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The Impact of Energy Level Zoning Nursing Mode on the Emergency Response Effect of Critically Ill Patients

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Abstract: Objective: To improve the emergency response effect of critically ill patients, and to implement a level zoning nursing model in clinical practice to clarify its impact on critically ill patients. Methods: A total of 95 critically ill patients who received diagnosis and treatment in the hospital during the period of January 2023 to December 2023 were analyzed. They were divided into a control group (49 cases) and an observation group (46 cases) in order of diagnosis and treatment. Two groups of nursing interventions were implemented using conventional methods and level based nursing models, and the intervention situation was analyzed. In terms of the incidence of complications, the observation group had a lower total value (P<0.05) compared to the two groups. In terms of clinical indicators, the observation group had lower values (P<0.05) compared to the two groups. In terms of nursing quality, the observation group had higher values (P<0.05) compared to the two groups. Conclusion: Implementing a level zoning nursing model in clinical practice can have a positive impact on emergency treatment of critically ill patients, and can help control related complications, improve clinical indicators, and enhance nursing quality.

Keywords: Critical Illness; First Aid; Energy Level Zoning Nursing Mode

From the perspective of clinical development, critically ill patients have a more emergency condition and need to take corresponding measures in a timely manner to ensure the effectiveness of emergency treatment and reduce the risk of death. When carrying out emergency treatment for critically ill patients in clinical practice, conventional methods are mainly adopted. Although they can help patients control their condition, they cannot guarantee the maximum effectiveness of emergency treatment[1]. With the continuous development of modern medical and health care, various new nursing models have been gradually applied to clinical nursing, effectively improving nursing effectiveness, which provides a new direction for research on emergency nursing for critically ill patients[2]. The article analyzes the impact of energy level zoning nursing mode on the emergency response effect of critically ill patients, as follows.

1. Materials and methods

1.1 General information

A total of 95 critically ill patients who received diagnosis and treatment in the hospital during the period of January 2023 to December 2023 were analyzed. They were divided into a control group (49 cases) and an observation group (46 cases) in order of diagnosis and treatment. In terms of age range, the two groups had an age range of 23 years ≤ 74 years, with a mean of (47.43 ± 4.33) years in the observation group and (47.45 ± 4.31) years in the control group. In terms of gender, there were 28 males and 18 females in the observation group, and 29 males and 20 females in the control group. After processing the relevant data information of two sets of basic data through statistical systems, it was confirmed that the comparability was high (P>0.05). This study was approved and approved by the hospital ethics committee. Selection requirements: All are critically ill patients; The information material is complete. Exclusion requirement: Missing data.

1.2 Methods

1.2.1 Routine nursing measures for the control group

Monitor various vital signs of patients according to conventional standards, and provide measures such as maintaining blood pressure, correcting water and electrolyte imbalances, anti infection, and nutritional support.

1.2.2 Observation group level zoning nursing mode means

(1) In terms of skill level positions: ① To organize meetings and discussions with medical and nursing leaders to determine relevant

skill level positions, improve and perfect the competition mechanism according to the requirements of skill level positions, and require the nursing staff involved in nursing work to meet the relevant standard requirements in terms of years of service, nursing professional abilities, and professional title qualifications; Dividing nursing staff levels accordingly to ensure that their abilities match the requirements of job positions, and determine the actual work content and scope of each position. To strengthen daily training and learning on job skills, and in the process of formulating nursing plans, it is required to combine the specific nursing needs of patients, relevant job functions, etc. At the same time, organizing nursing staff to conduct professional learning, regularly assessing their professional knowledge and practical operations, and maximizing the professional level of nursing staff.

(2) In terms of skill level allocation: When arranging the working hours of various nursing staff in the emergency department, it is necessary to take the work content of different skill level positions and the working conditions of the department as the basis, to ensure the rationality of scheduling and work content arrangement to the greatest extent possible, and to ensure the cooperation and cooperation among staff in various positions to ensure the quality of nursing. To control the quality of nursing in all aspects, and maintain a good working condition in the emergency green channel area for 24 hours. Reasonably arrange job changes and provide green channels for patients at any time. Regularly inspect the emergency room equipment and devices, and nursing staff need to master the operation and daily maintenance methods of various devices to ensure that the emergency equipment and devices are in a safe and stable state. They are required to complete examination preparation work in a short period of time, understand the examination process, and improve examination efficiency; Regularly inspect first aid supplies, replenish and replace them in a timely manner to avoid shortages or expiration of first aid supplies during the first aid process. Nursing staff are required to have rich clinical experience, be proficient in using emergency tools and nursing skills, be able to effectively cooperate with physicians in carrying out rescue work, and be able to calmly handle emergencies. Master relevant communication skills, promptly inform family members of the situation, and guide them to handle relevant procedures. Nursing staff are required to master various nursing measures such as health education, psychological counseling, nutritional support, and specialized disease care techniques, and be able to independently complete them.

(3) In terms of zoning management: Intensive Care Area: It is equipped with complete equipment and personnel, providing advanced nursing measures such as intensive care and emergency treatment, mechanical ventilation, and critical disease treatment, with high requirements for professional operation skills of nursing staff. Moderate Monitoring Area: After the patient's condition stabilizes, closely monitor vital signs, have corresponding nursing techniques, and can assist doctors in completing treatment measures. General Ward Area: It mainly manages patients with stable conditions and can provide basic medical care for patients, such as monitoring vital signs, medication administration, wound care, etc.

