

Effect observation of transitional nursing mode in OICU nursing**Xueling Lv¹, Zhifang Ding², Rui Li¹, Meixue Zhang¹**

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Introduction. To investigate the role of transitional nursing model in obstetric intensive care unit (OICU).

Methods. A total of 40 critically ill obstetric patients hospitalized in OICU of Fuyang People's Hospital from January 2022 to August 2023 were enrolled and separated into study or control group (n= 20). Control group received routine OICU nursing intervention, study group received transitional nursing intervention. The quality of life (QOL), negative emotions [self- rating Anxiety Scale (SAS), Depression Scale (SDS) scores], incidence of nurse handover problems and total length of hospital stay were analyzed.

Results. Without intervention, no significant differences in SAS or SDS between the 2 groups were found. After intervention, study group showed a significant higher SAS and SDS scores. Before intervention, no significant differences in QOL were found. After intervention, study group showed a significant higher score. Study group also had a significantly lower total hospital stay or incidence of handover problems.

Conclusion. Transitional nursing mode can effectively improve QOL of obstetric critically ill patients in intensive care unit, relieve their negative emotions, improve QOL, shorten the total hospitalization days, and reduce the incidence of nurse handover problems.

Keywords. Transitional nursing model; OICU; Postoperative rehabilitation

INTRODUCTION

Critical pregnant women refer to critically ill pregnant women who have serious threats to the life, health and safety of mothers and children during the period from the beginning of pregnancy to the sixth week after delivery [1]. In addition, with the

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lifting of one-child policy in China, the gestational age is on the high side, and there are more elderly parturients, which leads to an increasing trend in the number of patients with critical obstetric diseases. The clinical manifestations are mainly eclampsia, postpartum massive hemorrhage, coagulation disorder, amniotic fluid embolism, coma and shock, etc. The critical condition mostly involves organs, and eventually leads to multiple organ failure and death of pregnant women [2]. OICU is the most advanced intensive care unit of hospital rescue equipment and modern monitoring, which can ensure the life safety of patients to the maximum extent, and is an important part of the “life saving procedure” of obstetrics for critically ill pregnant women. According to the literature [3], about 1/3 of patients will have adverse events within 72 hours after ICU transfer, and more than 1/3 of patients will re-enter the ICU for this reason. Therefore, optimizing and improving the transitional nursing mode of critically ill patients transferred from OICU, improving the observation of patients’ condition by nursing staff, and effectively reducing the incidence of adverse events are crucial to ensuring the life safety of pregnant women. Studies have shown that the transitional care model can connect the care measures before, during and after ICU patients are transferred to the general ward, so that the coordination and continuity of the patient's health care can be ensured to the maximum extent during the transfer between different institutions and/or different health care departments of the same institution [4-5]. At present, there are many applied studies on cardiothoracic surgery and craniocerebral injury in transitional nursing mode, and good feedback has been obtained, but there are few reports on nursing intervention in critical pregnant women. Therefore, the author conducted a clinical comparative study in this paper to study the role of transitional nursing mode in OICU nursing.

1. MATERIALS AND METHODS

1.1 General Information

Forty critically ill obstetric patients hospitalized in the obstetric ICU of Fuyang People’s Hospital between 2022.01-2023.08 were enrolled and randomly separated

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into study or control group (n=20) by random number table method. Inclusion criteria: ① After diagnosis, it met the criteria for emergency critical condition of pregnant women; ② Voluntarily participate and sign the informed consent; ③ Clinical data and follow-up were finished. Exclusion criteria: ① history of mental illness; ② Withdraw the experimenter midway. Controls has a mean age of 33.19 ± 5.84 , including 18 cases of regular birth examination and 2 cases of irregular birth examination (5 cases of primipara and 15 cases of parturient). Mean gestation weeks were 36.17 ± 3.57 . Study group has a mean age of 32.85 ± 5.98 , including 17 cases of regular birth examination and 3 cases of non-regular birth examination (6 cases of primipara and 14 cases of parturient). Mean gestation weeks were 36.21 ± 3.62 , with no significant difference in baseline data between the 2 groups ($P > 0.05$).

1.2 Methods

Control group followed routine nursing plan, and carried out routine nursing handover when the patients were transferred from OICU, and carried out vital signs monitoring, condition observation, and abnormal situation handling.

