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Analysis of the Intervention Effect of Emergency Nursing on Patients with Severe Traumatic Hemorrhagic Shock

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Abstract

Objective: To analyze the effect of emergency nursing intervention on patients with severe traumatic hemorrhagic shock. **Methods:** A total of 70 patients with severe traumatic hemorrhagic shock were enrolled from December 2023 to October 2024. The reference group (35 cases) received routine nursing, and the study group (35 cases) received emergency nursing. The effect was analyzed. **Results:** After 72 hours of nursing, the MODS, APACHEII, SAS scores, and complication rates of the study group were lower than those of the reference group ($P < 0.05$). After 72 hours of nursing, the nursing satisfaction rate of the study group was higher than that of the reference group ($P < 0.05$). **Conclusion:** Emergency nursing can improve the treatment effect of emergency patients with severe traumatic hemorrhagic shock.

Keywords

Severe traumatic hemorrhagic shock; emergency nursing; effect

Introduction

Hemorrhagic shock is common in emergency departments. Mild cases manifest as nervousness, pale complexion, clammy hands and feet, and patients with severe trauma and hemorrhagic shock may even experience clinical manifestations such as confusion and decreased blood pressure, and their risk of death is relatively high [1]. This disease has an acute onset, rapid progression, and extremely high risk of disability and death. How to implement emergency treatment is related to life, health, and safety [2]. Currently, severe traumatic hemorrhagic shock can be treated with hemostasis, fluid replacement, and symptomatic support. At the same time, combined with good emergency care, it can significantly improve the condition [3]. Therefore, this article analyzes the effect of emergency nursing intervention on patients with severe trauma and hemorrhagic shock. The specific report is as follows.

1. Materials and Methods

1.1 Information

A total of 70 patients with severe traumatic hemorrhagic shock were enrolled from December 2023 to October 2024. In the reference group, there were 20 males and 15 females, aged 45-78 years, with an average age of (52.12±3.16) years. In the study group, there were 18 males and 17 females, aged 46-79 years, with an average age of (52.23±3.24) years. The baseline data of the two groups were compared (Table 1), $P > 0.05$.

Inclusion criteria: (1) history of severe trauma; (2) age ≥18 years; (3) meeting the clinical diagnostic criteria for hemorrhagic shock; (4) still having vital signs on admission; (5) signing the informed consent form.

Exclusion criteria: (1) shock caused by other reasons; (2) combined with other serious diseases; (3) mental disorders.

Table 1. Comparison of general information between the two groups

Group	patient (Number of cases)	Age (age)	Body mass index (kg/m^2)	gender		Causative factors		Time from onset to hospitalization (min)
				Female (example/%)	Male (example/%)	Traffic Accidents (example/%)	Falling from height (cases/%)	
Reference group	35	52.12±3.16	23.43±1.32	20/57.14	15/42.86	20/57.14	15/42.86	34.45±2.18
Research Group	35	52.23±3.24	23.35±1.19	18/51.43	17/48.57	18/51.43	17/48.57	34.53±2.24
χ^2/t value	-	0.1438	0.2663	0.2303		0.2303		19.0786
P	-	0.8861	0.7908	0.6313		0.6313		0.0000

1.2 Methods

The reference group received routine care. The emergency care of patients with severe traumatic hemorrhagic shock was guided by routine pre-hospital and in-hospital emergency care processes. This included assessing whether the patient met the green channel standards after being received by 120 emergency services, quickly conducting interviews, physical examinations, and first aid, taking samples according to the prescribed procedures during the examination, and escorting the patient for examination. Specialized nursing work was performed according to the doctor's instructions. Specialized personnel were arranged to communicate with the patient's family and provide good explanations.

