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Application of a Dual-path Health Education Model in Peritoneal Dialysis Patients

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Abstract: Objective: To explore the application value of applying the information-based dual-path health education model in the nursing of peritoneal dialysis patients. Methods: 86 cases of peritoneal dialysis patients from January 2022 to March 2023, and the patient data were disrupted by computer system software, among which 43 patients had the general health education as the conventional group, and the other 43 patients mainly received the information based on informatization, analyzing the application effect of the two health education models. Results: The conventional group' health education satisfaction, self-care ability rating score and quality of life score were significantly worse than the study group, and the complication rate of peritoneal dialysis was significantly higher than that of the study group (P<0.05). Conclusion: The application of information-based two-path health education to the health education of peritoneal dialysis patients can effectively reduce the probability of peritoneal dialysis related complications, and improve the self-care ability of patients, which has the value of in-depth research and extensive promotion.

Keywords: peritoneal dialysis, health education, information, quality of life score

Introduction

In modern diseases, end-stage renal disease has become one of the chronic diseases that threaten human health. In clinical medicine, end-stage renal disease is mostly treated by peritoneal dialysis. According to the clinical treatment experience, it is found that many patients are extremely prone to peritonitis, hypoproteinemia and other complications after receiving treatment, which will seriously affect the treatment effect of their diseases[1]. In order to further explore the value of information dual-path health education, peritoneal dialysis patients in our department were selected as the analysis sample for this exploration. The following is the specific report of this exploration.

1. Data and methods

1.1 Information

In the nephrology medical record system of our hospital from January 2022 to March 2023, the patient data were disrupted by computer system software, and 86 patients were set in the routine group (43 patients) and the study group (43 patients). The general data of all patients were compared (P>0.05), which had inquiry significance.

Inclusion criteria: (1) all knew the survey content and agreed to participate; (2) all met the requirements of peritoneal dialysis treatment.

Exclusion criteria: (1) patients with consciousness disorders; (2) patients who did not approve the survey and refused to follow up.

The distribution of general data in the two groups are detailed in Table 1.

Table 1 General data distribution of patients in the two groups

project	The research group	Conventional group	P
Total number of patients (n)	43	43	>0.05
Number of male / female patients (n)	23/20	22/21	>0.05
Patient age range and mean value (years)	21-75 54.2±5.02	22-76 55.1±5.10	>0.05

1.2 Methods

The patients in the conventional group mainly receive traditional health education. During the hospitalization, the nursing staff conducts the health education according to the patients' health knowledge, including the health knowledge related to peritoneal dialysis treatment, guidance to the patients' medication methods, etc.

The patients in the study group mainly received the dual-path health education based on information technology, mainly including:

(1) Establish a health education team: the health education team is mainly composed of the head nurse and nursing staff of the peritoneal dialysis department. The head nurse should organize the nursing staff to collect the relevant materials of peritoneal dialysis health education by consulting the literature and browsing the peritoneal dialysis health education website, evaluate the current health knowledge level of the admitted patients, and formulate the corresponding health education plan for them[2]. The mission program is mainly divided into three parts: admission education, mission during hospitalization and discharge education.

(2) Nursing staff should first assist patients to pay attention to the hospital Wechat official account and conduct real-name authentication to ensure that patients can normally receive related health education materials of peritoneal dialysis on the mobile phone, and then guide patients to learn health knowledge related to peritoneal dialysis on the mobile phone.① Admission education. After the patient goes through the admission procedures, the nursing staff should work with the attending doctor to evaluate the condition and physical condition of the patient, and make a dietary plan related to peritoneal dialysis treatment for them. After the diet plan is formulated, it should be sent to the patient's mobile phone peritoneal dialysis diet in time. It can show which high-quality proteins can be consumed during the treatment through pictures or forms during the treatment, and the corresponding diet plan should be synchronized to the PDA of the nursing staff. Caregivers can also carry a PDA to the patient's bed and give them dietary guidance[3]. ② Hospitalization education: 1. Drug education. After the attending doctor issues relevant medical advice according to the changes of the patient's condition, the drug education content should be synchronized to the patient's mobile phone. Nursing staff can mainly explain the use methods and precautions of folic acid, vitamins and antihypertensive drugs to patients by playing videos. In addition, they should guide patients to consume food rich in folic acid and vitamins, and give corresponding medication health knowledge to patients' bedside according to the PDA.2. Education of peritoneal dialysis. When the doctor issues peritoneal dialysis treatment advice according to the patient's condition, it should be converted into video to patients to guide how to standardize peritoneal dialysis, mainly including environmental preparation, seven-step hand washing, catheter exit care, etc. In addition, it is necessary to explain the complications prone to peritoneal dialysis treatment to the patients in detail. The nursing staff can also organize the patients to the peritoneal dialysis operation room to watch the abdominal dialysis operation, and at the same time, explain the focus of the operation points, complication observation methods and corresponding treatment methods to the patients in detail[4]. ③ Discharge education is mainly to guide patients' exercise

methods and psychological counseling after discharge. Before discharge, the above content should be sent to the patients' mobile phone in the form of pictures or words to encourage patients to actively participate in activities and exercise. Nursing staff should take PDA to exercise and psychological counseling before discharge.