Study group received transitional nursing intervention, as follows: (1) Establishing nursing group: setting up OICU liaison nurse post, selecting one OICU head nurse as OICU liaison nurse. In addition, two OICU nurses with rich clinical experience, 2 head nurses of the general ward and 4 obstetric nurses were selected. A total of 9 nursing staff received OICU training and passed the assessment. (2) The implementation of nursing intervention to confirm the transition period within 7 days after the transfer to the OICU. ① The OICU nurses will make a transport plan for the actual conditions such as catheter placement, vital signs, consciousness, sleep status, dietary needs, psychological status and skin status of critically ill pregnant women. Contact nurses to inform patients and nurses in general wards about the targeted transport plan for patients, inform patients in advance of the next link will be in the environment and what kind of nursing services will be received, timely release to patients and their families with their own publicity brochures, inform patients and families to prepare the necessary daily necessities in advance, and be familiar with the

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new environment of general wards. ② After ensuring the safety of all transport measures, transfer and handover in the general ward shall be carried out by the liaison nurse and the general ward nurse on the patient's situation, develop a personalized and targeted nursing plan according to the patient's evaluation results, and formulate a transitional nursing note table. ③ Transitional care. Pay close attention to the patient's state of consciousness, vital signs, vaginal bleeding and uterine rejuvenation, keep the patient's airway unobtrusive, and clean the skin. Psychological counseling for patients with emotional anxiety, more encouragement and comfort patients, while doing a good job of diet care, choose foods rich in vitamins and easy to digest. (4) The contact nurse of OICU shall follow up the patient for 7 days during the transitional period. The contact nurse shall keep in touch with the nurses in the general ward and modify the nursing plan in time to ensure the continuation of the rehabilitation nursing work.

1.3 Observation Indicators

① Self-rating Anxiety Scale (SAS) and Self-rating Depression Scale (SDS) scores prior intervention and before discharge were compared to measure negative emotions of patients. The full score is 80 with a higher score represent more anxiety and depression. ② Before and after intervention, the SF-36 scores were analyzed, and the values were inversely proportional to the disease condition. ③ The total hospitalization days were compared. ④ Incidence of nurse handover problems was considered as one case of handover problems, as if a patient had handover information omission or error. $\text{Incidence of nurse handover problems} = \frac{\text{cases of problems}}{\text{total number of patients in the group}} \times 100\%$

1.4 Data analysis

Data was analyzed by SPSS 22.0. Measurement data were represented as (mean \pm SD), count data were represented as %. T-test was adopted to for compare data. $P < 0.05$ was defined as statistically significant.

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2 RESULTS

2.1 Comparison of adverse psychological states

No differences in SAS and SDS scores between the 2 groups before intervention were shown. After intervention, SAS and SDS scores of study group were significantly decreased (Table 1).

Table 1 Comparison of adverse psychological states

| Group | Time | SAS | SDS |
|---------------|--------|--------------|--------------|
| Study Group | Before | 50.56±3.84 | 49.29±3.87 |
| | After | 21.08±2.28*# | 24.22±2.52*# |
| Control group | Before | 52.89±4.95 | 48.85±3.69 |
| | After | 38.87±2.62* | 34.45±3.57* |

Note: #, P < 0.05 between 2 groups; *, P* < 0.05 for comparison before and after intervention in the same group.

2.2 Comparison of QOL

No differences in QOL scores were found prior intervention. After intervention, study group had a significant higher QOL score were significantly increased (Table 2).

Table 2 Comparison of QOL

| Group | Time | General health | Physiological function | Physiological occupational ability | Somatic pain | Vigor |
|---------------------|--------|----------------|------------------------|------------------------------------|--------------|-------------|
| Study Group(n=20) | Before | 54.40±4.38 | 20.50±5.31 | 22.60±3.98 | 23.50±4.84 | 35.48±4.81 |
| | After | 84.88±5.11*# | 48.7±4.18*# | 50.5±3.06*# | 59.7±5.09*# | 65.2±3.08*# |
| Control group(n=20) | Before | 55.11±4.26 | 21.68±5.49 | 23.73±3.81 | 22.19±4.57 | 34.92±4.93 |
| | After | 69.45±5.20* | 35.23±4.41* | 37.84±4.49* | 40.40±5.16* | 50.25±4.55* |

Note: #, P < 0.05 between 2 groups; *, P* < 0.05 for comparison before and after intervention in the same

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group.

2.3 Comparison of hospital stay

Study group's total hospital stay was significantly lower compared to that of controls (Table 3).

Table 3 Comparison of hospital stay

| Group | Total hospital days (d) |
|---------------------|-------------------------|
| Study Group(n=20) | 6.26±1.57 |
| Control group(n=20) | 9.58±2.39 [#] |

Note: [#], P < 0.05 between 2 groups

2.4 Incidence of nurse handover problems

Study group had a 5.0% (1 case with pipeline problems) of incidence of nurse handover problems, which was significantly lower than control group's 25% (2 cases with pipeline problems, 1 case with specimen collection, 1 case with therapeutic drugs, and 1 case with blood transfusion).

