

Analysis of the Nursing Effect of Continuity of Care on Elderly Patients with Coronary Heart Disease Unstable Angina and its Impact on Quality of Life

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Abstract: *Objective:* To analyze the effect of using continuity of care for elderly patients with coronary heart disease (CHD) with unstable angina pectoris (UAP) and its impact on their quality of life. *Methods:* 100 cases of elderly patients with CHD with UAP admitted to our hospital from March 2022 to March 2023 were selected and grouped into an observation group and a control group of 50 cases each according to the randomized number table method. The nursing effect and quality of life of the observation group (continuity nursing) and the control group (routine nursing) were compared. *Results:* The total effective rate of nursing care was 96.00% observation group and 80.00% for the control group, and the differences were significant ($\chi^2 = 6.061, P < 0.05$). Patients in the observation group had fewer episodes (1.42 ± 0.21) times/week and a shorter duration (5.46 ± 0.39) min, which were better than the control group ($t = 3.465, 2.973; P < 0.05$). The depression self-rating depression scale (SDS) score (42.16 ± 6.64) and anxiety self-rating scale (SAS) score (32.26 ± 7.35) in the observation group were lower and the quality of life was higher as compared to that of the control group ($P < 0.05$). *Conclusion:* Continuous nursing care improved the nursing effect of elderly CHD with UAP patients, promoted the alleviation of UAP symptoms, improved patient mentality, and improved their quality of life. Hence, continuous nursing care possesses significant clinical application value.

Keywords: Continuity of care; Elderly; Coronary heart disease; Unstable angina; Nursing outcomes; Quality of life

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1. Introduction

Coronary heart disease (CHD) in the elderly can cause myocardial hypoxia and ischemia. The pathogenesis of CHD is caused by coronary artery atherosclerosis resulting in the narrowing of the lumen, and a decrease in the volume of returned blood. As CHD progresses, it can lead to myocardial infarction, which could be fatal^[1]. Early CHD patients mostly exhibit unstable angina pectoris (UAP), which is an important factor in the production of physical pain and decreased quality of life, hence effective interventions should be performed

promptly. Conventional nursing care is unable to provide effective care for patients after their discharge from the hospital [2]. When considering the actual needs of elderly patients with CHD with UAP, the implementation of out-of-hospital nursing interventions is crucial. Continuity of care can be transitioned from in-hospital to out-of-hospital to facilitate high-quality interventions, eliminating the need to monitor the patient's physiological indicators, but instead monitor fluctuations in the patient's state of mind to effectively improve the quality of care provided [3]. In this study, 100 cases of elderly CHD with UAP patients were selected to investigate the application value of continuity of care from the aspect of nursing effect and quality of life.

2. Information and methods

2.1. General information

100 cases of elderly patients with CHD with UAP were selected and admitted to our hospital between March 2022 and March 2023. They were grouped into an observation group and a control group according to the random number table method, with 50 cases per group. Inclusion criteria: (1) Meets the diagnostic criteria of elderly CHD with UAP [4] and was confirmed by computed tomography (CT) or electrocardiogram (ECG); (2) compliant; (3) informed about the study consented. Exclusion criteria: (1) Serious functional disorders or malignant tumors; (2) serious arrhythmia or acute myocardial infarction; (3) mental disorders. As shown in **Table 1**, there were no statistical differences when comparing the basic information of the two groups of patients ($P > 0.05$).

Table 1. Comparison of the general information of the two groups of patients

Group	Cases, <i>n</i>	Gender [<i>n</i> (%)]		Age (mean ± standard deviation , years old)	Disease duration (mean ± standard deviation , year)
		Male	Female		
Observation group	50	29 (58.00)	21 (42.00)	66.17 ± 6.45	6.27 ± 1.11
Control group	50	28 (56.00)	22 (44.00)	66.28 ± 6.49	6.22 ± 1.14
χ^2/t	-	0.040	-	0.085	0.222
<i>P</i>	-	0.839	-	0.932	0.824

2.2. Methods

2.2.1. Control group

Routine care was provided to the control group: (1) Health education was carried out through manuals, lectures, videos, and other ways to help patients develop a correct understanding of the disease, and actively cope with the disease; (2) Patients were advised maintain a low-fat and low-salt diet, according to the patient's dietary preferences and nutritional status to improve their nutritional status and immunity; (3) Psychological guidance was provided to maintain a positive state of mind during the nursing period by monitoring the patient's facial and verbal expressions; (4) The medication dosage and methods were explained to the patients by the prescription issued by the doctor to ensure that all procedures were standardized.

