ISSN 2706-6819 Vol.4, Issue 1: 53-58, DOI: 10.25236/IJFM.2022.040110

Application of Intensive Care Nursing Scoring System in Patients with Intracerebral Hemorrhage in ICU

Jierui Feng[1,a*], Bowen Sun[2,b*], Xiaoqing Gong[1,c], Yan Wu[1,d]

[1]Neurosurgery, The 904th Hospital of the Chinese People's Liberation Army, Wuxi, China
[2]Emergency Department, Affiliated Hospital of Jiangnan University, Wuxi, China
[a]jnfjr@foxmail.com, [b]sun-clinic@foxmail.com, [c]mxt18021566700@163.com, [d]1506233044@qq.com
**Corresponding author*

Abstract: *Objective: To explore the clinical value of intensive care nursing scoring system intervention in patients with intracerebral hemorrhage in ICU. Methods: 80 patients with intracerebral hemorrhage in ICU treated in our hospital were selected as the research sample (January 2021 December 2021). The patients were divided into groups according to the double-blind lottery method. The control group carried out routine nursing intervention. The observation group applied the intensive care nursing scoring system on the basis of the control group. The time indexes, quality of life, NIHSS score and ESS score of the two groups were observed, The incidence of complications and satisfaction rate were calculated. Results: each index time (ICU time, mechanical ventilation time and hospitalization time) in the observation group was less than that in the control group (P < 0.05). Before intervention, the scores of quality of life (cognitive function, physical function, social function and emotional function) had no comparative value (P > 0.05); After the intervention, the scores of various indexes in the observation group were higher, and the difference was more obvious than that in the control group (P < 0.05). There was no significant difference in each index (NIHSS score and ESS score) before intervention (P > 0.05). After the intervention, the NIHSS score of the observation group was lower and the ESS score was higher than that of the control group (P < 0.05). The complications in the observation group were 5.00% lower than 17.50% in the control group (P < 0.05). The satisfaction of 97.50% in the observation group was lower than 85.00% in the control group (P < 0.05). Conclusion: the intervention effect of intensive care nursing scoring system for patients with intracerebral hemorrhage in ICU is significant. It can effectively improve the quality of life of patients, reduce the risk of adverse events, shorten the length of hospital stay and improve the satisfaction of patients and their families. It has high clinical practice value and is worthy of promotion.*

Keywords: *ICU, Cerebral haemorrhage, Intensive care nursing scoring system, Satisfaction*

1. Introduction

Intracerebral hemorrhage is a common clinical disease. It refers to a kind of clinical syndrome in which patients have non-traumatic intracerebral vascular rupture, resulting in blood accumulation in the brain parenchyma. It belongs to a common type of stroke. In severe cases, it can threaten the life safety of patients, which needs to be paid more attention. After the illness, the symptoms of patients are obvious, such as vomiting, headache and disturbance of consciousness. Some patients can see coma, drowsiness and neurological deficit. The prognosis is poor and may even lead to death. Timely treatment is needed to ensure the life safety of patients. The causes of the disease are complex, such as hypertension combined with arteriosclerosis, cerebrovascular disease, blood disease, etc., which may lead to the disease, especially the elderly, previous stroke history and basic diseases, whose own physical function is reduced, which is more likely to induce the disease [1]. Clinical studies have found that emotional fluctuations, bad living habits and diet are also inducing factors. Patients are often accompanied by obvious increase in blood pressure, limb paralysis and disturbance of consciousness. They reach the peak state in just a few minutes and hours after onset. The symptoms of different patients are different, mainly depending on the bleeding site and amount. ICU actually refers to the intensive care unit, which belongs to a relatively independent ward and provides high-quality nursing for patients, so as to ensure the best protection for severe patients, improve the treatment effect of patients and ensure the life safety of patients. This study will take 80 patients with intracerebral hemorrhage in ICU as the object to analyze