3 DISCUSSION

In the past 20 years, China's maternal mortality rate has been greatly reduced, which is related to China's promotion of good birth and good fertility, strengthening maternal and child management during pregnancy, early detection of pregnancy complications and intervention treatment, matching assistance for critically ill patients, step-by-step referral and other factors. With the progress of science and technology, some women who cannot conceive normally have the opportunity to successfully conceive with the help of assisted reproductive technology. At the same time, with the lifting of one-child policy, lots of elderly pregnant women appear, which leads to an increasing number of critically ill pregnant women [6]. OICU mainly carries out continuous and dynamic monitoring of the condition of patients with severe and

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multi-system failure, and can timely diagnose, treat and rescue critically ill pregnant women in critical moments, which is a symbol of the modernization of obstetrics [7]. Studies have shown that ICU patients may suffer from delusions, hallucinations and memory loss, which to a certain extent is likely to cause post-traumatic stress disorder [8]. For this reason, the implementation of care services that meet patients' care needs during the transition period is the focus that can promote their disease outcomes. However, after the current nursing service is transferred out of the OICU, it is easy to ignore the nursing during the transition period when the OICU is transferred to the general ward, and there will be a series of influencing factors that affect patient's condition, such as nursing staff change and lack of understanding of the patient's condition. Studies [9] have shown that the transitional care model, in which ICU patients are provided with continuous critical care for a period of time before, during, and after they are transferred to another care unit, can effectively ensure the continuity and effectiveness of care. Based on this, this study applied the transitional nursing model to OICU patients to explore.

The results showed that intervention sharply decreased SAS and SDS scores, increased QOL, and shortened total hospital stay, confirming that this nursing program significantly improved negative emotions, improving QOL, and promoting the recovery of critically ill pregnant women. The reason may be that the transitional nursing mode can be implemented through patient-centered, continuous, coordinated, transferred and education-supported, and multi-disciplinary nursing teams from a professional perspective to care for patients, and personalized plans can be formulated for patients' recovery, physiological and psychological status both before and during the transfer process. Ensure that patients receive the same level of collaboration and continuity of care in different care units and within the same health care department [10]. In addition, in the process of handover with the obstetrics department, the patients were informed about the environment in which they would be in the next step and what kind of nursing services they would receive, so that the patients could reduce their worries and negative emotions. Research shows that [11],

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through interviews with transferred patients and their families, the psychological needs of patients and their families during the transfer process are understood, and publicity brochures are prepared based on this. Compared with oral education, learning through the publicity brochures is more favored by patients and their families, and is more conducive to the understanding of disease knowledge. Therefore, oral and written educational guidance can be combined to enrich the healthcare knowledge of patients and their families, help them understand the transition period, and improve self-efficacy. At the same time, patients with the same disease share disease knowledge in various ways, alleviating the negative psychology of patients [12]. Transitional nursing can also select experienced transitional nursing staff, led by liaison nurses, from a professional perspective, jointly guide and implement medical care according to patients' conditions and needs [13], maintain effective communication between hospitals and families, ensure the accuracy and continuity of nursing work, effectively improve the drawbacks of routine nursing, and further promote patients' rehabilitation. Patients' QOL was improved. The incidence of nurse handover problems in study group was sharply decreased when compared to controls, which may be due to the fact that in the transitional nursing mode, liaison nurses participated in the whole nursing work of patients, from the formulation of nursing plan to the docking with the responsible nurses after transfer, effectively guaranteed the uninterrupted nursing work, helped nurses in general wards to understand the condition of patients, and helped them to receive patients in advance. Improving the efficiency of nurses is of great help and has mobilized the positive effects of clinical nursing practice in many ways [14]. The transitional nursing model does a good job in the handover of nursing work between different departments, so that the errors caused by different understanding of different nurses and the loss of patient information may be avoided in the transition. In the process of the continuous verification of the checklist, the behavioral efficiency of the entire transport team has been improved, various services have been more in place, and the formation of professional nursing teams has effectively improved the theoretical knowledge and skills of nurses through

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formal and informal health education, thus avoiding the incidence of nurse handover problems [15].

4 CONCLUSION

To sum up, transitional nursing model efficiently improved critically ill obstetric patients' QOL, alleviated their negative emotions, shortened the total number of hospital days, and decreased incidence of nurse handover problems. It also has some shortcomings, such as a small sample size, so the study needs to be further improved.

CONFLICTS OF INTEREST

The authors declared that they have no conflicts of interest regarding this work.

ETHICS APPROVAL

This study was approved by the People's Hospital of Fuyang City, Anhui Province and was conducted in accordance with the Helsinki Declaration.

INFORMED CONSENT

Informed consent was obtained from subjects or legal guardians.

DATA AVAILABILITY

The experimental data used to support the findings of this study are available from the corresponding author upon request.

AUTHORS' CONTRIBUTIONS

XL L and ZF D wrote the main manuscript. R L prepared the data collection. MX Z analyse and interpret of results. All authors approved the manuscript's final version.

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