

The value of the application of rehabilitation nursing programme based
on one disease and one product in patients with Percutaneous
Coronary Intervention (PCI)

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Abstract

Objective:To explore the application of rehabilitation nursing programme based on one disease, one product in patients undergoing Percutaneous Coronary Intervention (PCI). **Methods:**60 cases of PCI patients admitted from February 2023 to March 2024 were studied, and the enrolled patients were divided into the control group (conventional nursing care) and the observation group (the rehabilitation nursing programme based on the nursing measures of the control group was implemented) according to the random number method, each containing 30 cases, and the evaluation of the hospitalization cost, the duration of hospitalization and bed rest, the quality of life, the degree of knowledge and adherence to the programme was conducted between the groups. The hospitalisation cost, hospitalisation and bed rest time, quality of life, health knowledge and compliance were evaluated between the groups. **Results:**The hospitalisation cost, hospitalisation time and bed rest time of the observation group were significantly better than those of the control group ($P < 0.05$); the GQOLI-74 quality of life evaluation of the patients in both groups was significantly better than that of the pre-intervention period ($P < 0.05$); and the adherence rate of the patients in the observation group was significantly higher than that of the control group (83.33%) at 93.33%, i.e. ($P < 0.05$). **Discussion:**The rehabilitation nursing programme based on one disease, one product significantly reduces the hospitalization cost of PCI patients, has a positive effect on shortening the hospitalization and bed rest time, and positively improves the quality of life and adherence.



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Percutaneous coronary intervention (PCI) has been widely used in clinical practice as an effective means of treating coronary artery disease. However, although PCI can significantly improve patients' cardiac function and reduce symptoms, post-procedure patients often face multiple challenges during the recovery period, such as recovery of cardiac function, prevention of complications, and improvement of quality of life. Therefore, a scientific and reasonable rehabilitation nursing programme has become an indispensable part of patients' postoperative recovery process [1]. The 'one disease, one product' rehabilitation care programme is a personalized and targeted care model, which emphasizes the provision of customized rehabilitation care services according to the patient's specific condition, physical status and rehabilitation needs, which not only focuses on the patient's physiological recovery, but also pays attention to the construction of psychological support, adjustment of living habits and social support system, which can help the patient recover from various aspects. This model not only focuses on the physiological recovery of patients, but also pays attention to psychological support, adjustment of living habits and the construction of social support system, which promotes the comprehensive recovery of patients from various aspects. In the process of PCI patient care, the application of 'one disease, one product' rehabilitation nursing programme is of great value. Through the formulation of personalised care plans, the incidence of postoperative complications can be effectively reduced, the recovery of cardiovascular function can be promoted, and the quality of life can be improved. Therefore, exploring and promoting the application of the 'one patient, one product' model is of great clinical significance for optimising the recovery process and improving the quality of care for patients with PCI.

1. Data and Methods

1.1 General information

The 60 cases of PCI patients admitted from February 2023 to March 2024 were the subjects of the study, and the enrollees were divided into the control group and the observation group according to the random number method, each containing 30 cases. In the observation group, there were 16 males and 14 females, aged 30-80 years, with a mean age of (62.26 ± 4.55) years; in the control group, there were 17 males and 13 females, aged 31-80 years, with a mean age of (61.26 ± 5.50)

years; the study was reported to the hospital's Ethics Committee, and the study was started after review and approval. Comparison of baseline data, the difference between the two groups was not statistically significant ($P > 0.05$).

Inclusion criteria: confirmed diagnosis of coronary artery disease requiring PCI; age 18-80 years; within 1 week to 3 months after PCI. Exclusion criteria: serious comorbidities (e.g., end-stage renal disease, advanced cancer); patients with mental or cognitive disorders; participation in other interventional studies.