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the clinical application value of intensive care nursing scoring system:1 data and methods

1.1 General Information

80 patients with intracerebral hemorrhage in ICU treated in our hospital from January 2021 to December 2021 were selected as the research samples. Based on the double-blind lottery method, the patients were divided into two groups: 40 patients in the control group, male to female ratio (23:17) (23 males / 17 females), age span 44-75 years, mean age (59.49 ± 2.20) years, 40 patients in the observation group, male to female ratio (11:9) (22 males / 18 females), The age span was 43-74 years, and the mean age was (59.62 ± 2.25) years. Inclusion criteria: (1) all patients were > 40 years old; (2) First onset; (3) The patient's family members reached a research agreement with the researchers; Exclusion criteria: (1) the patient has mental disorder or previous mental history, Alzheimer's disease, aphasia, etc; (2) Patients with liver and kidney function diseases and malignant tumor diseases; (3) Patients dropped out of the study; There was no significant difference in general data between the two groups ($P > 0.05$), which met the research requirements.

1.2 Method

1.2.1 Control Group

The control group selected routine nursing intervention, carried out various vital signs monitoring for patients, closely observed the progress of patients' condition, and treated patients symptomatically. Guide patients in diet control. Patients usually focus on liquid diet, regularly evaluate the nutritional status of patients, and reasonably adjust the nutritional diet plan. Provide reasonable psychological guidance to patients, explain matters needing attention related to intracerebral hemorrhage to patients and their families, encourage patients to actively face the disease and actively cooperate with medical staff.

1.2.2 Observation Group

The observation group applied the intensive care nursing scoring system on the basis of the control group: (1) graded management was carried out for patients. Based on the intensive care nursing scoring system (ICNSS), nurses were divided into different grades (N1-N3) according to their educational background, work experience and professional level, Nurses of different grades were selected according to the severity of patients (the patients were scored with ICNSS scale, with a score system of 16-64. The higher the score system, the higher the degree of disease of patients), N1 carried out level I Nursing (low-risk patients: 16-22 points), N2 carried out level II nursing (medium-risk patients: 23-32 points), and N3 carried out level III Nursing (high-risk patients: 33-64 points); (2) Carry out hierarchical management, and the nurses at the upper level shall provide relevant guidance to the nurses at the lower level, including formulating personalized plans, guiding their operation skills, solving the problems existing in the nursing process, implementing the shift system and coordinating with each other, so as to ensure the overall nursing quality. (3) Regular assessment and evaluation shall be carried out, and nurses at all levels shall analyze relevant nursing problems, find out the causes of problems and make targeted improvement, so as to ensure the improvement of nursing work quality, formulate improved nursing plans and promote the early recovery of patients. (4) Regularly carry out the inspection of relevant medical devices and equipment in the intensive care unit, observe whether they are abnormal or damaged, avoid delaying the treatment time, do a good job in daily disinfection, ensure that the relevant rescue drugs are sufficient, clear them by classification, supplement and inspect them regularly, and improve the quality of nursing.

1.3 Observation Indicators

(1) The time indexes of the two groups were observed, including ICU time, mechanical ventilation time and hospitalization time.

(2) The quality of life of the two groups was observed. The QLQ-C30 quality of life measurement scale was used as the reference standard. The scale was observed from the dimensions of cognitive function, physical function, social function and emotional function. The single dimension implemented a 0-100 score system. The closer the score to 100, the higher the quality.

(3) The NIHSS scores of the two groups were observed, and the neurological function scale [2] was used as the reference standard. The full score of the scale was 35. The higher the score, the more obvious the neurological impairment of the patients; The ESS score [3], taking the European Stroke Scale as the reference standard, is scored from 14 items such as vision, consciousness, language and gaze. The total

ISSN 2706-6819 Vol.4, Issue 1: 53-58, DOI: 10.25236/IJFM.2022.040110

score of the scale is 90. The higher the score, the lower the patient's consciousness of neurological function.

