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Identification, Evaluation and Prevention Strategies of Risk Factors in Nursing ICU Critical Patients

Yang Pingfen[1], Ma Yiyun[1], Su Hongbin[2], Cai Ping[3]

Southern Central Hospital of Yunnan Province(First Peoples Hosp Honghe State)

1. Department of Emergency Medicine; Center of Hyperbaric Oxygen Therapy;

3. Outpatient Department, Mengzi city 661199, China.

Abstract: Objective: To identify and evaluate the nursing risk factors of critical patients in ICU, and then take effective prevention strategies. Methods: A total of 130 critical patients admitted to the ICU of our hospital from February 2018 to December 2020 were selected and randomly divided into observation group (taking targeted prevention strategies according to nursing risk factors) and control group (routine care), with 65 patients in each group. Results: Compared with the control group, the nursing satisfaction in the observation group (96.92%) was higher, and the incidence of nurse-patient disputes (6.15%) was lower (P<0.05).The scores of each index of nursing quality in observation group were higher than those in control group (P<0.05). Conclusion: According to the nursing risk factors of critical patients in ICU, effective prevention strategies can improve nursing satisfaction and reduce the occurrence of disputes between the nursing personnel and patients, which is of great importance in significantly promoting the nursing quality.

Keywords: ICU critical patients; Nursing risk factors; Identification and evaluation; Prevention strategies

Nursing risk is a kind of occupational risk which has a direct impact on the safety of patients and the quality of medical care. The purpose of nursing risk management is to avoid and reduce the occurrence of nursing risk [1].The ICU is the main place for the rescue and treatment of the critical patients in the hospital. The patients treated in the ICU always have very complicated conditions and high nursing risk. In order to ensure the safety of nursing work for critical patients, a comprehensive analysis of related risk factors is required [2-3].Therefore, this paper mainly identifies and evaluates the risk factors of ICU care for critical patients, and then takes effective prevention strategies.

1. Materials and methods

1.1. General materials

A total of 130 critical patients admitted to ICU of our hospital from February 2018 to December 2020 were randomly divided into observation group and control group, with 65 patients in each group. In the observation group, there were 34 males and 31 females, with an average age of (41.36±7.58) years. In the control group, there were 33 males and 32 females, with an average age of (42.84±6.85) years. There was no difference in general data, P>0.05, which was comparable.

1.2 Methods

The control group was given routine nursing, while the observation group was given targeted prevention strategies according to nursing risk factors: (1) Effectively prevent and manage the occurrence of pressure sores. The occurrence of pressure sores will aggravate the patient's condition and pain, and increase its economic burden as well as the workload of nursing personnel, and even cause sepsis due to secondary infection, which poses a great threat to the patient's life and health. Using scientific management can effectively avoid the occurrence of pressure sores. The hospital needs to establish risk management system for preventing and treating the pressure sores, and formulate the pressure sores healing evaluation table, which should be specially specified in the transition process, so as to strengthen the effective protection of partial skin and reduce the risk of pressure sores. (2) Effectively prevent and manage the occurrence of deep vein thrombosis (DVT). Early predictive intervention can significantly improve the prognosis of patients. Nursing personnel need to accurately fill in the risk score of DVT every day, and formulate targeted measures according to the level of risk and combining the patient's condition. They also need to evaluate the activity ability of patients every day to guide the early implementation of limb function exercise for patients. If the patient has no obvious contraindications, the formation of venous thrombosis in the lower extremities can be effectively prevented by the use of intermittent pneumatic compression device or gradient pressure elastic socks. (3) Effectively prevent and manage the occurrence of aspiration. Nasal feeding is the main way of nutrition intake for critical patients. The occurrence of aspiration can cause lung infection and airway obstruction, leading to the aggravation of the patient's condition. The effective semi-decubitus position plays a very important role in preventing reflux aspiration. If the patient does not have contraindications to head elevation, the head of the bed should be elevated by 30 to 45 degrees. The gastric tube was withdrawn regularly and the interval was 4 hours. Each shift should transfer the information about patients' abdominal distension and accurately evaluate the residual conditions, and then treat them properly. Prevention is the key to aspiration, and health education for nursing staff should be strengthened. (4) Effectively prevent and manage the occurrence of extubation. Pipeline is a necessary condition to maintain the life and health of critical patients. If the pipeline slips, the patient's life will be endangered. According to the impact on patients, the pipeline is divided into high, medium and low pipes. Nursing staff need to carefully evaluate the rating table of unplanned extubation every day to find out the factors affecting the safety of the pipeline and take effective preventive measures. If the patient's score is high, it is necessary to take key protection and handover and complete bedside handover and other related work. It is of great importance to have a good mastery of the constraint indications and restrain the patients appropriately. Moreover, the nursing personnel should timely communicate with the doctor to fully understand the indications of extubation, so as to prevent the delay of catheterization and aggravate the patient's discomfort. And it is necessary to keep a detailed record of the number, length and type of all piping to minimize the adverse effects caused by disconnection. (5) Effectively prevent and manage the occurrence of urinary system infection. Each shift needs to transfer and observe the basic situation of urine so as to timely detect and properly treat the infection. If the patient has an indweling catheter, the perineum needs to be swabbed twice a day and the urine bag needs to be changed weekly to keep the catheter open. In addition, the patient's catheter needs to be clipped regularly, usually once every 2 hours. And the nursing personnel need to accurately evaluate the need for an indwelling catheter every day and actively communicate with the physician so that the catheter can be removed in a timely manner.

