

Effects of Continuous Nursing on Patients with Chronic Heart Failure Complicated with Atrial Fibrillation

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ABSTRACT

Objective: To assess the effects of continuous nursing on patients with chronic heart failure complicated with atrial fibrillation.

Methods: A total of 60 patients with chronic heart failure complicated with atrial fibrillation who were diagnosed in Department of Cardiology of our hospital from January 2017 to August 2019 were enrolled and assigned into observation group (n=30) and control group (n=30) using a random number table. Conventional discharge guidance was implemented in control group, while continuous nursing was conducted in observation group. The self-care ability score, compliance of warfarin anti-coagulation therapy, international normalized ratio (INR), coagulation time, quality-of-life score and nursing satisfaction were then compared between the two groups.

Results: After nursing, the self-care ability score in observation group was higher than that in control group ($P<0.05$). The compliance rate of warfarin anti-coagulation therapy in observation group was higher than that in control group (96.67% vs. 76.67%, $P<0.05$). Observation group exhibited a higher INR ($P<0.05$), and longer thromboplastin time, prothrombin time and activated partial thromboplastin time than control group ($P<0.05$) after nursing. Following nursing, the quality-of-life score in observation group was lower than that in control group ($P<0.05$), while the overall nursing satisfaction rate in observation group was higher than that in control group (96.67% vs. 80.00%, $P<0.05$).

Conclusion: Continuous nursing can effectively enhance the self-care ability and the compliance of warfarin anti-coagulation therapy in patients with chronic heart failure complicated with atrial fibrillation, thereby helping improve their anti-coagulation function and quality of life and achieving a higher nursing satisfaction rate.

Keywords: cardiology; chronic heart failure; atrial fibrillation; continuous nursing

INTRODUCTION

Persistent cardiac failure is a common cardiovascular condition of heart disease, and atrial fibrillation is also a risk that is combined with arrhythmias of patients with chronic cardiac failure [1,2]. Interventional surgery is often done routinely, and warfarin anti-coagulation treatment post-operatively is required to maintain its success. Any individuals, though, have limited compliance with

therapy following release, which impairs their prognosis and thus safety steps should be taken. Continuous nursing is a nursing style in which care is clear and cohesive and thorough. The goal of this randomized clinical trial was to evaluate the effectiveness of continuing treatment in 60 patients who had persistent cardiac disease and had atrial fibrillation diagnosed in the hospital between January 2017 and August 2019...

MATERIALS AND METHODS

Baseline clinical data

In general, from January 2017 to August 2019, 60 patients with atrial-complicated heart failure, who were admitted in our hospital's department of cardiology were registered in two classes with a random number scale, with each category

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containing 30 participants. 16 males and 14 females aged 50-83 years with an average of (66.59 ± 12.31) years were in the monitoring category; 17 males and 13 females, ages 50-84 years, with a median of (66.78 ± 12.23) years were in the study community. In both age and gender there have been no corresponding statistically relevant variations ($P > 0.05$). With permission from the Medical Ethics Committee, the present research was carried out and patients and their family members told their consent.

Methods

In the control community, conventional discharge instruction was carried out. On the day the patients and their family members obtained discharge warnings and their correct contact details was recorded. In addition, every 2 weeks after discharge, the patients were followed up by phone and advised to report to a hospital in due course for testing.

In the research group, continuous nursing was performed. Firstly, a continuous nursing community was set up, and a WeChat community was set up and an official WeChat account was created. The patients were welcomed to the WeChat Community on the day the discharge was given and requested to obey the official log. Patients were discharged and followed up every four weeks by WeChat: (1) Intervention: persistent cardiac disease, atrial fibrillation, and warfarin rehabilitation treatment have been reported on an on-going basis via the WeChat official site, and measures and self-care after discharge have been mentioned in this paper. In the WeChat party, links for WeChat official articles were exchanged, and patients were then told to read the papers promptly. WeChat official account posts. Relations were improved between the patients and between patients and nurses in the WeChat community, by the exchanging of therapy knowledge, queries responses and reminding patients to take medications in due course. (2) Nutritional guidance: In the process of WeChat conversation or drop-in follow-up, patients were often advised to consume fiber and high-vitamin items, such as thin, readily digestible, low calorie, low-salt and low-fat foods and snacks. The patients' abdomen must be massaged after meal, such that gastrointestinal peristalses are facilitated and heart discomfort can not be exacerbated by inadequate defecation and tension during bowel movement. (3) Cardiopulmonary conditioning guidance: The patients were directed to lay down on their sheets, gently shut their eyes, relax their muscles in the

body and breathe steadily and comfortably, inhaling through the nose and breathing out through their lungs for five minutes, twice a day. (4) Environmental care: During WeChat, the patients and their families were advised to improve the living atmosphere, to frequently clean indoor air and to change the indoor light to soft air when they understood the patients' living climate, to ensure the direct solar radiation prevented and to monitor the internal temperature and humidity of 22 to 25° C and soft

Observation indices

Comparisons were made between two classes of self-pflections, warfarin anti-coagulatory medication enforcement, universal standardized ratio (INR), clotting duration, quality of life and nursing satisfaction.

