



Perioperative Nursing of Puerperae with Pregnancy Associated with Cardiac Disease and Pulmonary Arterial Hypertension

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Abstract: Objective — To explore the perioperative nursing effect of puerperae with pregnancy associated with cardiac disease and pulmonary arterial hypertension. Methods — Sixty puerperae with pregnancy associated with cardiac disease and pulmonary arterial hypertension who were admitted to XX Hospital from June 2020 to July 2021 were selected as the research objects. According to hospitalization number, they were randomly divided into experimental group and control group, with 30 cases in each group. The patients in the control group were treated with routine care, and the patients in the experimental group were treated with clinical pathway nursing. The physical indicators and clinical effects of the two groups of parturients before and after nursing were compared. Results — After monitoring and nursing, the comfort score of the pregnant women in the observation group was significantly higher than that of the pregnant women in the control group, and the difference was statistically significant ($P < 0.05$); the hospitalization expenses and length of stay of the pregnant women in the observation group were significantly less than those of the control group, the difference was statistically significant ($P < 0.05$); after treatment, the maternal satisfaction of the observation group (83.67%) was significantly higher than that of the control group (40.82%), and the difference was statistically significant ($P < 0.01$). Conclusion — On the basis of basic monitoring and nursing care, the implementation of clinical pathway nursing for puerperae with pregnancy associated with cardiac disease and pulmonary arterial hypertension can effectively improve the comfort and satisfaction of the patients, and improve the rehabilitation level and quality of life of the puerpera. The safety of infants is of great significance and has good clinical value in clinical application.

Keywords: pregnancy associated with cardiac disease, pulmonary arterial hypertension, clinical pathway nursing, comfort, satisfaction

1. Introduction

Pregnancy associated with cardiac disease is a major cause of perioperative maternal and neonatal death, which must be paid close attention to by maternal and medical staff. Pulmonary hypertension, as the most common complication of pregnancy associated with cardiac disease, also greatly increases the mortality of patients. As an innovative clinical nursing model, clinical pathway nursing is a targeted and standardized nursing process established on the basis of evidence-based nursing theory. The application of this model can effectively standardize nursing behavior, improve nursing efficiency and patient rehabilitation quality, reduce hospitalization time, and thereby reduce hospitalization costs. The thesis mainly explores the perioperative nursing effect of puerperae with pregnancy associated with cardiac disease and pulmonary arterial hypertension.

2. Materials and methods

2.1 General materials

Sixty puerperae with pregnancy associated with cardiac disease and pulmonary arterial hypertension who were hospitalized in XX Hospital from June 2020 to July 2021 were selected as the research objects. According to the hospitalization number, they were randomly divided into experimental group and control group, with 30 cases in each group. Patients in the experimental group were 23 to 38 years old, with an average age of (25.17 ± 3.26); patients in the control group were 23 to 37 years old, with an average age of (24.96 ± 3.17). There was no significant difference in demographic information between the two groups of patients, and the difference was not statistically significant ($P > 0.05$). Before implementing the intervention, the patients and their families were informed of the purpose and precautions of the operation in detail, and they expressed their informed understanding and signed an informed consent form. At present, the study has been approved by the ethics committee of this hospital.

2.2 Nursing methods

2.2.1 Routine care

During the treatment and nursing process, the nursing staff should closely observe the vital signs and changes of the condition of the pregnant and lying-in women, and record the changes of various indicators such as the blood pressure and pulse of the pregnant and lying-in women according to the monitoring of the conditions of the pregnant and lying-in women.

2.2.2 Clinical pathway nursing

The specific process of clinical pathway nursing is as follows. (1) On the first day when the patient enters the obstetrics department, the nursing staff first evaluates the patient's medical risk, understands the patient's mental and health status, and uses professional tools for evaluation. Responsible nurses inform patients and their families of the basic procedures and precautions of the clinical pathway, and after obtaining the patient's consent, strictly collect the nursing history, formulate a rigorous nursing plan, and fill in relevant nursing scales. (2) On the second day after the patient enters the obstetrics department, the nurse in charge should ask the cardiologist for consultation and treat the plan according to the diagnosis agreement. Nursing staff strictly follow the doctor's prescription and pay attention to keeping the systolic blood pressure of the parturient at around 100mmHg. (3) On the third day after the patient enters the obstetrics department, the nursing staff should closely monitor the patient's medication and observe whether there are adverse reactions. In the course of medication, if the patient has chest tightness, muscle weakness, and dyspnea, the nursing staff should notify the clinician in time. (4) Attach importance to health education for patients and carry out related activities to enhance their attention and self-prevention awareness. For patients with mild depression or anxiety, the hospital will ask senior nurses for psychological care. The frequency of care is twice a week, once for forty minutes. Through psychological skills such as listening, empathy, and meeting, help patients sort out their emotions, reduce the burden of thought, and dispel thoughts and worries. For patients with serious psychological problems, the hospital will ask a professional psychologist for consultation, or refer the patient to the corresponding department.