(4) The complications of the two groups were observed, including infection, lower extremity venous thrombosis and pressure ulcer, and the incidence of complications was calculated.

(5) The satisfaction of patients in the two groups was observed and carried out with a self-designed satisfaction questionnaire. The questionnaire implemented a 60 point system, with a full score of 60 - very satisfied; 59-50 points - satisfied, less than 50 points - dissatisfied, calculate satisfaction.

1.4 Statistical Treatment

The data were analyzed by spss27 0 statistical processing, measure various time indicators, quality of life indicators, NIHSS score, ESS score and ESS score with ($\pm$ s) mean $\pm$ standard deviation, and test the statistical value with T; Complications and satisfaction were counted by number (n) or rate (%) to test the statistical value, $P < 0.05$.

2. Results

2.1 Indicators of Patients in the Two Groups

Each index time (ICU stay, mechanical ventilation time and hospital stay) of the observation group was better than that of the control group, with significant statistical difference ($P < 0.05$), as shown in Table 1.

Table 1. Comparison of time indexes between the two groups (±s, d)

group	n	Stay in ICU (d)	Mechanical ventilation	Length of stay (d)
Observation	40	7.26±0.85	4.17±0.75	9.56±1.46
control group	40	9.71±0.92	6.25±0.88	12.22±1.57
t	-	7.562	6.325	8.625
P	-	0.000	0.000	0.000

2.2 Comparison of Patients' Quality of Life

The scores of quality of life (cognitive function, physical function, social function and emotional function) in all dimensions before intervention were not compared ($P > 0.05$); after the intervention, the scores of various indexes in the observation group were significantly different from those in the control group ($P < 0.05$). See Table 2.

Table 2. Patient quality of life score (±s, score)

Group (n=40) Before intervention	cognitive function		Somatic function		social function		Emotional function	
	After intervention	Before intervention	After intervention	Before intervention	After intervention	Before intervention	After intervention	Before intervention
Observation group	61.26±2.85	76.74±2.22	61.62±4.68	76.25±2.22	62.57±3.21	79.36±2.14	71.54±3.66	87.85±3.26
control group	61.35±2.75	68.65±2.14	61.63±4.52	68.16±2.52	62.66±3.24	71.81±2.36	71.61±3.57	80.51±3.28
t	0.266	7.598	0.314	8.657	0.323	8.696	0.346	8.574
P	0.825	0.000	0.787	0.000	0.766	0.000	0.750	0.000

2.3 NIHSS and ESS Scores of the Two Groups

NIHSS score and ESS score had no comparative value before intervention ($P > 0.05$). After the intervention, the NIHSS score of the observation group was low and the ESS score was high, which was significantly different from that of the control group ($P < 0.05$), as shown in Table 3.

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Table 3. Comparison of NIHSS and ESS scores between the two groups (±s, points)

Group(n=40)	NIHSS		ESS	
	After intervention	Before intervention	After intervention	Before intervention
Observation group	27.66±1.66	7.56±0.33	45.55±2.55	64.42±2.21
control group	27.17±1.65	15.25±0.37	45.65±2.49	49.17±2.23
t	0.357	8.525	0.318	8.257
P	0.685	0.000	0.776	0.000

2.4 Complications of the Two Groups

Complications were 5.00% in the observation group and 17.50% in the control group ($P < 0.05$), as shown in Table 4.

Table 4 complications of the two groups [n (%)]

group	n	Infected	Lower extremity venous thrombosis	Pressure sore	Incidence of complications
Observation group	40	1(2.50)	1(2.50)	0(0.00)	2(5.00)
control group	40	1(2.50)	2(5.00)	4(10.00)	7(17.50)
χ^2	-	-	-	-	4.507
P	-	-	-	-	0.034

2.5 Patient Satisfaction

Satisfaction was 97.50% in the observation group and 85.00% in the control group, with significant difference ($P < 0.05$), as shown in Table 5.