Self-care abilities were tested utilizing a four-dimensional self-care framework, self-concept, self-responsibility, self-care skills and mastery of health awareness [3]: Self-care skills were tested. For each dimension the overall score is 100 points and the score is proportional to the potential of the self-care community.

For warfarin anti-coagulation therapy efficacy, patients have been tested 6 months to ensure that warfarin succeeds in anti-coagulation therapy. The continued usage of the medication was described as adherence and non-compliance.

The time indexes for coagulation included thrombin period (TT), period with prothrombin, and portion thromboplastin time (PTT) activation.

The score for quality of life[4] has been determined using the Minnesota Lived Questionnaire for Heart Disease, which contains three areas: emotion (0-25 points), body (0-40 points), other (0-40 points). The score is negative in comparison to the quality of life of the person.

The quality of nursing was measured by means of an autonomous nursing questionnaire with maximum score of 100 points and minimum score of 0 points and 0 to 59 respectively, average quality of 60 to 80 respectively and a moderate satisfaction of 81 to 100 points .. The total satisfaction rating was determined dependent on the average satisfaction rating + satisfaction rate = final.

Statistical analysis

All data have been analyzed statistically by software SPSS 22.0. Numerical data is represented in the form of n and checked for μ_2 . The quantitative statistics were) (seen and t-tested. Statistically important was found $P < 0.05$.

RESULTS**Self-care ability scores**

The self-care ability scores rose in both groups

after nursing compared with those before nursing ($P < 0.05$), while the self-care ability score in observation group was higher than that in control group ($P < 0.05$) (Table 1).

Table 1. Self-care ability scores ($\bar{x} \pm s$, point)

Group	Time	Mastery of health knowledge	Self-concept	Self-responsibility	Self-care skills
Control (n=30)	Before nursing	71.84±5.46	72.19±6.02	71.92±5.91	71.35±5.48
	After nursing	78.21±6.35 [#]	78.94±6.75 [#]	78.35±6.43 [#]	77.64±6.30 [#]
Observation (n=30)	Before nursing	71.97±5.52	72.32±6.14	72.07±5.98	71.47±5.56
	After nursing	85.30±7.09 ^{#*}	86.07±7.13 ^{#*}	86.12±7.76 ^{#*}	85.09±7.45 ^{#*}

Compared with the same group before nursing, [#] $P < 0.05$; compared with control group, ^{*} $P < 0.05$.

Compliance of warfarin anti-coagulation therapy

After 6 months of follow-up, 29 and 23 patients continued receiving warfarin anti-coagulation therapy in observation group and control group,

respectively. The compliance of warfarin anti-coagulation therapy in observation group was higher than that in control group (96.67% vs. 76.67%, $P < 0.05$) (Table 2).

Table 2. Compliance of warfarin anti-coagulation therapy [case (%)]

Group	Case No.	Compliance	Non-compliance	Compliance rate
Observation	30	29 (96.67)	1 (3.33)	29 (96.67) [*]
Control	30	23 (76.67)	14 (23.33)	23 (76.67)

Compared with control group, ^{*} $P < 0.05$.

Coagulation time indices

Considerable improvement in INR, TT, PT and

APTT was found in the two groups after nursing, and observation group had a higher INR and longer TT, PT and APTT than control group after nursing ($P < 0.05$) (Table 3).

Table 3. Coagulation time indices ($\bar{x} \pm s$)

Group	Time	INR	TT (s)	PT (s)	APTT (s)
Control (n=30)	Before nursing	1.10±0.36	17.95±2.41	12.23±2.52	25.38±6.49
	After nursing	1.63±0.48 [#]	20.78±2.85 [#]	15.19±3.08 [#]	34.02±8.59 [#]
Observation (n=30)	Before nursing	1.12±0.37	17.84±2.36	12.10±2.67	25.11±6.37
	After nursing	2.19±0.54 ^{#*}	23.92±3.16 ^{#*}	18.54±3.37 ^{#*}	45.87±10.34 ^{#*}

Compared with the same group before nursing, [#] $P < 0.05$; compared with control group, ^{*} $P < 0.05$.