The research group adopted emergency nursing. (1) Establish a team. Make clear regulations on the requirements for medical staff to participate in the group, and the head nurse will coordinate and arrange the specific work. After joining the group, implement intensive training on nursing theory knowledge of severe traumatic hemorrhagic shock, emergency skills training standards, nursing diagnosis business, etc. (2) Establish an emergency nursing pathway. Integrate the opinions of the medical department and the nursing department, improve the emergency nursing pathway for patients with severe traumatic hemorrhagic shock, implement the pre-hospital emergency and in-hospital emergency treatment process for severe traumatic hemorrhagic shock, and improve the nursing quality evaluation system. Organize meetings regularly to judge the implementation of emergency nursing work for severe traumatic hemorrhagic shock, evaluate whether emergency nursing meets clinical standards, and propose solutions. (3) Implement emergency nursing. 1) Emergency treatment. Be familiar with the screening and treatment of severe traumatic hemorrhagic shock, quickly receive patients, understand respiratory conditions, immediately open a green channel, and immediately take fluid resuscitation and anti-shock treatment. If necessary, take mechanical ventilation, tracheotomy, and red blood cell transfusion to maintain breathing. Complete relevant examinations as soon as possible and adopt nursing strategies according to the doctor's advice. 2) Observation and nursing of the condition. Closely observe changes in the condition, regularly evaluate changes in respiration, pulse, and SPO2 levels, understand body temperature conditions, and cooperate with symptomatic supportive treatments such as improving circulation, maintaining internal environment stability, and protecting organ functions to maintain a stable balance of body fluids. 3) Specialized nursing. Arrange a special person to monitor, and implement a 24-hour monitoring system before the patient is out of danger to understand the patient's condition at any time. According to the reasonable score of the condition, give relevant protective measures. 4) Health education nursing. Maintain close communication with the patient's family, inform them of the progress of treatment in a timely manner, explain the relevant treatment strategies, and strive to obtain cooperation. 5) Psychological counseling nursing. After the patient regains consciousness, comfort

and encourage more, stabilize the patient's emotions, and enhance the confidence to cooperate with the treatment. 6) Life care. Improve the comfort of the ward as much as possible, reduce the noise interference of the surrounding environment, pay attention to increasing the comfort level during nursing operations, give dietary guidance, actively improve the sleeping environment, and help the patient as much as possible.

1.3 Evaluation metrics

(1) MODS score, APACHE II score. The higher the score, the worse the condition. (2) SAS. < 6 points: no anxiety. The higher the score, the more anxious. (3) Complication rate. (4) Satisfaction. The highest score is 100 points, the higher the score, the more satisfied.

1.4 Statistical analysis methods

SPSS 22.0 was used to process the data. The measurement data were expressed as ($\bar{x} \pm s$). The enumeration data were expressed as [n (%)] and the χ^2 test was performed. The difference was statistically significant when P < 0.05.

2. Results

2.1 Comparison of MODS and APACHEII scores between the two groups

After 72 hours of nursing, the MODS and APACHEII scores of the study group were lower (P < 0.05) (see Table 2).

Table 2. Comparison of MODS and APACHEII scores between the two groups

Grouping	Patient (example)	MODS score (point)		APACHEII score (point)	
		Before Care	After 72 hours of care	Before Care	After 72 hours of care
Reference group	35	16.69±1.58	14.85±1.32*	27.29±1.79	23.47±1.52*
Research Group	35	16.72±1.61	11.26±0.45*	27.34±1.83	21.66±1.13*
t-value	-	0.0787	15.2293	0.1156	5.6536
P-value	-	0.8375	0.0000	0.9083	0.0000

Note: P < 0.05 compared with before and after nursing.

2.2 Comparison of SAS scores between the two groups

After 72 hours of nursing, the SAS score of the research group was lower (P < 0.05) (see Table 3).

Table 3. Comparison of SAS scores between the two groups

Grouping	Patient (example)	SAS Scoring (point)	
		Before Care	After 72 hours of care
Reference group	35	58.74±3.46*	53.87±1.52*
Research Group	35	58.69±3.52*	47.11±1.74*
t-value	-	0.0599	17.3098
P-value	-	0.9524	0.0000

Note: *P < 0.05 compared with before and after care in this group.

2.3 Comparison of complication rates between the two groups

The incidence of complications in the study group was lower (P < 0.05) (see Table 4).