Table 5 patient satisfaction [n (%)]

Group (n = 40)	Very satisfied	satisfied	dissatisfied	Satisfaction rate
Observation group	24(60.00)	15(37.50)	1(2.50)	39(97.50)
control group	20(50.00)	14(35.00)	6(15.00)	34(85.00)
χ^2	-	-	-	5.636
P	-	-	-	0.018

3 Conclusions

Intracerebral hemorrhage is a common clinical disease. It belongs to the common type of stroke [4], which refers to the aggregation in the brain parenchyma caused by non-traumatic cerebrovascular rupture. Patients have obvious symptoms after illness [5], which can be changed into vomiting, headache, disturbance of consciousness, etc. [6]. Some patients also have neurological deficit, coma, hemiplegia, etc. [7], and the prognosis is poor, It is prone to increased intracranial pressure and brain edema, threatening the life and health of patients [8]. ICU can effectively provide patients with high-quality care, create the best rehabilitation environment for patients, reduce patients' treatment risk [9], and help patients recover. The intensive care nursing scoring system is a new model [10], which helps to evaluate the patient's condition, ensure the orderly development of various nursing work, create a high-quality rehabilitation environment for patients [11], strengthen the overall management, realize the optimal allocation of resources and ensure the patient's satisfaction [12]. Through hierarchical nursing intervention, ensure the optimal allocation of resources, observe the treatment effect of patients, adjust the nursing intervention plan to avoid excess resources [13], reduce nursing risk, reasonably communicate with patients' family members, obtain the support of family members, meet patients' medical service needs to the greatest extent, and help patients recover their health as soon as possible [14]. Shorten the hospitalization time of patients, reduce the incidence of complications, solve the shortcomings in traditional nursing, clarify the actual needs of patients, and carry out targeted intervention to promote patients to recover their function and physical fitness as soon as possible and improve their quality of life [15].

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In the results of this study, there was a significant difference in each index time (ICU time, mechanical ventilation time and hospitalization time) between the observation group and the control group (P<0.05), indicating that the application of the nursing scoring system can effectively improve patients' symptoms, promote patients' nursing quality, improve patients' clinical symptoms, shorten hospitalization time and restore health as soon as possible. There was no difference in the scores of patients' quality of life (before intervention) (cognitive function, physical function, social function and emotional function) (P > 0.05); After the intervention, the scores of various indexes in the observation group were significantly higher than those in the control group (P<0.05), indicating that the nursing scoring system can effectively improve the physical function of patients, strengthen the overall quality of life of patients, create a high-quality rehabilitation environment for patients, reduce nursing risk and improve the prognosis of patients. There was no difference in NIHSS score and ESS score before intervention (P > 0.05). After the intervention, the NIHSS score of the observation group was lower and the ESS score was higher than that of the control group, with significant difference (P < 0.05), indicating that the nursing scoring system can effectively improve the patient's neurological function, reduce the damage caused by the disease to the patient's nerves and improve the patient's condition. 5.00% of the complications in the observation group were lower than 17.50% in the control group, and the difference was significant (P < 0.05), indicating that the application of the system can improve the overall safety, reduce the incidence of complications and ensure the life safety of patients. The satisfaction of the observation group was 97.50% higher than 85.00% of the control group, and the difference was significant (P < 0.05), indicating that the system can improve the quality of life of patients, help patients turn crisis into safety, improve the survival rate of patients through intervention, obtain the cooperation of family members, and provide high-quality rehabilitation environment for patients.

In conclusion, the intensive care nursing scoring system for patients with intracerebral hemorrhage in ICU can effectively improve the incidence of complications, reduce nursing risk, create a high-quality rehabilitation environment for patients, improve patients' nursing satisfaction, help patients recover their health as soon as possible, and is worthy of clinical promotion.

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