Quality-of-life scores

After nursing, the quality-of-life scores in both

groups were lower than those before nursing, whereas observation group had a lower quality-of-life score than control group ($P < 0.05$) (Table 4)

Table 4. Quality-of-life scores ($\bar{x} \pm s$, point)

Group	Time	Emotion	Body	Others	Total score
Control (n=30)	Before nursing	9.53±1.72	14.36±2.10	13.91±1.87	37.82±5.68
	After nursing	7.89±1.43 [#]	12.27±1.82 [#]	12.05±1.54 [#]	32.21±4.79 [#]
Observation (n=30)	Before nursing	9.40±1.75	14.15±2.17	13.76±1.83	37.31±5.64
	After nursing	6.47±1.29 ^{#*}	10.46±1.65 ^{#*}	10.51±1.32 ^{#*}	27.44±4.26 ^{#*}

Compared with the same group before nursing, [#] $P < 0.05$; compared with control group, ^{*} $P < 0.05$.

Nursing satisfaction rate

The overall nursing satisfaction rate in observation

group was higher than that in control group (96.67% vs. 80.00%, $P < 0.05$) (Table 5).

Table 5. Nursing satisfaction rate [case (%)]

Group	Case No.	Much satisfaction	General satisfaction	Unsatisfaction	Total satisfaction rate
Control	30	11 (36.67)	13 (43.33)	6 (20.00)	24 (80.00)
Observation	30	15 (50.00)	14 (46.67)	1 (3.33)	29 (96.67) [*]

Compared with control group, ^{*} $P < 0.05$.

DISCUSSION

Atrial fibrillation is a popular form of arrhythmia in an elderly patient with a high frequency, in particular in patients with chronic heart failure[5]. Clinically, management of radiofrequency elimination may be done in order to successfully fix arrhythmias and monitor symptoms of illness in the case of persistent cardiac failure that is aggravated by atrial fibrillity [6,7]. In chronic heart failure patients with symptoms of atrial fibrillation, however, thromboembolic incidents appear to occur after surgery, thus, warfarin therapy is needed.

Warfarin, an oral anticoagulant medication, is widely used in coronary perioperatives which can efficiently suppress platelet accumulation which avoid vitamin K-related coagulation factors from being synthesized and hence have anti-coagulation effects[8,9]. However, there is also a need for nursing care as warfarin has to be administered for a long period, and atrial fibrillation difficult, persistent cardiac disease may fail or decrease doses after release reducing the effectiveness of warfarin anti-coagulations. The patients to be released were previously getting primarily clinical instructions on the day of release, and after their discharge, telephone follow-up was regularly issued. The nursing interventions were not extensible, so the result in patients following release was far from sufficient. Continuous treatment is a clinical style derived from the discharge instructions and caring intervention that allows room and resources to be expanded outside of the facility. In the first instance, care is carried out with a follow-up of cases. Therefore, it is necessary to adopt a greater variety of clinical steps to offer more systematic and consistent nursing services to patients[10,11]. The health recommendations were improved in the current study by the WeChat party and WeChat official accounts after discharge. Patients' concerns were addressed immediately, warfarin was advised to be taken in due course and nutrition and cardiopulsive therapy recommendations were performed, as well as patients' environmental care. Nutritional advice can enable patients to keep their dietary practices safe and rational after their discharge and mitigate the undesirable dietary effects on their disease control. The advice on cardiopulmonary care will increase the cardiopulmonary function of patients through clinical instruction. Furthermore, the environmental treatment will enhance the home atmosphere and increase the health of patients, while physically and mentally calming patients. The findings of this analysis (1) indicate that the self-

care performance in the observation community was greater during nursing than in the control group, and the adherence rating in the observation team was also higher than in the control group for warfarin anti-coagulation treatment (96.67 percent vs. 76.67 percent). In comparison to the monitoring community, the study party had a higher TT, PT and APTT INR and a longer one ($P < 0.05$). These results indicate that the continuing treatment of patients with atrial fibrillation and their self-management skills can certainly improves drug compliance and lead to the effectiveness of anticoagulation therapies for warfarin. (2) The evaluation group had a better standard of life score during the nursing phase than the control group and the average satisfaction rating in the analysis community was higher than in the control community. The primary explanation is that consistent treatment increases the commitment of patients to medications, guarantees warfarin counter-coagulation therapy effectiveness and tends to minimize thromboembolic harm, thus increasing management of disease and mitigating the impact of diseases on patients' quality of life. Furthermore, in the comprehensive treatment the clinical program is more reliable, meaning that patients may be offered a quality service that increases their clinical satisfaction.

Continuous nursing in patients with persistent cardiac disease who are affected by auric fibrillation can successfully strengthen their self-care and comply with warfarin countercoagulative treatment. Their anti-coagulation role and quality of life can also be enhanced and the level of nursing is higher.

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