Effect of Continuous Nursing Model on Nursing Effect of Continuous Peritoneal Dialysis

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Abstract: *Objective:* To analyze and study the effect of continuous nursing mode for continuous peritoneal dialysis nursing. *Methods:* 40 patients with continuous peritoneal dialysis received in our hospital were randomly selected as the research object. The research time was from June 2018 to June 2020. The patients were divided into two groups by random number table method. The patients with routine nursing mode were named as the control group and the patients with continuous nursing mode were named as the observation group (20 cases in each group). The clinical nursing effects of different nursing modes are compared. *Results:* After nursing, the nursing compliance of the observation group was 95%, which was higher than 70% of the control group. There was significant difference between the two groups (P < 0.05). Comparing the blood routine related indexes of the two groups, the blood potassium, hemoglobin, serum creatinine and carbon dioxide binding force of the observation group were better than those of the control group (P < 0.05). The incidence of peritonitis and rehospitalization rate in half a year in the observation group were lower than those in the control group (P < 0.05). *Conclusion:* The continuous nursing model for patients undergoing continuous peritoneal dialysis can improve the treatment effect of patients, significantly improve the compliance of patients, significantly improve the serological indexes, promote the health of patients, reduce the incidence of peritonitis, and significantly reduce the rehospitalization rate in half a year. It has a broad prospect of clinical promotion.

Keywords: Continuous nursing model; Continuous peritoneal dialysis; Clinical effect

1. Introduction

Continuous peritoneal dialysis is a frequently used treatment for patients with end-stage renal disease. It can prolong the life of patients. Its operation is relatively simple, the treatment cost is low, and it can improve the quality of life of patients. However, this treatment method is limited by the patient's cognition of the disease. Many patients lack professional nursing means and their cognition of the disease is not in place, which is easy to affect the treatment effect. Therefore, it is very necessary to carry out nursing intervention for patients. The continuous nursing model can provide nursing guidance for patients treated at home, solve the problems encountered by patients during treatment at home, improve the treatment effect of patients, and help patients improve their quality of life [1]. This paper mainly studies the nursing effect of continuous nursing model on patients with continuous peritoneal dialysis. It is reported as follows.

2. Materials and methods
2.1. General information

40 continuous peritoneal dialysis patients in our hospital were selected and divided into observation group (n=20) and control group (n=20) according to random number table method. The ratio of male to female in

the observation group was 11:9, the age range was 32-70 years, with an average of 46.89 ± 5.73 years; and the body weight was 46-80 kg, with an average of 55.60 ± 4.25 kg. The ratio of male to female in the control group was 12:8, the age range was 30-68 years, the average was 47.60 ± 5.68 years, and the body weight was 40-79kg, with an average of 56.04 ± 4.16 kg. After statistical analysis, there was no significant difference in the general data of patients (P > 0.05), which could be compared between groups.

2.2. Methods

The control group received routine nursing mode. The patients explained the relevant precautions to the patients on the last day of discharge, informed the patients of the contact information of the nursing staff, and provided nursing guidance for the patients. The patients are told to remember the review time and review regularly. The observation group adopted the continuous nursing mode.

(1) Establish a continuous nursing group. Doctors and nurses are selected from the nephrology department to form a nursing team, X the patient's admission and discharge data are sorted out, the patient's telephone, Wechat, effective address and other information are collected, and files for the patients are established. The purpose and significance of collecting relevant information should be explained to patients to strive for the cooperation of patients [2]. The importance of continuous nursing mode should be explained to patients to pave the way for follow-up nursing work.

(2) Telephone follow-up. The patients were followed up for the first time 3 days after discharge, and the follow-up interval was adjusted to one week according to the patients' gradual proficiency in dialysis operation. The number of follow-up can be adjusted flexibly according to the condition changes of different patients. If the patient's condition is stable, it can be adjusted to follow-up once every 2 weeks.

(3) Network follow-up. Nurses establish Wechat and QQ groups of peritoneal dialysis for patients according to the collected information, assign professional nurses to answer the questions raised by patients in the group, and encourage patients in the group to exchange nursing and dialysis experience [3]. Nurses summarize the questions frequently asked by patients and inform each patient as much as possible by setting up announcements. Nurses also share the professional knowledge of peritoneal dialysis in the group from time to time, and guide patients to learn professional and scientific nursing knowledge.

(4) Door to door follow-up. Patients with serious conditions during telephone follow-up are listed as the object of door-to-door follow-up. During door-to-door follow-up, we focus on the dialysis situation of patients, so that patients can have dialysis in the presence of nurses. Nurses explain the precautions in dialysis to patients and correct the wrong operation process of patients [4].

Psychological comfort and guidance should be given to patients with bad emotions, so that patients can understand that correct and standardized dialysis treatment can promote the improvement of diseases, so as to improve patients' bad emotions. Close attention should be paid to the condition changes of such patients. When the condition is stable, the number of door-to-door follow-up can be gradually adjusted, such as once a month. After the patient's condition improves, the follow-up frequency can be adjusted again [5].

2.3. Evaluation criteria

Analysis of patients' nursing compliance is compared. Complete compliance: Patients all follow the nursing guidance of the nursing staff and can take medicine on time and regularly. Partial compliance: More than 60% of patients could follow the nursing guidance of nursing staff, and there were interruptions in the process of medication. Non-compliance: The medication of patients is relatively random, patients do not take standardized medication, and there is also intermittent medication. The blood routine indexes of patients were compared, and the incidence of peritonitis and rehospitalization rate in half a year were

statistically analyzed.

