EFFECT OF COGNITIVE INTERVENTION COMBINED WITH PSYCHOLOGICAL FLEXIBILITY TRAINING ON PSYCHOLOGICAL STATE AFTER INTERVENTIONAL THERAPY FOR ACUTE MYOCARDIAL INFARCTION

Xia Pan*, Huanhuan Wang
Department of Internal Medicine-Cardiovascular, Xuancheng City Central Hospital, Xuancheng, Anhui 242000, China

ABSTRACT

Introduction: *To study the effect of cognitive intervention combined with psychological flexibility training nursing on the psychological state of patients with acute myocardial infarction (MI) after interventional therapy.*

Materials and methods: *86 patients with acute MI after interventional therapy were randomly divided into control group and observation group, with 43 patients in each group. The control group only used the routine nursing implementation scheme for 43 cases, and the observation group used cognitive intervention and psychological flexibility training nursing for 43 cases. Compared the two groups of patients under different nursing intervention measures before and after nursing, the test values of anxiety score, depression score, self-care ability (self-care skills, self-care responsibility, self-concept, health knowledge level and total score), the test values of psychological elasticity scale (toughness, strength, optimism and total score), the test values of patients' coping styles such as face, avoidance and submission, and the total satisfaction rate of nursing.*

Results: *There was no difference between the two groups before nursing intervention ($p>0.05$). After the implementation of various nursing work, the measured value of self-care ability, the measured value of psychological elasticity scale and the measured value of patients' coping style showed an increase, especially in the observation group ($p<0.05$). After the implementation of various nursing work, the anxiety score and depression score showed a decline, especially in the observation group ($p<0.05$). The total satisfaction rate of nursing in the observation group (97.67%) was higher than that in the control group (83.72%) ($p<0.05$).*

Conclusion: *Cognitive intervention combined with psychoelastic training nursing has a significant impact on the psychological state of patients with acute MI after interventional therapy, which is conducive to improving the psychological state of patients, improving their self-care ability and psychological elasticity, facing the disease with a more positive attitude, and obtaining the satisfaction and acceptance of patients.*

Keywords: *Cognitive intervention, psychological elasticity nursing, acute, miocardial infarction, intervention, mentality.*

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Introduction

Acute myocardial infarction (MI) is a high incidence clinical disease. Interventional therapy can improve the blood flow of the body's myocardium in a relatively short time. However, the possibility of restenosis after the implementation of interventional therapy is high, and it is very easy to cause a variety of negative psychology. The latest research shows that after the interventional treatment of acute MI, anxiety, depression and other adverse emotions have become risk factors that are not conducive to prognosis, leading to an increased risk of death[1]. Therefore, it is very important to carry out effective nursing after interventional therapy for acute MI. Cognitive behavior intervention can correct patients' original wrong cognition, so as to achieve the purpose of improving negative emotions. The nursing intervention of psychological elasticity training is helpful for patients to adapt to the physical and mental damage caused by diseases as soon as possible, help patients to actively adjust their

negative physical and mental status, so as to help patients face the disease and treatment bravely, and then improve the clinical treatment cooperation[2].

This study will explore the effect of cognitive intervention combined with psychoelastic training nursing on the psychological state after interventional therapy for acute MI, so as to provide reliable theoretical reference suggestions for clinical diagnosis and treatment

Materials and methods

Basic data

A total of 86 patients with acute MI who underwent interventional therapy between January 2019 and October 2021 were randomly divided into control group (n=43) and observation group (n=43).

The data of the two groups were as follows: there were 35 male and 8 female patients in the control group; Age 35-68 years (50.09 ± 5.55); According to the educational level, it can be divided into primary school, middle school and University: 3 cases, 25 cases and 15 cases respectively; According to the complicated diseases, they can be divided into hypertension, hyperlipidemia and diabetes, 26 cases, 14 cases and 3 cases respectively; According to the type of interventional surgery, it can be divided into percutaneous coronary stenting and percutaneous transluminal coronary angioplasty. The number of cases were 41 cases and 2, respectively.

There were 37 male patients and 6 female patients in the observation group; Age 40-63 (50.11 ± 5.51) years; According to the educational level, it can be divided into primary school, middle school and University: 2 cases, 25 cases and 16 cases respectively; According to the complicated diseases, it can be divided into hypertension, hyperlipidemia and diabetes. The number of cases is 25, 15 and 3 respectively; According to the type of interventional therapy, it can be divided into percutaneous coronary stenting and percutaneous transluminal coronary angioplasty. The number of cases were 40 cases and 3, respectively. By comparing the basic data of the two groups with relevant statistical software, it can be concluded that: $p>0.05$, the comparability is good.

