurological and rehabilitation characteristic of patients with different baseline data and conditions is given, based on the results of our own research.

Keywords: stroke, ischemic stroke, rehabilitation, depression, transcutaneous electrical nerve stimulation, TENS.

Corresponding author: o.kolenko@med.sumdu.edu.ua

Резюме

О. І. Коленко,

¹⁾І. О. Чемерис,

І. В. Чернецький,

Сумський державний університет,
вул. Римського-Корсакова,
2, Суми, Україна, 40007;

¹⁾КНП «Клінічна лікарня №4»,
Сумської міської ради,
вул. Праці, 3, Суми, 40000

ЕФЕКТИВНІСТЬ РАННЬОЇ РЕАБІЛІТАЦІЇ У ХВОРИХ З ГОСТРИМ ІШЕМІЧНИМ ІНСУЛЬТОМ В УМОВАХ НЕВРОЛОГІЧНОГО ВІДДІЛЕННЯ

Вступ. Наявність ознак рухових та когнітивних порушень у пацієнтів з ішемічним інсультом (ІІ) вимагає розробки програми індивідуальних та інтенсивних реабілітаційних заходів з метою відновлення функцій мозку, та адекватного лікування всіх можливих проявів, які погіршують відновлення. Встановлено, що стать не є визначальним фактором відновлення хворих після ішемічного інсульту і суттєво не впливає на прогноз реабілітації. Комплексність, етапність, ранній початок реабілітаційних заходів – найбільш ефективний фактор відновлення втрачених функцій та навичок після ІІ.

Мета роботи. Надати теоретичне обґрунтування та розв'язання наукової задачі, яка полягає у вивченні факторів, що сприяють покращенню реабілітації хворих з ІІ; вивчити сучасні методи відновлення функцій та їх ефективність. Проведене дослідження показує суттєву значимість застосування кінезітерапії, черезшкірної електростимуляції (ЧЕНС) та психотерапії у системі ранньої реабілітації хворих.

Матеріали та методи. Було обстежено 60 хворих, які лікувалися та проходили початковий реабілітаційний курс у ранньому відновному періоді в умовах неврологічного відділення для хворих з порушеннями мозкового кровообігу КУ СМР «Міська клінічна лікарня №4». Пацієнти були розділені на 2 групи залежно від термінів відновлення з метою оцінки ймовірності розвитку післяінсультного депресивного стану та динаміки відновного лікування. Аналіз даних, отриманих після обстеження, проводився за допомогою програм "Microsoft Excel'16". Статистичну обробку результатів здійснювали методом варіативної статистики за критерієм Стьюдента.

Результати. На основі дослідження встановлено, що латералізація ураження при ішемічному інсульті являється важливим фактором, який впливає на реабілітаційний потенціал хворих. Депресія є частим наслідком ішемічного інсульту і через 6 місяців відмічається у 54 (90 %) хворих ($p < 0,05$). Її характерними рисами у постінсульт-

The analysis of the development of the depression, depending on the localization and severity of stroke was held. We did not find a clear dependence on the development of depression on the localization of stroke. It could only be noted that more pronounced depression was observed in patients with right-sided localization of the IS. In accordance with the results in group A, the proportion of patients with a mild form of depression was 76.6 %. In group B, the rate was 86.7 %, but it was mild and moderate depression.

Unfortunately, to date, rehabilitation activities in municipal hospitals have been constructed in such a way that the greatest attention is paid to motor rehabilitation. This can be explained by the considerable social importance of immobility, which requires the involvement of outside assistance, causes the disability and financial costs of society.

Conclusions

1. In the course of the work, the current state of providing rehabilitation assistance to patients in the conditions of further industry reform was studied and analyzed. The conducted research shows the significant importance of the use of kinesitherapy, TENS and psychotherapy in the system of early rehabilitation of patients. The fact that lateralization of lesions in IS is an important factor influencing the rehabilitation potential is confirmed. The presence of signs of movement and cognitive impairment in patients with brain ischemia requires the development of a program of individual and intensive rehabilitation measures to restore brain function and adequate treatment of all possible manifestations that impair the effectiveness of rehabilitation measures and impair the quality of life of patients after stroke. The most effective factors in recovering of lost functions and skills after an IS are complexity, phasing, early start of the rehabilitation.

It is established that gender is not a determining factor in the recovery of patients after IS and does not significantly affect the prognosis of rehabilitation.

2. Thus, the conducted comprehensive

Nevertheless, equally important is psychological and speech rehabilitation, because speech is a no less important tool for the work of a particular category of patients, and psychological correction in the presence of defects contributes to reducing the percentage of post-stroke depressive states. Swallowing disorders are also within the competence of the speech therapist. Productive rehabilitation has not yet been established with this category of patients. The primary method of correction of post-stroke speech disorders is to renew speech, reading, and writing sessions with a speech therapist- aphasiologist or neuropsychologist conducted on the background of receiving nootropics. However, not always the staff of the department has specialists at the appropriate level. However, this is a reason for further in-depth research.

epidemiological, clinical and neurological, the statistical study made it possible to assess the epidemiological situation in Sumy region and in the Sumy city, study the most common risk factors, determine the rehabilitation potential of patients and indicate that early approach, consistency and individuality contribute to effective recovery after stroke. The obtained results allow developing and proposing measures to improve the rehabilitation program aimed at increasing the daily activity of the patient's life with stroke.

3. To increase the effectiveness of the rehabilitation period of patients with stroke and to improve the system of providing care assistance, the following measures should be followed: 1) to encourage patients to active rehabilitation activities and all necessary techniques to improve lost functions; 2) create conditions for the introduction of advances physical rehabilitation techniques, including the TENS and special exercises for the acquisition of self-care skills; 3) adhere to the principles of duration and complexity of rehabilitation; 4) actively involve patients' relatives, provide outreach and psychological support measures.

Prospects for future research

1. Define and expand the role of related specialists in the treatment of cognitive dysfunctions.
 2. Particular attention should be given to the problem of speech rehabilitation and resumption of swallowing.
 3. Expand the role of a speech therapist in the rehabilitation of verbal function.
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Conflict of interest

The authors declare no conflict of interest.

Відомості про авторів

Коленко Оксана Іванівна, СумДУ, доцент кафедри нейрохірургії та неврології, e-mail: o.kolenko@med.sumdu.edu.ua, тел. +380954821636;

Чемерис Інна Олександрівна, лікар-невропатолог, магістр, КНП «Клінічна лікарня №4», Сумської міської ради, вул. Праці,3, Суми, 40000, e-mail: neiro@med.sumdu.edu.ua, тел. +380668536863;

Чернецький Ігор Володимирович, Сумський державний університет, студент, вул. Римського-Корсакова, 2, Суми, Україна, 40007, e-mail: neiro@med.sumdu.edu.ua, тел. +380542646444.

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