2.4. Statistical analysis

SPSS24.0 statistical software was used to process the data, and the counting data were expressed in percentage (%), differences between groups were performed by χ^2 test, the measurement data are expressed in mean $\pm$ standard deviation ($\bar{x} \pm s$) and the differences between the data of the two groups are tested by t. As $P < 0.05$, the research results is statistically significant.

3. Results
3.1. Comparison of patient's nursing compliance (**Table 1**)

Table 1. Comparison of patient's nursing compliance [n%]

Group	Complete compliance	Partial compliance	Noncompliance	Effective rate
Observation group (n = 20)	13 (65.0)	6 (30.0)	1 (5.0)	19 (95.0)
Control group (n = 20)	9 (45.0)	5 (25.0)	6 (30.0)	14 (70.0)
χ^2 value				4.329
P value				0.037

3.2. Comparison of blood routine related indexes between the two groups (**Table 2**)

Table 2. Comparison of blood routine related indexes between the two groups ($\bar{x} \pm s$)

Group	Serum potassium (mmol/L)	Hemoglobin (g/L)	Serum creatinine (μmol/L)	Carbon dioxide combining power (mmol/L)
Observation group (n = 20)	3.36±0.64	95.83±15.33	540.30±159.66	28.66±5.13
Control group (n = 20)	4.31±0.59	82.41±15.29	654.36±130.11	22.61±4.51
t value	4.881	2.772	2.477	3.961
P value	0.000	0.009	0.018	0.000

3.3. Comparison of peritonitis incidence and rehospitalization rate in half a year

Table 3. Comparison of peritonitis incidence and rehospitalization rate in half a year [n%]

Group	Number of cases	Peritonitis	Rehospitalization in half a year
Observation group	20	1 (5.0)	1 (5.0)
Control group	20	6 (30.0)	7 (35.0)
χ^2 value		4.329	5.625
P value		0.037	0.18

4. Discussion

With the continuous development of social economy, people's life and diet have changed to some extent. The incidence of malignant diseases is increasing, and renal failure is one of them. At present, the clinical treatment of renal failure is more difficult. Continuous peritoneal dialysis is a more effective treatment method, which can maintain the residual renal function to the greatest extent, prolong the life of patients,

and significantly improve the quality of life of patients. Therefore, this treatment method is widely used in clinical practice. Continuous peritoneal dialysis can be treated at home, but there are also many hidden dangers. Many patients do not understand the relevant knowledge of renal failure, and there are deficiencies in the cognition and operation process of continuous peritoneal dialysis. In the process of treatment at home, it is easy to affect the dialysis effect and then the treatment effect due to improper operation process or operation method [6]. Therefore, in order to improve the therapeutic effect of continuous peritoneal dialysis and improve the quality of life of patients, continuous nursing is needed to improve the therapeutic effect of patients.

The continuous nursing model is an extension of the traditional nursing model, which can gradually transition from clinical nursing to family nursing. It mainly gives the nursing needs of patients treated at home through telephone follow-up, network follow-up and door-to-door follow-up through information network. With the help of the above methods, nursing continues to guide patients with health knowledge and dialysis knowledge related to renal failure, which can improve patients' treatment compliance and increase treatment effect. The continuous nursing model can provide the guarantee of health guidance for patients and answer the problems and doubts in the process of dialysis at home. During the implementation of continuous nursing, with the help of telephone and network, we can timely understand the patient's condition, give appropriate treatment opinions to patients with serious condition, and use medical staff to follow up or guide patients to hospital for treatment, which can improve treatment efficiency, save medical resources and bring great convenience to patients [7].

In this study, the nursing compliance of patients in the observation group was 95%, which was higher than 70% of patients in the control group. There was significant difference between the groups ($P < 0.05$). At the same time, the related indexes of blood routine were compared. The indexes of blood potassium, hemoglobin, serum creatinine and carbon dioxide binding force in the observation group were better than those in the control group. The comparison between the two groups of data is significant and statistically significant ($P < 0.05$). The incidence of peritonitis and six-month rehospitalization rate in the observation group were lower than those in the control group., with statistical significance ($P < 0.05$). Research shows that by establishing a continuous nursing team and giving telephone follow-up and network follow-up to patients treated at home, we can timely grasp the patient's condition, give patients scientific nursing guidance with the help of the network, correct the patient's wrong cognition and operation, and improve the patient's health status. At the same time, the follow-up frequency was flexibly adjusted according to the actual situation of dialysis patients, and the nursing resources were optimized. Compared with conventional nursing mode, continuous nursing mode has more obvious nursing effect. Continuous nursing can improve patients' self-care ability, reduce the incidence of complications in the process of dialysis, improve patients' condition, reduce the hospitalization rate to a certain extent, and reduce the economic burden for patients.

To sum up, the continuous nursing model for renal failure patients undergoing continuous peritoneal dialysis has better nursing effect, can reduce the relevant serological indexes of patients, reduce the incidence of peritonitis and the rehospitalization rate of patients for half a year, significantly improve the nursing compliance of patients, promote the health of patients, and has great application value in clinic.

Disclosure statement

The author declares no conflict of interest.

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