1.3 Judgment criteria

(1) Calculate the incidence of complications in two groups, including cardiac arrest, acute respiratory distress, and hypovolemic shock. (2) Statistically analyze two sets of clinical indicators, including the duration of emergency examination procedures, duration of venous channel opening, duration of rescue, and duration of hospitalization. (3) Evaluate the nursing quality before and after intervention in two groups, using the hospital orthopedic nursing quality survey scale as a survey tool. The survey content includes nursing attitude (0-25 points), nursing skills (0-25 points), nursing cognition (0-25 points), and nursing profession (0-25 points). The lower the score, the worse the nursing quality.

1.4 Statistical methods

Using SPSS 20.0 software to analyze the data, t and x±s are measures of compliance with normal distribution in continuous variables, chi square and% are count data, and $P<0.05$ indicating the data is statistically significant or valuable.

2. Results

2.1 Analysis of complications

In terms of the incidence of complications, the observation group had a lower total value ($P<0.05$) compared to the two groups. As

shown in Table 1.

Table 1 Comparison of incidence of complications between two groups（n,%）

Groups	Cardiac arrest	Acute respiratory distress	Hypovolemic shock	Total complications
Observation group（n=46）	0	0	1	1（2.17）
Control group（n=49）	2	2	2	6（12.24）
X2				7.812
P				0.005

2.2 Clinical indicator analysis

In terms of clinical indicators, the observation group had lower values (P<0.05) compared to the two groups. As shown in Table 2.

Table 2 Comparison of clinical indicators between two groups（`x±s）

Groups	Emergency examination operation duration（min）	Duration of venous channel opening（min）	Duration of rescue（min）	Duration of hospitalization（d）
Observation group（n=46）	25.01±2.12	3.41±1.10	32.52±2.69	14.01±1.02
Control group（n=49）	36.45±5.65	4.99±1.28	45.85±4.57	20.23±2.13
t	12.903	6.433	17.181	17.962
P	0.001	0.001	0.001	0.001

2.3 Analysis of nursing quality

In terms of nursing quality, compared to the two groups, the observation group had higher values in all aspects (P<0.05):

The scores for nursing attitude, nursing skills, nursing cognition, and nursing profession were (10.28±1.22, 10.32±1.04, 11.03±1.04, 10.57±1.21) in the observation group before intervention, and (10.30±1.24, 10.35±1.02, 11.05±1.06, 10.60±1.19) in the control group. The results were (t=0.079, 0.141, 0.092, 0.121, P=0.937, 0.887, 0.926, 0.903). After intervention, the observation group was (23.34 ± 6.63, 23.58 ± 7.02, 23.69 ± 7.01, 23.60 ± 6.99) (points), while the control group was (18.12 ± 3.20, 18.21 ± 3.33, 17.97 ± 4.10, 17.99 ± 4.03) (points). The results were (t=4.934, 4.810, 4.890, 4.828, P=0.001, 0.001, 0.001, 0.001).

3. Discussion

When carrying out emergency work for critically ill patients, it is necessary to pay attention to the control of complications, minimize the time of emergency examinations and the opening of venous channels, improve emergency efficiency, and provide certain guarantees for the patient's life and health. The energy level zoning nursing model, as a new type of nursing method, can allocate resources according to the patient's condition, provide personalized and professional nursing, and effectively manage and arrange nursing staff, improving work efficiency[3].

Compared with conventional nursing models, the energy level zoning nursing model has the following advantages in clinical application. Firstly, the level zoning nursing model allocates patients to corresponding nursing areas based on their severity, thereby providing more personalized and specialized care. For example, critically ill patients can receive closer monitoring and treatment in the intensive care unit, and after their condition stabilizes, they can receive corresponding care in the general care area. Secondly, after the classification and zoning, the requirements for nursing staff in different areas may vary. Corresponding training management and competitive measures will be taken for different nursing staff, requiring them to have corresponding job abilities and improve nursing quality[4]. Thirdly, under the level zoning nursing model, it is conducive to strengthening the management of nursing staff, allowing nursing staff with different abilities to be responsible for corresponding nursing areas, improving work efficiency, and avoiding waste of nursing resources[5]. At the same time, it will also strengthen nursing management in various stages, control the quality of nursing in each stage, ensure that the emergency green channel area is in good working condition 24 hours a day, ensure that emergency equipment and devices are in a safe and stable state, improve emergency examination efficiency, ensure sufficient emergency supplies, improve the professional level of nursing staff, effectively cooperate with physicians to complete emergency operations, do a good job in family communication, and orderly carry out post emergency nursing work, so as to improve the efficiency of first aid, shorten the time of first aid, enable patients to recover as soon as possible, shorten hospital stay,

and facilitate the control of complications[6]. Based on the research results in the article, in terms of the incidence of complications, the observation group had a lower total value (P<0.05) compared to the two groups. In terms of clinical indicators, the observation group had lower values (P<0.05) compared to the two groups. In terms of nursing quality, the observation group had higher values (P<0.05) compared to the two groups. Reminder: Providing a level zoning nursing model to critically ill patients can improve emergency efficiency and nursing quality. However, the number of research cases in the article is limited, and further analysis of its application value is needed.

In summary, implementing the level zoning nursing model in clinical practice can have a positive impact on emergency treatment of critically ill patients, help control related complications, improve clinical indicators, and enhance nursing quality.

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