2.2.2. Observation group

Continuity of care was provided to the observation group: (1) The patients' files including their basic information, contact information, and address were established. Information regarding the patient's discharge, follow-up schedule, number of follow-up visits, etc. was collected. Disease record cards were distributed to ensure timely management of the patient's daily medication and disease control. When patients were

discharged from the hospital, drugs were administered to the patients to reduce the rate of adverse reactions, and the usage of each drug was recorded. The patient's understanding of the symptoms, etiology, adverse effects, and treatment of the disease was deepened via health brochures, videos, and lectures. Within 1 month after discharge, the patient was contacted once per week via telephone to keep track of their condition, and to grasp the patient's compliance with the given medication and for any possible adverse reactions. and explain to the patient The hazards of failing to control the disease and solutions were explained to the patient for their adherence to the treatment; within 6 months after discharge, one telephone interview per month was conducted, and the patient was informed of his/her follow-up time in the hospital one week in advance. (2) The patient's condition, living habits, and mentality in various aspects were acknowledged using WeChat, telephone, outpatient, and other follow-up interventions. All inquiries were patiently addressed, and scientific guidance was provided. The importance of adhering to the medication prescribed by the doctor and the necessary precautions were again explained to the patient. (3) According to the patient's physical condition, a training program was developed, such as trotting, jogging, etc. Patients were encouraged to participate in bicep and lumbar muscle training for 30 minutes, 3 times a day, with a 30-minute break in between. Respiratory training was provided to strengthen the patient's respiratory functions. Patients were instructed to consume low-fat and low-salt foods, increase protein and fiber intake, and develop healthy eating habits to improve their nutritional status and promote recovery.

2.3. Observation indicators

2.3.1. Nursing effect

The continuity of care was said to exhibit an "obvious" effect upon the disappearance of angina and increased symptom improvement among the patients. This was further classified into two grades: "effective," where the frequency of angina attacks was reduced to below 50% with significant improvement of the symptoms; "ineffective," whereby angina persists and the symptoms did not improve^[5]. The total effective rate was calculated by adding up both the significant and effective rates.

2.3.2. Symptom situation

Changes in the frequency and duration of angina attacks in the two groups were observed.

2.3.3. Adverse emotions

The SDA and SAS scales were used to assess for depression (53–62, 63–72, > 73 for mild, moderate, and severe respectively), and anxiety (50–59, 60–69, > 70 for mild, moderate and severe respectively) in the two groups before and after nursing interventions.

2.3.4. Quality of life

The ADL scale was used as an assessment tool to evaluate the quality of life of the two groups in terms of somatic, social, psychological, and physiological functions, each with 100 points. A higher ADL score indicated a higher quality of life.

2.4. Statistical analysis

Data analysis was carried out using SPSS 27.0 and the measurement data were expressed as mean ± standard deviation, and compared using a *t*-test; count data were expressed as % and analyzed using the chi-square (χ^2) test. Results were considered statistically significant at $P < 0.05$.

3. Results

3.1. Comparison of nursing effect between the two groups

As shown in **Table 2**, the total nursing effectiveness rate of the observation group is higher than that of the control group ($P < 0.05$).

Table 2. Comparison of nursing effect between the two groups [n (%)]

Group	Cases, n	Significant effect	Effective	Ineffective	Overall effectiveness rate
Observation group	50	28 (56.00)	20 (40.00)	2 (4.00)	48 (96.00)
Control group	50	22 (44.00)	18 (36.00)	10 (20.00)	40 (80.00)
χ^2	-	-	-	-	6.061
P	-	-	-	-	0.014

3.2. Comparison of angina attacks between the two groups

As shown in **Table 3**, the improvement of angina attacks in the patients of the observation group was better than that of the control group ($P < 0.05$).

Table 3. Comparison of angina attacks between the two groups (mean \pm standard deviation)

Group	Cases, n	Frequency of occurrence (times/week)	Duration (min)
Observation group	50	1.42 \pm 0.21	5.46 \pm 0.39
Control group	50	1.58 \pm 0.25	5.72 \pm 0.48
t	-	3.465	2.973
P	-	0.001	0.004

3.3. Comparison of adverse emotions between the two groups

As shown in **Table 4**, the SDS and SAS scores of the observation group after nursing were lower than those of the control group ($P < 0.05$).