1.2 Methods

Patients in the control group receive routine care: within 24 hours after, closely monitor patients' vital signs, especially heart rate, blood pressure, respiratory rate and oxygen saturation, regularly check blood glucose, electrolytes, and liver and kidney functions, and find abnormalities in time, regularly check the puncture site, keep the local area clean and dry to avoid infection. Change the dressing as needed, observe whether there are bleeding, swelling and other complications, and provide appropriate antibiotic prophylaxis. After the operation, gradually guide the patients to eat according to their physical strength, and give them a high-protein, high-calorie, low-salt diet to help restore their physical strength, and according to the doctor's instructions, guide the patients to carry out an appropriate amount of bedtime activities at an early stage, to avoid the formation of deep vein thrombosis.

The observation group based on the nursing measures of the control group on the basis of one disease, one product rehabilitation nursing intervention: (1) personalised nursing assessment and nursing plan development: according to the specific condition of each patient, the difference in physical condition and living habits, to develop a personalised nursing programme. For example, for diabetic patients, nurses will focus on monitoring blood glucose levels and adjusting diets to ensure stable blood glucose during postoperative recovery; for hypertensive patients, blood pressure monitoring will be strengthened to ensure control within safe limits. (2) Individualized psychological guidance and emotional management: one-on-one psychological assessment and guidance is carried out for patients' psychological status. For patients with postoperative anxiety and depression, nursing staff will help patients relieve pressure and reduce their negative emotions by establishing a trusting relationship, using cognitive-behavioural therapy, relaxation training, etc. For example, for patients who are worried about recurrence, individualized knowledge education and psychological support are provided to enhance their confidence. that enhance their confidence. (3) Rehabilitation exercise and lifestyle intervention: according to the

recovery situation of the patients, formulate an exercise plan in line with their physical condition; for patients with faster recovery, gradually guide aerobic exercise such as walking and cycling; for weak patients, bed activities and joint activities are the main focus; at the same time, personalised guidance is given to the patients to make appropriate adjustments to their diets, work and rest, and to stop smoking and limiting alcohol consumption, so as to cultivate healthy lifestyles and effectively promote comprehensive postoperative health. At the same time, the patients were instructed to make appropriate adjustments in diet, work and rest, smoking and alcohol cessation, etc., so as to cultivate a healthy lifestyle and effectively promote comprehensive postoperative rehabilitation [2].

1.3 Evaluation criteria

(1) Comparison and evaluation of patients' hospitalisation cost, hospitalisation time and bed rest time.

(2) Quality of life: GQOLI-74 quality of life is applied to evaluate the quality of life of patients, which contains four items, including psychological function, physical function, material function and social function, and the higher the scores of each item indicate that the quality of life of patients is more desirable.

(3) Adherence: full adherence (strictly following the doctor's instructions after discharge), partial adherence (passively taking medication under the supervision of family members, but taking medication for a long period of time and accepting regular follow-ups), poor adherence (taking medication under the supervision of family members after discharge, but often decreasing the dosage on their own and omitting to take the medication), and non-adherence (hiding the medication, changing the medication, and refusing to take the medication). Adherence = (full adherence + partial adherence + poor adherence) n/%.

1.4 Statistical methods

SPSS24.0 was used to analyse the data by chi-square (2) and t-test for counting and measuring data respectively, which were shown as '%' and ' $\bar{x} \pm s$ ' (normally distributed data), and the difference of $P < 0.05$ meant that the difference was statistically significant.

2. Results

2.1 Hospitalisation costs, length of stay and bed rest time

The observation group's hospitalisation cost, hospitalisation time and bed rest time are significantly better than the control group ($P < 0.05$), see Table 1.

Table 1 Hospitalisation costs, length of stay and bedtime between groups ($\pm s$)

Group	Hospitalisation costs (\$)	Length of stay (days)	Bedtime (hours)
Observation group	36097.05 \pm 426.34	6.76 \pm 1.24	13.60 \pm 4.02
Comparison group	40246.94 \pm 502.42	8.72 \pm 1.42	17.68 \pm 4.26
<i>t</i>	51.250	4.260	5.010
<i>P</i>	<0.05	<0.05	<0.05

2.2 Comparison of pain level between groups

After the intervention of the two groups of patients, all indicators of the GQOLI-74 quality of life score were significantly improved ($P < 0.05$). The scores of the observation group were significantly better than those of the control group in terms of psychological, somatic, material and social functions ($P < 0.05$), see Table 2