1.3 Observed indicators

(1) Satisfaction with the health education of the patients in the two groups.

(2) Self-care performance scale score of the two patient groups.

(3) The quality of life score of patients in both groups mainly includes physiological function, emotional function, health status, psychological function and social function. The total score of each score is 100 points. The higher the score, the higher the quality of life, and the worse the versa.

(4) The probability of adverse reactions in the two groups of patients, mainly including: peritonitis, hypoproteinemia, anemia, and heart failure.

1.4 Statistical methods

The data of this study were processed by SPSS 25.0 professional statistical software, and P <0.05 was statistically significant.

2. Results

2.1 Satisfaction with health education in both groups

The health education satisfaction in the conventional group was significantly worse than the study group (P <0.05), as shown in Table 2-1.

Table 2-1 Satisfaction with health education in both groups

group	Example number (n)	Very satisfied (n)	satisfied (n)	discontent (n)	Total satisfaction rate (n /%)
Conventional group	43	17	15	11	32（74.42%）
The research	43	22	20	1	42（97.67%）
P	-	＜0.05	＜0.05	＜0.05	＜0.05

2.2 Self-care performance scale score of patients in the two groups

The self-care performance scale score of the conventional group was significantly worse than the study group (P <0.05), as shown in Table 2-2.

Table 2-2 Comparison of the self-care performance scales between the two groups

group	Example number (n)	Before intervention (points)	After intervention (points)
Conventional group	43	84.29±3.01	83.18±3.28
The research	43	94.29±4.18	98.32±4.02
P	-	＜0.05	＜0.05

2.3 Quality of life scores in both groups

The QoL scores of patients in the conventional group was significantly worse than the study group (P <0.05), as detailed in Table 2-3.

Table 2-3 Comparison of quality of life scores between the two groups (scores)

project	The research group	Conventional group	P

Example number	43	43	-
physiological function	94.10±3.92	76.37±3.89	＜0.05
Emotional function	93.83±4.19	77.18±3.78	＜0.05
health condition	94.82±3.67	75.37±4.26	＜0.05
psychological function	95.27±3.18	77.63±4.02	＜0.05
social function	93.32±4.27	74.28±3.87	＜0.05

2.4 Complication rate of peritoneal dialysis in both groups

The complication rate of patients in the conventional group was significantly higher than that in the study group (P <0.05), as detailed in Table 2-4.

Table 2-4 Comparison of peritoneal dialysis complications in the two groups [n, n /%]

project	The research group	Conventional group	P
Example number	43	43	-
peritonitis	1	3	＜0.05
Hypoproteinemia	0	2	＜0.05
anemia	1	3	＜0.05
heart failure	1	2	＜0.05
Total complication rate	3（6.98%）	10（23.26%）	＜0.05

3. Discussion

Peritoneal dialysis treatment has many characteristics, such as convenient operation, simple equipment, and little impact on the patient's physical condition. But found in the actual treatment, many patients due to peritoneal dialysis treatment health knowledge, worry treatment effect, combined with the first contact easily lead to lower compliance, not cooperate with nursing intervention and peritoneal dialysis related complications, not only can lead to treatment effect, at the same time patients with serious symptoms may pose a serious threat to their life safety[5]. Therefore, it is necessary to carry out health education for such patients. In the past, the traditional method of education mainly explained the health knowledge of such treatment methods to patients through oral narration during their hospitalization. Although some results can be achieved, the publicity and education effect is not ideal due to the relatively limited publicity and education time in the hospital and the relatively single education form, different patients' passive knowledge acceptance ability, and the patients are in the passive learning state. With the rapid development of hospital informatization construction, the hospital information system and the mobile terminal of Internet patients have also formed a public service platform, providing a more convenient communication path for health education. Usually, patients receiving peritoneal dialysis need to complete home treatment independently after discharge, so the self-care ability is high. If patients do not understand the health knowledge of such treatment methods and lack of self-care ability, it can easily cause a variety of complications, which will seriously affect the clinical treatment effect. In the study of this paper, the information-based dual-path health education mode was applied to the research group. Finally, the satisfaction of health education, self-care scale and quality of life of patients in this group were significantly better than that of the conventional group, and the complication rate of patients in this group was significantly lower than that of the conventional group (P<0.05). The reason is that this health education takes the information terminal as the carrier, and sends the key points of the education to the nursing staff PDA and patient mobile phones, so as to facilitate the nursing staff and patients to view and

learn relevant health knowledge at any time. Health education knowledge into vivid and interesting video, be clear at a glance of graphic or form, and then through double path health education on the one hand to health education knowledge through SMS, WeChat sent to patients with mobile phone, on the other hand the corresponding health care points synchronization to nursing staff PDA, nursing staff can carry PDA to patients around for health guidance, not only can effectively improve the quality of clinical care at the same time to improve health education satisfaction also has a very important role.

To sum up, the application of information-based dual-path health education mode in the health education and nursing of peritoneal dialysis patients can effectively improve the health knowledge level of patients, and play a very important role in improving patients' self-management ability, life quality and treatment effect.

Conflicts of interest

The author declares no conflicts of interest regarding the publication of this paper.

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