Inclusion criteria:

• The symptoms of the patients were consistent with the description of acute MI in the guidelines for diagnosis and treatment of acute MI[3];

• Successful interventional therapy;

• Clear awareness and verbal communication skills.

Exclusion criteria:

• Interventional therapy failed and there were very serious complications;

• Have a history of mental illness;

• There are serious chronic diseases.

Methods

The patients in the control group only used the routine nursing implementation scheme:

• The nursing staff communicated with the patients more in the ward, and took at least 30min of psychological communication and intervention with the patients alone every day, patiently listened to the patients' emotional catharsis and complaints, and gave emotional support, patiently answered the patients' questions, and let the patients close their eyes and recall their beautiful things in their minds, So as to bring pleasure to yourself.

• Guide the patients to formulate the corresponding diet plan according to the actual condition development and diet taste, and require the patients to exercise properly, so as to improve their own resistance and disease pain tolerance.

The observation group applied cognitive intervention combined with psychological flexibility training nursing to the included patients:

Cognitive intervention:

• A nursing implementation team was established, and the members had very rich nursing implementation experience. The training content mainly included: the causes, manifestations, interventional treatment and other precautions of acute MI. At the same time, the team members were required to understand the specific nursing implementation content, All of them have been trained and assessed. Unqualified personnel shall be assessed again until they pass the assessment.

• Cognitive correction: nurses who have passed the examination apply rational emotional therapy to help them rebuild the cognitive system structure of diseases and interventional therapy. The nurses have a good relationship with the patients, and then they mainly listen to understand the patients' cognitive level after intervention. After the patients' emotional state is stabilized, they can point out their cognitive errors, and mainly help the patients' families to popularize the key points such as adverse reactions and precautions after intervention treatment by means of explanation and distribution of brochures.

Psychological elasticity training nursing:

• Nursing staff can use various types of evaluation systems and software to evaluate the psychological status of patients, analyze the personality and personality of patients, establish mutual trust and harmonious relationship with patients, increase the communication frequency with patients, let patients experience the care and care from hospitals and nursing staff, and meet multiple nursing needs of patients to maintain emotional stability.

• Explain the pathological mechanism of acute MI and prognostic factors after interventional therapy to patients and their families in detail, so that they can understand the relationship between psychological factors and disease prognosis and adverse reactions, and eliminate the frustration of patients.

• Implement nursing intervention in the form of group, so as to continuously improve patients' stress ability for disease and treatment. More attention should be paid to the introverted patients who are relatively older and have a relatively low income. For patients with a variety of complications, individual psychological nursing guidance should be implemented to teach patients the methods of self-regulation.

• Help patients and nursing staff to coordinate their families, let patients understand their importance to their families, and ask their families to give support to their families.

Observation indicators

The anxiety score, depression score, self-care ability, Resilience Scale, coping style and total satisfaction rate were compared between the two groups before and after nursing.

• Test value of anxiety score and test value of depression score: the values of the former and the latter were measured respectively according to the self rating Anxiety Scale and the self rating depression scale. The higher the score, the more serious the anxiety and depression.

• Selfcare ability measurement value: the main measurement indicators involved include self-care skills (involving 12 items), self-care responsibility (involving 8 items), self-concept (involving 9 items), health knowledge water (involving 14 items) and total score. The scoring method is 4-level method. The higher the score, the better.

• Test value of psychological elasticity scale: it is mainly measured by the psychological elasticity scale developed by Connor, including tenacity, strength, optimism and total score. Among them, the tenacity involves 13 items, the strength involves 8 items, and the optimism involves 4 items. The scoring method is 4-level method. The higher the score, the better.

• Patient coping style test value: it is mainly measured according to the medical coping questionnaire developed by Herman Feifel, including face, avoidance and submission. Among them, face involves 8 items, avoidance involves 7 items, and submission involves 5 items. The scoring method is 4-level method. The higher the score, the better.

• Total satisfaction rate of Nursing (satisfied, relatively satisfied, dissatisfied): total satisfaction rate = satisfaction rate + relatively satisfied rate.

