Application Effect of "3P" Nursing Management Mode in Emergency Patients with Acute Ischemic Stroke

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Abstract: **Objective:** To explore the application effects of the 3P(perfecting equipment,perfecting nursing ability, perfecting emergency pathway and application) nursing management mode of acute ischemic stroke nursing care. **Methods:** Clinical data of 80 cases of patients were selected as research group,and 80 acute ischemic stroke patients were selected as reference group. **Results:** Vein opening time, CT completion time and thrombolysis DNT in the research group were significantly lower than that of the reference group（$P < 0.05$）. **Conclusion:** The "3P" management mode can significantly shorten the patients' vein opening time, CT completion time and DNT time of thrombolysis, improve the first aid effect,improve the treatment effect of AIS, which can be widely used.

Keywords: "3P" Mode; Acute Ischemic Stroke; Emergency;

Introduction

Stroke is one of the major diseases leading to disability and death in humans. Acute ischaemic stroke (AIS) accounts for about 80% of all strokes. The timeliness and effectiveness of its treatment are essential to reduce the morbidity and mortality of patients and can greatly improve the quality of life of patients and improve the prognosis[1] .Nowadays,the prevention and treatment of cerebrovascular diseases have improved significantly in China. However, stroke is still the leading cause of the mortality and disability among Chinese residents.The incidence prevalence,recurrence rate and mortality of stroke in China remain high[2]. The burden of stroke disease in China is higher than the global average and is showing an increasing trend[3].The prevention and treatment of stroke still face huge challenges, and the system needs to be further improved and optimized[4].

Relevant research and work progress in China have proved that the use of the "3P" model (perfecting equipment, perfecting nursing ability,perfecting emergency pathway and application) to rescue critically ill pregnant and lying-in women has achieved good clinical effects[5].This research is aim to explore the application effect of "3P" mode in emergency patients with acute cerebral infarction.

1. Materials and Methods

1.1 Research object

80 patients with acute ischemic stroke who were treated before the implementation of the "3P" management model from January 2020 to December 2020   were selected as the reference group. 80 cases of acute ischemic stroke patients who had been nursing with the "3P" management model from January 2021 to December 2021 were selected as the research group. Both groups of patients were diagnosed with acute ischemic stroke by cranial CT examination and were included in the study on the basis of informed consent.There was no significant difference in gender, age ,and education level between the two groups (P >0.05).

Inclusion criteria:Patients hospitalized in our department from 2020–2021 and met the following inclusion criteria were selected as study participants:(1) confirmed as ischemic stroke by cranial CT and MRI scans and met the diagnostic criteria in the Guidelines for the Diagnosis and Treatment of Acute Ischemic Stroke in China (2018)[6].; (2) stable vital signs; (3)

accepted a questionnaire survey and provided complete information.Exclusion criteria :(1)Malignant tumors; (2) Coagulation disorders; (3) Hematological diseases; (4) Combining brain tumors, cerebrovascular malformations, brain trauma, aneurysms and other diseases; (5) Persons with mental illness; (6) Persons with other acute and chronic critical illnesses.

1.2 Methods

The reference group received routine emergency nursing, given oxygen inhalation, monitoring of blood pressure, establishment of venous access, and close attention to changes in patients' vital signs according to their conditions. While the research group received "3P" nursing management mode, and the specific measures were as follows.

Specifically, perfecting equipment: the emergency room is now equipped with conventional equipment such as electrocardiograph, electrocardiograph, ventilator, defibrillator, and endotracheal intubation equipment. Timely inspection, timely maintenance, so that the instruments used are in the best standby state at any time.

Perfecting nursing ability:we set up a team of emergency stroke nurses , given theoretical and operational training of stroke treatment regularly.

Perfecting emergency pathway and application:The expert group discussed and formed the best rescue plan for different types of stroke patients and regularly organize nursing staff to carry out pre-plan drills, so that each nurse is familiar with the rescue plan, can skillfully apply first-aid skills in actual combat, and can be competent for each functional position in the rescue plan, so as to enhance the overall nursing ability of the emergency stroke team.

1.3 Statistical Methods

The experimental data were statistically analyzed and processed by SPSS20.0 software. The count data were tested by x^2, expressed by [n (%)], and the measurement data were measured by the t-test, expressed by (x±s). The difference was statistically significant when $P<0.05$.

2. Results

2.1 Comparison of Clinical Data between the Two Groups of Patients

There was no significant difference in gender, age ,education level,and disease type between the two groups (P >0.05), which were comparable, as shown in Table 1.

Table 1   Comparison of clinical data between the two groups of patients.

Category	Research group (n =80)	Reference group (n =80)	t/x^2	p
Gender（Male/Female）	47/33	45/35	0.435	＞0.05
Average age (years)	58.2±9.6	57.1±8.4	0.893	＞0.05
Education level				
College and above	24	26	0.202	＞0.05
High school	28	29	0.715	＞0.05
Middle school and below	32	35	0.362	＞0.05

2.2 Comparison of Treatment Time between the Two Groups of Patients

Vein opening time, CT completion time and thrombolysis DNT in the research group were significantly lower than that of the reference group （P < 0.05）, as shown in Table 2.

Table 2　Comparison of treatment time between the two groups of patients.

Category	Vein opening time(min)	CT completion(min)	thrombolysis DNT(min)
Research group (n =80)	2.5±3.1	10.36±3.76	41.9±10.5
Reference group (n =80)	5.8±6.2	18.91±4.56	62.4±15.7
t	9.267	7.395	5.136
P	＜0.05	＜0.05	＜0.05

3. Discussion

Acute ischemic stroke(AIS) is a medical emergency that requires intensive treatment and care in the early hours,because its fast diagnosis and proper interventions can lead to favorable results.Furthermore,delayed treatment can lead to considerable complications,higher mortality,and enormous costs for the person,families,and the healthcare system[7].According to the current medical research results, the gold treatment time of acute ischaemic stroke is 4.5 hr, which is commonly known as the "time window"of thrombolytic therapy.Therefore, shortening the treatment time as much as possible is the key to improve the treatment effect of AIS and improve the prognosis of patients[8].

This study showed that after the implementation of the "3P" management mode of , the treatment time of each link in the hospital was shortened, DNT was statistically significantly shortened, and the treatment efficiency of stroke was statistically significantly improved.Our hospital has clarified the division of responsibilities of emergency stroke nurses, quickly identified stroke, and opened green channels in time, which greatly improves the efficiency of rescue and improves the success rate of rescue.

In summary,the implementation of the "3P" management mode can improve the first aid effect,improve the treatment effect of AIS, which can be widely used.

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