Application of early nursing intervention on patients with cerebral infarction in in training process of language and limb function rehabilitation.

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Abstract

Objective: To study and analyse application of early nursing intervention on patients with cerebral infarction in in training process of language and limb function rehabilitation.

Method: 70 cases with cerebral infarction hospitalized in our hospital are selected (July 2015-July 2016) and randomly divided into 2 groups, that is, 35 cases for the research group and the control group respectively. Routine nursing is provided for patients from the control group, and early nursing intervention is conducted on the basis of routine nursing for patients from the research group. Language and limb function rehabilitation scores of patients from both groups after nursing are compared.

Result: The language function rehabilitation score of patients from the research group after nursing is (80.31 ± 4.34), and their limb function rehabilitation score is (62.44 ± 4.89). The total effective rate is 94.2%, which is significantly higher than that of 21.9% of the control group (P<0.05).

Conclusion: Carrying out early clinical nursing intervention is conductive to the promotion of language and limb function rehabilitation by patients with cerebral infarction, the consolidation of the curing effect, and the improvement of patients' life quality and motor function. Thus, it can be widely used clinically.

Introduction

Cerebral infarction is a common cerebrovascular system disease, which has great influence on patients' life, and patients usually have language and limb problems [1]. Nowadays, with the improvement of people's life level and diet structure change, the incidence rate of cerebrovascular diseases like cerebral infarction is growing year by year, thus affecting people's mental and physical health as well as life quality seriously [2,3]. With characteristics like acute onset, changing illness states, and complications, cerebral infarction is a disease mainly caused by the circulatory disturbance of patients' brain tissues [4,5]. Most patients with cerebral infarction have complications like language barrier, hemianesthesia, hemiplegia and unconsciousness after receiving emergent treatment, which lowers the life quality of patients and may even be life-threatening. Therefore, in the clinical treatment process for patients with cerebral infarction, it is of great importance to take positive nursing intervention to lower the incidence rate of complications and enhance life quality of patients. By taking 146 cases with cerebral infarction as research objects, the application effect of early nursing

intervention is explored in this research, and relevant reports are shown below.

Materials and Methods

General materials

78 cases with cerebral infarction treated in our hospital from July 2015 to July 2016 are taken as research objects. All patients meet the diagnosis standard about "cerebral infarction" in cerebrovascular system diseases. According to random number table, the groups are divided into the observation group and control group, having 35 cases respectively. In the observation group, there are 25 men, 11 women. Their age is between 42 and 66, and their average age is (55.8 ± 16); the disease lasts from 6 months to 5 y, and the average disease course is (3.8 ± 0.2 y). In the control group, there are 21 men and 14 women whose age is (43-65) and average age is (54.3 ± 1.5). The disease course lasts from 7 months to 5 y, and the average disease course is (4.6 ± 0.4 y). In terms of the difference in basic materials of the two groups, there's no statistical significance (P>0.05).

Methods

Routine nursing is conducted on patients from the control group. Clinical symptoms of patients are observed carefully with rigorous monitoring of their vital signs [6]. In case of any abnormality, it would be informed to doctors timely, and effective measures would be taken in time properly [7]. For patients from the observation group, early nursing intervention is conducted [8]. Specific intervention contents include:

(1) Setting of the body position. After patients are hospitalized, their illness conditions are evaluated timely. On this basis, soft tissue massage is conducted twice/d. At the same time, guidance of moderate body turn-over exercise is provided for patients on the bed. (2) Movement guidance intervention. In the process of doing the turn-over exercise on the bed, it is necessary to provide movement guidance for patients, including finger bending, dressing, and taking light articles of daily use. (3) Standing and walking training intervention. After hospitalization for a while, once it is certain that patients' movement would not be seriously restricted, it is needed to guide patients to take standing and walking trainings, make them keep balance when standing on the ground, and then further guide them to receive the step training. (4) Language training intervention. If patients have language problems, relevant nurses should provide language related learning for them. At first, it can be simple syllables. According to patients' specific conditions, targeted further language learning plans can be made, so as to help patients with language expression. The learning process can be transited from syllables to

vocabulary learning, sentence learning, and dialogue learning. In addition, patients' families should be encouraged to communicate more with patients along with caring, so that patients can not only be well-exercised in language ability but also feel warm psychologically, thus enhancing their cooperation degree during the nursing.

Judgment criterions

According to the FMA assessment method adopted for medical researches, the language and limb function of patients with cerebral infarction is assessed. The full score is 100, 1. Excellence: 90-100; 2. Good: 80-89; 3. Moderate: 60-79; 4. Poor: <60.

Statistical analysis

SPSS 20.0 statistical software is used to deal with relevant data. Measurement data is expressed by "($\bar{x} \pm s$)". T-test is adopted, and the enumeration data is represented by the percentage (%) with χ^2 examination; If P<0.05, it suggests there's statistical significance for the difference.

Results

The total clinical effective rate of the intervention group treatment is 94.2%, which is obviously higher than that of 73.5% of the control group. Thus, the difference is with statistical significance (P<0. 05), as shown in Table 1.