Statistical analysis

SPSS 21.0 version was used for statistical analysis software; The inspection methods of measurement ($\bar{x}\pm s$) and count (%) are: t-test and χ^2 inspection. Take p=0.05 as the standard to check whether there is data difference, among which, $p<0.05$ has data difference.

Results

Comparison of anxiety score and depression score between groups before and after nursing

Before the implementation of nursing intervention, there was no difference between the two groups ($p>0.05$). After the implementation of various nursing work, the anxiety score and depression score showed a decline, especially in the observation group ($p<0.05$). As shown in Table 1.

Groups	N	Before		After	
		Anxiety	Depression	Anxiety	Depression
Control group	43	60.22±2.22	61.55±2.11	45.55±2.22	45.15±2.11
Observation group	43	60.23±2.11	61.33±2.12	35.55±2.11	36.65±1.22
t	-	0.021	0.482	21.410	22.869
P	-	0.983	0.631	<0.001	<0.001

Table 1: Comparison of anxiety score and depression score between groups before and after nursing ($\bar{x}\pm s$).

Comparison of self-care ability between groups before and after nursing

Before the implementation of nursing intervention, there was no difference between the two groups ($p>0.05$). After the implementation of various nursing work, the self-care skills, self-care responsibility, self-concept, health knowledge level

and total score index were evaluated, showing an increase, and the change in the observation group was more prominent (p<0.05). See Table 2.

Index	Time	Control group (n=43)	Observation group (n=43)	t	*P*
Self care skills	Before	23.34±5.55	23.33±5.21	0.009	0.993
	After	26.66±1.22	32.21±2.11	14.932	<0.001
Self care responsibility	Before	37.77±2.22	37.61±2.12	0.342	0.733
	After	38.99±2.11	40.76±2.11	3.890	<0.001
Self concept	Before	17.55±2.11	17.34±2.21	0.451	0.653
	After	20.22±2.33	24.43±3.22	6.946	<0.001
Health knowledge level	Before	15.55±3.22	15.56±3.21	0.014	0.989
	After	18.77±2.11	20.95±2.31	4.569	<0.001
Total score	Before	91.22±2.33	91.23±2.33	0.020	0.984
	After	93.34±2.33	94.77±1.22	3.565	0.001

Table 2: Comparison of self-care ability between groups before and after nursing ($\bar{x}\pm s$).

Comparison of the values measured by the Mental Resilience Scale before and after nursing between groups

There was no difference between the two groups before nursing intervention (p>0.05).

After the implementation of various nursing work, the indexes of toughness, strength, optimism and total score were evaluated, showing an increase, especially in the observation group (p<0.05). As shown in Table 3.

Index	Time	Control group (n=43)	Observation group (n=43)	t	*P*
Tenacity	Before	30.22±5.55	30.31±5.43	0.076	0.940
	After	32.22±1.22	34.45±2.33	5.560	<0.001
Power	Before	18.66±4.33	18.76±4.32	0.107	0.915
	After	20.66±2.11	23.34±1.21	7.225	<0.001
Optimism	Before	8.11±2.11	8.12±2.09	0.022	0.982
	After	10.11±1.22	12.76±2.11	7.130	<0.001
Total score	Before	57.77±7.66	57.34±7.65	0.260	0.795
	After	65.55±5.44	71.23±3.44	5.787	<0.001

Table 3: Comparison of the values measured by the Mental Resilience Scale before and after nursing between groups ($\bar{x}\pm s$).

Comparison of coping styles between the two groups before and after nursing

There was no difference between the two groups before nursing intervention (p>0.05). After the implementation of various nursing work, the indexes of face-to-face, avoidance and submission were evaluated, showing an increase, especially in the observation group (p<0.05). See Table 4.

Index	Time	Control group (n=43)	Observation group (n=43)	t	*P*
Face	Before	18.21±2.11	18.22±2.19	0.022	0.983
	After	20.22±2.11	22.23±3.11	3.507	0.001
Avoid	Before	13.54±2.11	13.23±2.22	0.664	0.509
	After	15.55±2.13	17.89±1.22	6.251	<0.001
Yield	Before	11.31±1.22	11.33±1.22	0.076	0.940
	After	13.32±2.11	16.67±2.11	7.362	<0.001

Table 4: Comparison of coping styles between the two groups before and after nursing ($\bar{x}\pm s$).