Table 2 Comparison of quality of life scores between groups ($\pm s$, points)

Group	Time	Psychological functioning	Somatic functioning	Physical functioning	Social functioning
Observation					
group (30 cases)	Pre-intervention	50.20 \pm 6.76	48.01 \pm 5.42	50.23 \pm 5.89	50.09 \pm 6.23
	post-intervention	59.90 \pm 7.12	59.23 \pm 6.24	58.05 \pm 7.23	58.40 \pm 6.20
	<i>t</i>	5.289	6.250	6.480	7.766
	<i>P</i>	<0.05	<0.05	<0.05	<0.05
Comparison					
group (30 cases)	Pre-intervention	51.20 \pm 5.12	49.04 \pm 5.45	50.32 \pm 5.40	49.20 \pm 5.09
	post-intervention	54.20 \pm 5.23	56.23 \pm 6.23	54.12 \pm 6.24	56.03 \pm 5.20
	<i>t</i>	3.455	5.009	4.235	4.678
	<i>P</i>	0.031	<0.05	0.021	<0.05

2.3 Comparison of adherence between groups

The compliance of patients in the observation group was 93.33% significantly higher than that of

the control group (83.33%), i.e. ($P < 0.05$), see Table 3

Table 3 Comparison of adherence between two groups ($\bar{x} \pm s$)

Group	Case	Fully adherent	Partially adherent	Poorly adherent	Non-adherent	Adherent
Observation group	30	17	6	5	2	28 (93.33)
Comparison group	30	11	7	7	5	25 (83.33)
<i>t</i>	-	-	-	-	-	11.042
<i>P</i>	-	-	-	-	-	0.000

3. Discussion

With the aging of society, the incidence of coronary heart disease has been increasing year by year, and coronary artery disease has become one of the major diseases leading to death worldwide. Percutaneous coronary intervention (PCI), as a common therapeutic method, has been widely used in patients with coronary heart disease, especially in patients with acute coronary syndrome, angina pectoris and stable coronary heart disease, which has significant efficacy. However, although PCI can effectively relieve symptoms and improve haemodynamic status, the management of the postoperative recovery period is still an important factor affecting the prognosis and quality of life of patients; therefore, scientific and personalized postoperative rehabilitation care has become the key to improving the quality of recovery and reducing the incidence of complications [3]. Although traditional conventional nursing methods can ensure the physiological recovery of patients to a certain extent, they often lack attention to the individual differences of patients and cannot meet the diversified needs of different patients, whereas the 'one disease, one product' rehabilitation nursing programme emphasizes the provision of personalized nursing care according to the patient's specific condition, physical status and living habits. Intervention. The results of this study showed that: the observation group's hospitalisation cost, hospitalisation time and bedtime were significantly better than the control group ($P < 0.05$); the GQOLI-74 quality of life evaluation of the patients of the two groups after the intervention was significantly better than that before the intervention ($P < 0.05$); and the adherence of the

patients of the observation group was significantly higher than that of the control group (83.33%) at 93.33%, i.e., ($P < 0.05$). . Similar to the findings of Wan Ting et al [4], the reason for this is that: the one-disease-one-product model is able to formulate a reasonable care plan according to the specific conditions of the patient, reduce ineffective treatment and repetitive care, and reduce the cost during hospitalisation. In addition, through effective rehabilitation management, it can reduce the occurrence of complications, promote faster recovery and shorten the hospital stay, while the sexualised care plan provides more intimate care services for patients by considering their health status, psychological needs and cultural background, and this care model can enhance the patients sense of trust and adherence, and improve the patients' initiative to cooperate with the treatment and rehabilitation, so that patients' This care model can enhance patients' sense of trust and compliance, and improve their active cooperation in treatment and rehabilitation, so that patients' treatment compliance and quality of life are improved.

In conclusion, the rehabilitation care programme based on one disease, one product significantly reduces the hospital costs of PCI patients, has a positive effect on shortening the length of hospitalization and bed rest, and has a positive effect on improving the quality of life and adherence.

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