For some severely ill patients with pre-eclampsia or eclampsia, special personnel are assigned to take care of them, and they are equipped with complete emergency medicines. In the process of receiving treatment in the intensive care unit, nursing staff should closely monitor the maternal arterial blood gas to avoid adverse conditions such as pulmonary vasospasm caused by hypoxia. If the mother has pulmonary interstitial edema, PEEP can be used to assist her in passive breathing to ensure adequate oxygen supply. During drug treatment, nursing staff should monitor the maternal blood pressure and other physical indicators at any time, and adjust the drip rate and concentration of the drug. When using stabilizers for analgesia, nursing staff should pay special attention to maintaining the depth of sedation. In the case of elevated pulmonary artery pressure, the nursing staff should allow the patient to inhale an appropriate amount of carbon monoxide, and at the same time, arrange for cardiac color Doppler ultrasound to closely monitor the pulmonary artery pressure of the parturient.

2.3 Observation indicators and evaluation standards

The hospitalization time, hospitalization expenses, comfort and satisfaction of the pregnant women were evaluated respectively in the two groups. The comfort of patients before and after nursing intervention was evaluated by VAS visual analog scale. Patient satisfaction is evaluated based on the survey results of a questionnaire designed by our hospital.

2.4 Statistical analysis

IBM SPSS19.0 statistical software was used for data analysis; measurement data was expressed as $\bar{x}\pm s$; the observation group and the control group were compared by t-test; the count data was used by χ^2 test; $P<0.05$ indicated that the difference was statistically significant.

3. Results

After nursing intervention, the number of complications of pregnant women in the observation group who implemented clinical pathway nursing intervention was significantly less than that in the control group. The difference was statistically significant ($P<0.05$).

The 36-hour comfort score results of pregnant women in the observation group that implemented clinical pathway nursing intervention were significantly better than those of the control group; the required hospitalization time was shorter; and the required hospitalization costs were less. The difference was statistically significant ($P<0.05$).

4. Discussion

In clinical obstetrics, pregnancy associated with cardiac disease with pulmonary hypertension is a very critical disease. Maternal tolerance is lower than that of ordinary people. They are prone to premature delivery due to heart failure, and even

worse, they can cause maternal or infant death. As a major cause of maternal and neonatal death during the perioperative period, the disease must be taken seriously by women and medical staff.

The clinical pathway nursing showed a certain plan and pertinence. Nursing staff must have a comprehensive understanding of the treatment plan and plan of the parturient in the delivery room, and arrange the corresponding examination in advance for the parturient according to the treatment plan, so as to minimize the waiting time during the checkup of the parturient and allow the parturient to complete the treatment or examination in the shortest possible time. In order to help mothers improve the efficiency of rehabilitation, reduce the length of hospitalization, and thereby reduce the cost of hospitalization. The main purpose of health education in clinical pathway nursing is to enhance patients' awareness of pregnancy-induced hypertension and self-preventive care. It can help patients prevent or reduce the recurrence rate of diseases from their daily lives. Psychological care is also an important means to promote the recovery of patients, and a healthy and good mental state is an important guarantee for the normal physical function of patients. The author's research has found that comprehensive nursing intervention, single psychological intervention or general nursing can improve the prognosis of mothers and infants, and can play an important clinical value in ensuring the safety of mothers and infants. As an innovative clinical nursing model, clinical pathway nursing is a targeted and standardized nursing process established on the basis of evidence-based nursing theory. The application of this model can effectively standardize nursing behavior, improve nursing efficiency and patient rehabilitation quality, and play a complementary role between medical treatment and nursing.

5. Conclusion

Studies have shown that when patients with pregnancy associated with cardiac disease and pulmonary arterial hypertension are receiving standardized treatment and nursing, taking scientific clinical pathway nursing can effectively improve the prognosis of mothers and infants, and has good clinical value in ensuring the safety of mothers and infants. Under the influence of the general environment, people's lifestyles are constantly changing, and the incidence of pregnancy associated with cardiac disease and pulmonary arterial hypertension has shown an increasing trend year by year. We need to expand medical approaches and methods in clinical practice, and clinical pathway nursing has shown good clinical value.

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