



Study on the Effect of Hemodialysis Nursing on Renal Failure Combined with Cardiovascular Disease

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Abstract

Objective: To analyze the effective nursing measures and effects of renal hemodialysis failure combined with cardiovascular disease. **Methods:** Patients with renal failure combined with cardiovascular disease ($n = 62$) from April 2020 to October 2021 were randomized, with 31 patients in the control group, the former used comprehensive care for hemodialysis, and the latter received routine care. Comparing indicators such as sf-36 score. **Results:** Regarding compliance, the data was 100.0% in the test group, higher than 83.87% in the control group ($P < 0.05$). Regarding nursing disputes, the incidence of 0 in the trial group was lower compared with 12.9% in the control group ($P < 0.05$). Regarding the total response rate, the data in the test group was 96.77%, which was higher than the 80.65% in the control group ($P < 0.05$). **Conclusion:** Comprehensive nursing care for renal failure combined with cardiovascular disease hemodialysis has a remarkable effect, and also has a lower incidence of nursing disputes, and the improvement of compliance is more obvious.

Keywords

Cardiovascular disease; nursing; renal failure; hemodialysis

Clinically, renal failure is very common and has complex pathogenesis. In severe cases, it can cause many complications, such as cardiovascular disease [1]. At present, hospitals generally use hemodialysis therapy to intervene in patients with renal failure and cardiovascular disease. However, during dialysis, most patients will encounter many problems due to factors such as disease torture, unfamiliar environment, treatment costs and nurse-patient relationship, which will increase their psychological burden and reduce their compliance, seriously affecting the dialysis effect [2]. This article selected 62 patients with renal failure and cardiovascular disease (April 2020 - October 2021) and focused on analyzing the effective nursing measures and effects of hemodialysis for renal failure and cardiovascular disease, as follows.

1. Materials and methods

1.1 General information

From April 2020 to October 2021, 62 patients with renal failure and cardiovascular disease were admitted to our department and randomly divided into 2 groups. There were 19 females and 22 males in the experimental group, with an age range of 28-74 years old, and a mean of (49.37 ± 8.41) years old; the dialysis time ranged from 5 months to 7 years, and the mean was (2.15 ± 0.39) years. There were 18 females and 23 males in the control group, with an age

range of 27-73 years old, and a mean of (50.01±8.96) years old; the dialysis time ranged from 6 months to 7 years, and the mean was (2.28±0.41) years. Inclusion criteria: (1) The patient was diagnosed by electrocardiogram and renal function tests; (2) The patient was conscious and informed of the study; (3) The patient was mentally and psychologically normal. The comparison of dialysis time between the two groups was $P > 0.05$, which was comparable.

1.2 Exclusion criteria [3]

- (1) Those whose expected survival period is less than 3 months.
- (2) Pregnant women.
- (3) Those with acute infectious diseases.
- (4) Those with blood system diseases.
- (5) Those with allergic constitutions.
- (6) Those with liver dysfunction.
- (7) Those with cognitive impairment.
- (8) Those with systemic infection.
- (9) Those who are transferred midway.
- (10) Those with mental illness.

1.3 Methods

Group 2 received routine care: monitoring of the condition, handling of abnormal conditions, and assistance with examinations. The experimental group received comprehensive care:

- (1) Before dialysis, prepare the drugs and equipment used for dialysis, check whether the drugs are expired, and whether the equipment can operate normally. Actively talk to patients to understand their psychological needs. Provide patients with books or newspapers so that they can read in their spare time to divert their attention and make them no longer feel anxious and nervous. Encourage and care for patients, play soothing music for them, and help them relax. Suggest patients to develop hobbies, such as singing, playing chess, or practicing calligraphy, in order to cultivate their sentiments. Use simple language, pictures, or videos to explain the knowledge of renal failure and cardiovascular disease to patients, and inform them of the purpose, process, and principle of hemodialysis so that they can have a correct view of the disease. Answer patients' doubts and reassure them.
- (2) During dialysis, closely monitor patients' physical signs and observe their condition. If there is any abnormality, report it immediately. Reasonably adjust dialysis parameters according to the actual situation of the patient. Accurately record the amount of fluid infused, and strictly control the blood flow and blood return rate to prevent the patient from having hypoxemia and other problems. Ask the patient if he/she feels uncomfortable. If the patient feels anxious, comfort him/her and use body language as appropriate, such as eye contact or handshake.
- (3) After dialysis, check the patient's water electrolytes, urea nitrogen and blood creatinine and other indicators. At the same time, use beautiful words to praise and commend the patient's performance during dialysis to enhance the patient's self-confidence and enable the patient to actively cooperate with subsequent treatment. According to the principles and requirements of disease treatment, adjust the patient's diet. Advise the patient to eat a light diet, eat more high-fiber, high-protein and high-vitamin foods, and avoid sweet, greasy, raw, cold and spicy foods. Require the patient to drink water appropriately, eat more fruits and vegetables, and promote bowel movements. Create a quiet and clean rest environment for the patient, keep the indoor light soft, the floor clean, the items neatly placed, the air fresh and noise-free. Strengthen air disinfection efforts, and regularly disinfect tables, chairs, bed rails and cabinets. Adjust the room temperature to 22-25°C and the relative humidity to 45-60%.

