A Study on the Application of Evidence-Based Nursing in The Care of Patients with Severe Acute Pancreatitis

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Abstract: *Objective:* To explore the application research of evidence-based nursing in the care of patients with severe acute pancreatitis. *Methods:* This study focuses on evidence-based nursing care of severe acute pancreatitis. Patients with severe acute pancreatitis who received treatment in our hospital were selected, from which 80 cases were chosen for detailed analysis. The patients were randomly grouped into a control group (conventional nursing care) and a study group (evidence-based nursing care), with 40 patients each. Relevant research data were recorded during the nursing process, analyzed, and used as research indicators. *Results:* The hospitalization time and morbidity and mortality rate of the research group were shorter than those of the control group, and the recovery rate was higher than that of the control group ($P < 0.05$). Patient satisfaction with nursing care in the observation group was higher than in the control group ($P < 0.05$). *Conclusion:* For patients with severe acute pancreatitis, the use of evidence-based nursing methods effectively reduced the patient's mortality rate, improved its curative effect, and also shortened the patient's hospitalization time.

Keywords: Severe acute pancreatitis; Evidence-based nursing; Applied research

1. Introduction

Evidence-based nursing is a new type of nursing method established on evidence-based medicine, which emphasizes the analysis of clinically relevant evidence to prescribe effective nursing measures. It is conducive to improving the quality and effectiveness of clinical care[1-2]. This study proposes the use of evidence-based nursing methods for the nursing care of patients with severe acute pancreatitis by selecting 80 patients admitted to our hospital.

2. Data and methods

2.1. General information

A total of 80 patients with severe acute pancreatitis admitted to our hospital from October 2022 to October 2023

were selected and randomly divided into a control group and a study group of 40 patients each. The control group was given conventional care. There were 25 males and 15 females in the study group aged 23–73 years old, with an average age of 49.98 ± 2.67 years. The observation group was given evidence-based nursing care. There were 26 males and 14 females aged 24–72 years old, with an average age of 48.67 ± 2.71 years. Data between both groups were comparable and were not significant ($P > 0.05$).

2.2. Methods

The control group received conventional nursing, that is, the nursing staff analyzed the patient's situation and performed corresponding life care and environmental care, as well as psychological guidance and health education for the patient's family.

The study group received evidence-based nursing for patients based on the above nursing care. The nursing staff understood the patient's situation in detail and summarized their differences. The patient's condition, development status, health, and specific needs, combined with the understanding of the situation, were used by nurses to clarify the relevant issues, and at the same time analyze the summarized problems, as a basis for the development of corresponding nursing measures. Factors that led to abdominal pain were noted to understand whether the patient has pain shock or hemorrhagic shock, according to the actual situation of the treatment, at the same time during treatment. The nursing staff took severe acute pancreatitis and evidence-based nursing as the keywords of this search and searched the keywords on the relevant websites, obtained the relevant literature, screened the literature that meets the research requirements, organized and analyzed them, and clarified the nursing measures for the relevant problems. Upon admission to the hospital, the patient's vital signs were closely monitored to ensure the implementation of targeted intensive care. For patients with organ damage, effective methods were implemented promptly. In addition, during the nursing period, the nurses developed good cooperation with the doctor to assist in checkups and surgery preparation. A gastric tube and urinary catheter were inserted into the patient's body in advance, and the condition of the tube was observed. If the patient vomits, the nursing staff carries out a detailed observation to determine whether the patient has skin and mucous membrane bleeding or urinary and fecal bleeding. During the early stages of the disease, high levels of toxins are produced. The patient was required to fast during early treatment, which resulted in the decline of immunity and resistance. Hence, adequate nutritional support was provided for the patient to avoid the occurrence of infections and other undesirable events during the patient's treatment and care [3–4]. At the same time, two intravenous channels were constructed where one was responsible for blood transfusion and replenishment of balanced fluids. The other one was responsible for delivering relevant emergency drugs, such as respiratory stimulants and dopamine [5–6]. The pancreatic secretion of the patient was also inhibited to protect the patient's pancreatic cells. Growth-inhibiting drugs were used to control the secretion of pancreatic enzymes, including lysosomal enzymes and inflammatory mediators.

This minimizes the occurrence of the patient's inflammatory response. Finally, the peritoneal chemical reaction exudation is a common phenomenon in the pre-morbid period of patients[7–8], hence the patient's vital signs were closely monitored. If the patient's heart rate is accelerated or the blood pressure falls suddenly, influencing factors are promptly analyzed, and relevant nursing measures are implemented.

2.3. Observation indicators

The number of cases of disease and death and the number of recovery of cases were recorded. The relevant incidence was calculated, and at the same time, statistics on the hospitalization time of the patients were conducted. Differences between the two groups were compared after obtaining the relevant data. Patients were

guided to complete a satisfaction questionnaire. Based on the content of the questionnaire, it was divided into the boundaries of satisfaction and dissatisfaction, with scores indicating different stages of satisfaction. The satisfaction score was calculated and statistically compared.

2.4. Statistical processing

The SPSS 23.0 software was used for statistical analysis. Measurement data were expressed as mean ± standard deviation and the count data were expressed as %. Measurement data were analyzed using a t-test, and count data were analyzed using a chi-squared (χ^2) test. Results were considered statistically significant at $P < 0.05$.

3. Results

3.1. Comparison of patient's hospitalization time, death rate, and recovery rate

As shown in **Table 1**, the death rate in the study group is higher, and the recovery rate and length of hospitalization were lower than that of the control group ($P < 0.05$).

Table 1. Comparison of hospitalization time, morbidity and mortality rate, and recovery rate of the two groups (mean ± standard deviation)

Group	Cases, n	Death rate	Recovery rate	Length of hospitalization (d)
Study group	40	1 (2.5%)	37 (92.5%)	16.39 ± 6.04
Control group	40	12 (30%)	26 (65.0)	26.83 ± 5.87
t/χ^2		6.895	4.697	5.386
P		< 0.05	< 0.05	< 0.05

3.2. Comparison of nursing satisfaction between the two groups

As shown in **Table 2**, the satisfaction of patients after nursing care in the study group was significantly higher than that of the control group ($P < 0.05$).

Table 2. Comparison of nursing satisfaction between the two groups [n (%)]

Group	Cases, n	Very satisfied	Satisfied	Unsatisfied	Total satisfaction
Study group	40	27	10	3	37 (92.5%)
Control group	40	6	16	18	22 (55.0%)
χ^2					8.497
P					< 0.05

4. Discussion

Severe acute pancreatitis has a high incidence rate, fast development speed, high recurrence rate, and a high mortality rate. More complications will arise during the occurrence and development of the disease, which adversely impacts the function of the patient's organs, leading to the occurrence of disorders that may be life-threatening. According to relevant research, the use of reasonable nursing methods for the care of patients with severe acute pancreatitis can effectively improve the clinical outcome. Therefore, it is necessary to implement appropriate nursing care for patients and ensure its smooth implementation and effectiveness [9–10]. In this study, evidence-based nursing was used for the intervention of patients in the study group, and the results showed that

the clinical effect and nursing satisfaction of the study group were higher than those of the control group ($P < 0.05$).

5. Conclusion

The application of evidence-based nursing for the care of patients with severe acute pancreatitis effectively improved the quality of care and clinical effects and is worthy of further application and promotion.

Disclosure statement

The authors declare no conflict of interest.

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