Table 1. Clinical effective rate of the intervention group compared with control group.

Group	Cases	Clinically cured	Obvious effective	Effective	Invalid	Total effective rate
Intervention	35	5	20	7	3	94.2%
Control	35	2	5	19	9	73.5%

Language function rehabilitation before and after intervention

Before the intervention, the difference in the language function score of patients from both groups shows no statistical significance (P>0.05); after the intervention, the score of language function of patients from both groups has increased clearly, and the result of the intervention group is superior to that of the control group. The difference is with statistical significance (P<0. 05), as shown in Table 2.

Table 2. Language function rehabilitation before and after intervention.

Group	Cases	Before intervention	After intervention
Intervention	35	43.27 ± 3.15	80.31 ± 4.34
Control	35	44.29 ± 3.26	55.17 ± 2.28

Limb function rehabilitation before and after intervention

Before the intervention, the difference in the limb function score of patients from both groups shows no statistical significance (P>0.05); after the intervention, the score of language function of patients from both groups has increased clearly, and the result of the intervention group is superior to that of the control group. The difference is with statistical significance (P<0.05), as shown in Table 3.

Table 3. The limb function score before and after intervention.

Group	Cases	Before intervention	After intervention
Intervention	35	38.36 ± 1.45	62.44 ± 4.89
Control	35	36.25 ± 1.51	51.06 ± 3.26

Discussion

In recent years, Chinese people's living standard has been improving gradually due to the stable economic development of society. Meanwhile, people's diet structure has changed dramatically as well, thus leading to the increase of the incidence rate of some cerebrovascular system diseases year by year [9,10]. Cerebral infarction is a common cerebrovascular system disease, which may lead to great threat to the mental and physical health of patients [11]. Therefore, from the perspective of patients' health, it is critical to take targeted medical measures.

Specific to patients with cerebral infarction, early nursing intervention for patients' language and limb function barriers is mainly mentioned in this research, thus expecting to realize effective recovery of patients' language and limb functions. The language and limb function score after nursing for patients from the observation group who have received early nursing intervention is significantly higher than those from the control group who have received routine nursing [12]. In addition, it is indicated by scholars *via* researches that carrying out early nursing intervention for patients with cerebral infarction can improve the nursing satisfaction by patients and promote the rehabilitation of patients, which fully verifies that early nursing intervention is of high value in treating patients with cerebral infarction.

Conclusions

For patients with cerebral infarction, the effect of carrying of early nursing intervention is significantly positive. In this way, patients' language function and limb function can be improved, so as to boost their rehabilitation speed. Therefore, it is worthy of being recognized and applied clinically.

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References

1. Kurlansky PA, Williams DB, Traad EA. The valve of choice in elderly patients and its influence on quality of life: A long-term comparative study. J Heart Valve Dis 2006; 15: 180-189.

2. Lavados PM, Hennis AJ, Fernandes JG. Iconography : stroke epidemiology, prevention, and management strategies at a regional level. Latin America Caribbean 2011.

3. Song X, Qiu M, Zhang X. Gender-related affecting factors of prediabetes on its 10-year outcome: BMJ Open Diab Res Care 2016; 4: 000169.

4. Pieńkowska J, Gwoździewicz K, Skrobiszbalandowska K. Perfusion-CT-Can we predict acute pancreatitis outcome within the first 24 hours from the onset of symptoms? Plos One 2016: 11: 0146965.

5. Dabrh AMA, Steffen MW, Asi N. Bypass surgery versus endovascular interventions in severe or critical limb ischemia. J Vasc Surg 2016; 63: 244-253.

6. Ho TW, Huang CT, Chiu HC. Effectiveness of tele-monitoring in patients with chronic obstructive pulmonary disease in taiwan-a randomized controlled trial. Sci Rep 2016; 6: 23797.

7. Davies RM, Scrimshire AB, Sweetman L. A decision tool for whole-body CT in major trauma that safely reduces unnecessary scanning and associated radiation risks: An initial exploratory analysis. Inj Int J Care Injured 2016; 47: 43-49.

8. Zheng Z. Early rehabilitation nursing intervention in patients with cerebral infarction on the effect of the application. Contemp Med Symp 2016.

9. Lyng SA, Robin C, Frederik P. Multifactorial intervention to prevent cardiovascular disease in patients with early rheumatoid arthritis: protocol for a multicentre randomised controlled trial. BMJ Open 2016; 6: 009134.

10. Bejot Y, Daubail B, Giroud M. Epidemiology of stroke and transient ischemic attacks: Current knowledge and perspectives. Revue Neurologique 2016; 172: 59-68.

11. Anazodo UC, Shoemaker JK, Suskin N. Impaired cerebrovascular function in coronary artery disease patients and recovery following cardiac rehabilitation. Front Aging Neurosci 2016; 7: 224.

12. Zhang Q. Effect of high quality nursing in improving the quality of life and nursing satisfaction of elderly patients with cerebral infarction. China Health Standard Manag 2016.

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