1.3 Observation indexes

The nursing satisfaction, the incidence of nurse-patient disputes and the nursing quality were compared. The nursing quality included basic nursing and communication between the nursing personnel and patients. The higher the score is, the higher the nursing quality will be.

1.4 Statistical analysis

SPSS22.0 statistical software was used to express "(±s)" and [n(%)], and "t" and "x2" tests were performed. $P<0.05$ was considered statistically significant.

2. Results

2.1 Comparison of nursing satisfaction

The observation group was higher than the control group (P<0.05), as shown in Table 1.

Table 1. Comparison of nursing satisfaction【n(%)】

Group	Cases	Excellent Satisfaction	Satisfaction	Naught Satisfaction	Total Satisfaction
Observation group	65	32	31	2	96.92%(63/65)
Control group	65	25	26	14	78.46%(51/65)
x^2					11.895
P					<0.05

2.2 Comparison of disputes between the nursing personnel and patients

The observation group was lower than the control group (P<0.05), as shown in Table 2.

Table 2. Comparison of disputes between the nursing personnel and patients【n(%)】

Group	Cases	Disputes Cases	Incidence
Observation group	65	4	6.15%(4/65)
Control group	65	9	13.85%(9/65)
x^2			10.125
P			<0.05

2.3 Comparison of nursing quality scores

The observation group was higher than the control group (P<0.05), as shown in Table 3.

Table 3. Comparison of nursing quality scores（$\bar{x}$±s, score）

Group	Cases	Basic Nursing	Nursing Document Writing	Nurse-patient Communication
Observation group	65	92.36±5.21	90.85±6.31	93.12±6.33
Control group	65	80.31±6.02	79.65±5.68	80.38±5.14
t		10.254	13.524	11.922
P		<0.05	<0.05	<0.05

3. Discussion

According to the characteristics of ICU patients and the effective combination of nursing work, the study found that the nursing risk factors of ICU patients in critical condition mainly include :(1) the risk of pressure sores. Due to the serious condition of the patients and various other reasons, there are inclined to cause low nutrients, limited autonomous activities and there are certain conditions that the patients need to be restrained according to their physical conditions, which will result in their inability turning frequency, so it will increase the risk of pressure sores; (2) There is a risk of deep vein thrombosis. It was mainly related to iatrogenic injury, activity limitation, drug influence, age, passive posture, immobilization, etc. (3) There is a risk of aspiration. It was mainly related to ineffective gastrointestinal decompression, non-mouth eating, poor swallowing function, unclear consciousness, and poor elevation of the bed head. (4) There is the risk of unplanned extubation. It is mainly related to unclear pipeline handover record, inadequate protection in the

process of transporting patients, improper fixation, complex pipeline, patient agitation, etc.; (5) There is a risk of urinary tract infection. It is mainly related to poor sterility concept of indwelling operation, long-term bed rest, gender and poor perineal nursing [4-5].

In the process of nursing critical patients, it is necessary to conduct a comprehensive analysis of the factors affecting nursing risks and implement effective coping strategies, so as to ensure the life safety of patients [6]. At the same time, patients and their families will also improve their satisfaction with nursing work and actively cooperate with various treatments and nursing work, which is conducive to reducing the risk of nurse-patient disputes. Therefore, medical staff need to constantly strengthen their own comprehensive quality and professional skills during the process of carrying out various work, so as to ensure the healthy development of medical industry and the life safety of patients [7-8].

By identifying and evaluating the nursing risk factors of critical patients in ICU and adopting effective prevention strategies, the results showed that, compared with the control group, the nursing satisfaction in the observation group (96.92%) was higher, and the incidence of nursery-patient disputes (6.15%) was lower ($P<0.05$). The nursing quality basic nursing score (92.36±5.21), nursing writing score (90.85±6.31) and nursing/patient communication score (93.12±6.33) in the observation group were higher than those in the control group ($P<0.05$). To sum up, by identifying and evaluating the nursing risk factors for critical patients in ICU, and adopting effective prevention strategies, nursing satisfaction can be improved, the incidence of nurse-patient disputes can be reduced, and the nursing quality level can be significantly improved.

References

1. Zhang L. Identification, evaluation and prevention strategies of risk factors in nursing ICU critical patients (in Chinese). Special Health 2020; (29): 229.
2. Huang J, Jia L, Xu D et al. Identification, evaluation and prevention strategies of nursing risk factors of ICU critically ill patients (in Chinese). Chinese General Practice Nursing 2014; (19):1799–1800.
3. Zhao Y, Pan Q. Application of evidence-based nursing in risk assessment and management of critical patients in ICU (in Chinese). International Journal of Nursing 2021; 40 (4): 702–705.
4. Wang R. Analysis on the effect of stratified nursing intervention under the strategy of risk assessment of aspiration on patients with mechanical ventilation in ICU (in Chinese). Xinjiang Medical Journal 2021; 51(2): 235–237,183.
5. Zhao L. Analysis on the effect of nursing risk management and conventional nursing methods on nursing ICU patients (in Chinese). Jia You Yun Bao 2021; 3(1):268.
6. Zhang X, Huang R, Guan X, et al. Analysis of the role of nursing risk quality management in reducing hospital infection rate of ICU patients (in Chinese). The Medical Forum 2021; 25(3): 414-415.
7. Wang X. Exploration on the effect of nursing risk management in artificial airway balloon nursing in ICU (in Chinese). Jian Kang Zhi You 2021; (2): 250.
8. Zou Q. Study on the application value of nursing risk management in ICU nursing management (in Chinese). Jian Kang Zhi You 2021; (2): 278.