Table 4. Comparison of adverse emotions between the two groups (mean \pm standard deviation, points)

Group	Cases, n	SDS		SAS	
		Before care	After care	Before care	After care
Observation group	50	68.93 \pm 10.45	42.16 \pm 6.64	59.56 \pm 10.24	32.26 \pm 7.35
Control group	50	69.97 \pm 10.44	46.38 \pm 7.63	59.52 \pm 10.57	37.14 \pm 8.64
t	-	0.498	2.950	0.019	3.042
P	-	0.620	0.004	0.985	0.003

3.4. Comparison of quality of life between the two groups

As shown in **Table 5**, the quality of life of the observation group was higher than that of the control group ($P < 0.05$).

Table 5. Comparison of quality of life between the two groups (mean ± standard deviation, points)

Group	Cases, <i>n</i>	Somatic function	Social function	Psychological function	Physiological function
Observation group	50	88.27 ± 6.52	79.34 ± 8.21	82.48 ± 7.62	88.23 ± 7.25
Control group	50	84.02 ± 6.55	74.89 ± 7.92	78.76 ± 6.89	85.16 ± 7.06
<i>t</i>	-	3.252	2.758	2.561	2.145
<i>P</i>	-	0.002	0.007	0.012	0.034

4. Discussion

With the advancement of medical technology, early intervention can be implemented to reduce the angina symptoms of elderly CHD with UAP patients and improve its therapeutic effect. It has been suggested that most CHD patients with acute exacerbation and re-admission were due to failure to cooperate with out-of-hospital care and low medication adherence [6]. Therefore, out-of-hospital interventions are needed to prevent the onset of acute episodes and improve the patient's compliance, and quality of life.

Continuity of care closely connects and ensures the smooth transition between in-hospital and out-of-hospital care services to ensure that the patients receive high-quality services under the guidance of professional medical care upon discharge. Furthermore, the out-of-hospital care program can be formulated according to the recovery status of the patients [7]. This study showed that continuity of care can efficiently improve the total effective rate of care for elderly patients with CHD with UAP as compared to conventional care. This is because continuity nursing is a further extension of in-hospital nursing services. Due to the decline in physical function and immunity of elderly patients, coupled with memory loss and cognitive impairment as they age, the patient's adherence to medication after discharge is low, thus negatively affecting the stabilization of the patient's condition and recovery. Conventional nursing care only provides medical services during in-hospital diagnosis and treatment but is unable to provide nursing interventions and health guidance when patients develop pathologies after discharge. In continuity nursing, the patient's disease, physical and mental condition, etc. are comprehensively assessed through follow-ups, and providing scientific guidance. Tracking the patient's medication usage and ensuring the patient understands the importance of taking medication according to the doctor's instructions is crucial. This is to facilitate the standardized use of drugs to maximize the therapeutic effect and prevent adverse reactions. In addition, adverse problems affecting the recovery of the condition can be dealt with promptly even after the patient is discharged. Hence, continuity of care can improve the patient's emotions and is more effective in stabilizing the condition of elderly patients with CHD with UAP [8]. This study also showed that continuity of care can effectively improve the condition of elderly CHD with UAP patients, reduce the frequency of angina attacks, shorten the disease duration, and promote the prognosis of recovery. The reason is that continuity of care ensures the consistency of medical services and has a positive impact on the improvement of the physical and mental health of patients and the alleviation of diseases [9,10]. Results from this study showed that the SDS and SAS scores of the observation group were lower than those of the control group after nursing ($P < 0.05$). Continuity nursing allows patients to understand their disease, maintain optimism in receiving treatment, and maintain good compliance. This study found that continuity nursing better improved the quality of life of elderly CHD with UAP patients as compared to conventional nursing ($P < 0.05$). Continuity nursing provides a safeguarding effect on the quality of medical services by providing professional nursing guidance for patients in their homes through follow-up nursing. Furthermore, continuity nursing emphasizes on the coherence of in-hospital and out-of-hospital nursing services, is strongly standardized, improves patient's physical and mental state, and can be used during rehabilitation. In addition,

dietary guidance enables patients to control the amount of fat and salt intake, which is conducive to improving the physiological health of patients and preventing the risk of lumen stenosis and blockage. Moderate exercise in rehabilitation training can improve blood circulation and the physical condition of patients, reduce the recurrence rate and adverse cardiac events, eliminate negative emotions, promote the recovery of patients, and improve their quality of life.

5. Conclusion

The continuity of care nursing improved the nursing effect of elderly CHD with UAP patients, promoted the alleviation of UAP symptoms, improved patient mentality, and quality of life. This study provides a basis for selecting out-of-hospital care programs for elderly patients with CHD with UAP. Bigger sample sizes can be taken into consideration in subsequent studies to further validate the effects of continuity of care on the nursing outcomes and quality of life of elderly patients with CHD with UAP.

Disclosure statement

The author declares no conflict of interest.

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