Table 4. Comparison of complication rates between the two groups

Grouping	Patient (example)	Acute heart failure (cases/%)	Acute renal failure (cases/%)	Hypotension (cases/%)	Liver function impairment (cases/%)	Disseminated intravascular coagulation (cases/%)	Neurological impairment (cases/%)	Acute respiratory distress syndrome (cases/%)	Multiple organ dysfunction (cases/%)	Water and electrolyte imbalance (cases/%)	Complication rate (example/%)
Reference	35	1/2.86	1/2.86	1/2.86	1/2.86	1/2.86	1/2.86	1/2.86	1/2.86	1/2.86	9/25.72
Research	35	0/0.00	0/0.00	0/0.00	0/0.00	0/0.00	0/0.00	0/0.00	1/2.86	0/0.00	1/2.86
χ^2 value	-	-	-	-	-	-	-	-	-	-	5.2200
P-value	-	-	-	-	-	-	-	-	-	-	0.0223

Note: *P < 0.05 compared with before and after care in this group.

2.4 Comparison of nursing satisfaction rates between the two groups

The nursing satisfaction rate was higher in the study group ($P < 0.05$) (see Table 5).

Table 5. Comparison of nursing satisfaction rates between the two groups

Grouping	Patient (example)	Very satisfied (> 90 points) (example/%)	Generally satisfied (70-90 points) (example/%)	Dissatisfied (50-69 points) (example/%)	Very dissatisfied (< 50 points) (example/%)	Patient care satisfaction rate (example/%)
Reference group	35	15/42.86	11/31.43	7/20.00	2/5.71	26/74.29
Research Group	35	25/71.43	9/25.71	1/2.86	0/0.00	34/97.14
χ^2 value	-	-	-	-	-	7.1229
P-value	-	-	-	-	-	0.0076

3. Discussion

Clinically, the incidence of hemorrhagic shock is high, partly due to trauma. In the case of severe trauma, if organs or large blood vessels rupture and massive bleeding occurs, hemorrhagic shock is likely to occur. Affected by this disease, the patient's circulatory function is impaired, blood perfusion is insufficient, heart rate compensation is accelerated, and the risk of disability and death is extremely high [4]. Once severe traumatic hemorrhagic shock occurs, the patient should be hospitalized immediately for emergency treatment. At the same time, good emergency care can improve the efficiency of emergency treatment and play the value of auxiliary treatment [5]. Under the conventional nursing model, there is no special emergency nursing process and strategy for severe traumatic hemorrhagic shock. Nursing work is mainly carried out based on the standardized emergency process of the emergency department. It lacks pertinence for patients with severe traumatic hemorrhagic shock, and the overall nursing service level needs to be further improved [6]. Therefore, it is necessary to propose emergency nursing strategies for patients with severe traumatic hemorrhagic shock and study their effects to guide the emergency nursing work of patients with severe traumatic hemorrhagic shock. Therefore, this article has carried out relevant research.

From the results, the levels of various indicators were better after emergency care was adopted ($P < 0.05$). This shows that emergency care is more effective for patients with severe traumatic hemorrhagic shock. Considering that, under the emergency model, a team strategy was adopted to form a complete nursing management system, so that all medical personnel can work together to increase efficiency and arrange training regularly, which can

comprehensively improve the emergency care level of medical personnel for patients with severe traumatic hemorrhagic shock, and is more conducive to judging and mastering the patient's condition, speeding up the emergency rescue process, and improving clinical rescue outcomes [7]. After receiving the patient, quickly identify the patient's condition, adopt relevant emergency strategies such as anti-shock and ventilation support, quickly solve the patient's shock problem, ensure the stability of the respiratory tract, and save the patient's life. Take condition observation nursing to keep abreast of changes in the condition and reduce the risk of death [8]. Take special person nursing to improve responsibility and attach importance to the patient's life safety. Take health education nursing to obtain the cooperation of the patient's family. Take psychological counseling nursing to reduce the patient's negative emotions caused by the disease. Take life nursing to reduce the impact of adverse environments, improve comfort, and make patients more satisfied [9]. In addition, compared with conventional nursing, the emergency procedures for severe traumatic hemorrhagic shock both in and out of the hospital are no longer cumbersome, and the operation of pre-hospital and in-hospital emergency procedures is more standardized and reasonable [10]. It can control the condition of patients with severe traumatic hemorrhagic shock with maximum efficiency and solve the problem of increased risk of complications due to untimely treatment [11]. Patients with severe traumatic hemorrhagic shock can receive better quality emergency care services, thereby reducing complications [12].

In summary, emergency care is more effective for patients with severe traumatic hemorrhagic shock.

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