1.4 Evaluation indicators [4]

- (1) The compliance of the two groups was evaluated according to the following criteria: ① Non-compliance: the patient still refused dialysis despite the persuasion of family members or nurses. ② Partial compliance: the patient was able to cooperate in completing dialysis after being persuaded by family members or nurses. ③

Full compliance: the patient was able to actively cooperate in completing dialysis. The calculation of compliance was based on the result of (partial compliance + full compliance)/n*100%.

- (2) Count the number of nursing disputes between the two groups.
- (3) The efficacy was evaluated according to the following criteria: ① Ineffective, blood pressure and heart rate were abnormal, and urea nitrogen and blood creatinine did not improve. ② Improved, blood pressure and heart rate were stable, and urea nitrogen and blood creatinine were significantly improved. ③ Significantly effective, blood pressure and heart rate were very stable, and urea nitrogen and blood creatinine were normal. The total effective rate was calculated based on the result of (improved + markedly effective)/n*100%.

1.5 Statistical analysis

The data was processed by SPSS22.0. The function of t is to test the measurement data ($\bar{x} \pm s$), and the function of χ^2 is to test the count data [n (%)]. $P < 0.05$, the difference is significant.

2. Results

2.1 Compliance analysis

Regarding compliance, the data of the experimental group was 100.0%, which was higher than that of the control group (83.87%) ($P < 0.05$) as shown in Table 1.

Table 1. Statistical compliance assessment results table [n, (%)]

Group	Number of examples	Noncompliance	Partial compliance	Complete compliance	Compliance
Experimental group	31	0(0.0)	11(35.48)	20(64.52)	100.0
Control group	31	5 (16.13)	15 (48.39)	11 (35.48)	83.87
χ^2					6.7452
P					0.0321

2.2 Analysis of nursing disputes

The statistical results showed that there were 0 people in the experimental group and 4 people in the control group, accounting for 12.9% of the cases of nursing disputes. The comparison showed that the incidence rate in the experimental group was lower ($\chi^2 = 6.5231$, $P < 0.05$).

2.3 Efficacy analysis

The evaluation results showed that regarding the efficacy, in the experimental group: 1 person had no effect, 13 people had improved, and 17 people had significant effects. The total effective rate in this group was 96.77% (30/31); in the control group: 6 people had no effect, 15 people had improved, and 10 people had significant effects. The total effective rate of this group is 80.65% (25/31). Comparison shows that the therapeutic effect of the experimental group is higher ($\chi^2 = 6.7245$, $P < 0.05$).

3. Discussion

Changes in dietary structure and lifestyle have significantly increased the prevalence of renal failure in China, which requires clinical attention [5]. Relevant information mentioned that renal failure is a relatively common disease in hospital nephrology departments, with complete or partial loss of renal function as the main pathological feature, and the occurrence of this disease is also related to renal vascular disease, diabetes and hypertension. and other factors are closely related, which can cause problems such as electrolyte imbalance, increased blood creatinine, decreased urine output, and can lead to cardiovascular disease, which is extremely harmful [6].

Hemodialysis can effectively remove toxic substances and excess water from the patient's blood, but most patients have a low level of awareness of their own disease. In addition, they worry about their illness and fear of death, which increases their psychological and mental stress. In this case, the patient's enthusiasm for cooperating with dialysis

treatment will be greatly reduced, thereby reducing its efficacy [7]. Comprehensive care is a new type of nursing method that can provide patients with professional nursing services from the aspects of environment, cognition, diet, dialysis, psychology and condition to enhance their self-confidence and improve dialysis compliance, thereby helping to ensure their dialysis effect and promote recovery [8]. In this study, the compliance and efficacy of the experimental group were higher than those of the control group ($P < 0.05$); the number of nursing disputes in the experimental group was less than that of the control group ($P < 0.05$).

In summary, comprehensive care for hemodialysis in renal failure combined with cardiovascular disease has significant effects, lower incidence of nursing disputes, and higher compliance, and is worthy of promotion.

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