Comparison of total satisfaction rate between two groups

The total satisfaction rate of nursing in the observation group (97.67%) was significantly higher than that in the control group (83.72%) (p<0.05). See Table 5.

Groups	N	Satisfied	Relatively satisfied	Dissatisfied	Total satisfaction rate (%)
Control group	43	30 (69.77)	6 (13.95)	7 (16.28)	36 (83.72)
Observation group	43	40 (93.02)	2 (4.65)	1 (2.33)	42 (97.67)
χ^2	-	-	-	-	4.962
P	-	-	-	-	0.026

Table 5: Comparison of total satisfaction rate between two groups (%).

Discussion

Acute MI is a high incidence of cardiovascular disease, which will bring severe pain to patients, resulting in a higher probability of a variety of negative emotions, including anxiety and depression. However, the occurrence of negative emotions will promote the secretion of sympathetic nerves and adrenal glands in the lower hypothalamus of the body, which will lead to a variety of clinical complications. After psychological problems such as depression occur, it will reduce the patients' ability to regulate and control the disease.

With the continuous development of the disease, it is easy to cause blood pressure fluctuations, cause adverse effects, and affect the prognosis and rehabilitation process of the patients[4, 5]. Numerous relevant data show that there is a close correlation between the development of acute MI after interventional therapy and life style, behavior habits and psychological status. Wrong cognition of the disease will easily lead to the formation of many bad life behaviors, which will have a negative impact on the heart rate and other vital indicators, which

is very detrimental to the further rehabilitation of patients[6]. Cognitive behavior intervention nursing is an intervention model that can improve the patients' bad psychological state. It mainly takes the patients as the nursing implementation center, and the implementation purpose is to reduce the pain of their symptoms to the greatest extent. It was found in the process of cognitive behavior intervention nursing. If the patient does not do a good job in psychological construction to resist the disease, it is easy to cause negative psychology such as anxiety and depression.

In addition, the lack of understanding of the disease and intervention treatment will lead to wrong cognitive concepts. The patient is easy to have wild thoughts during recovery, resulting in the continuous aggravation of the disease, which is not conducive to the patient's quality of life and physical and mental development. Cognitive-behavioral nursing can effectively evaluate the patients' inner state. Through this kind of nursing measures, patients can relax their mood, alleviate the adverse physical and mental effects caused by negative emotions, and promote the recovery of prognosis towards a good trend. And through cognitive behavior intervention nursing can strengthen the correct life concept, change the original bad living habits and wrong cognition, and help to restore and improve nursing satisfaction.

Therefore, cognitive intervention nursing for patients with acute MI after interventional therapy can effectively relieve their physical and mental pressure and reduce the incidence of various adverse events. Moreover, this kind of nursing measure is simple and easy, belonging to a class of intervention methods with high clinical nursing value[7, 8]. Through the data of this study, it was found that after the implementation of various nursing work, the measured value of self-care ability, the measured value of psychological elasticity scale and the measured value of patients' coping style showed an increase, and the change in the observation group was more prominent ($p<0.05$). After the implementation of various nursing work, the anxiety score and depression score showed a decline, especially in the observation group ($p<0.05$).

The total satisfaction rate of nursing in the observation group (97.67%) was higher than that in the control group (83.72%) ($p<0.05$). Therefore, mental flexibility training nursing on the basis of cognitive intervention has stronger nursing value, and its feasibility and advantages are prominent. This is because patients with a relatively high degree of psychological elasticity can correctly face their diseases on their own, can adjust their negative emotions to positive emotions, and can balance their psychological state. The research shows that the implementation of psychological elasticity training nursing according to the characteristics of psychological elasticity of patients with acute MI after interventional therapy is conducive to improving their psychological elasticity and their psychological status.

The main advantages of implementing psychological flexibility training nursing can also be divided into the following three points:

• It can effectively expand the psychological space of patients and improve their tolerance for adverse events;

• It helps to create a positive psychological state, and then reduces the pain of patients facing trauma alone;

• The perspective of adverse events can be viewed through positive emotional adjustment, which is conducive to promoting disease recovery.

In conclusion, cognitive intervention combined with psychoelastic training and nursing care for patients with acute MI after interventional therapy can effectively improve their negative psychology, improve their own self-care ability and psychoelastic degree, and promote patients to face the disease with a more positive attitude.

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Corresponding Author:
Xia Pan
Department of Internal Medicine-Cardiovascular, Xuancheng City Central Hospital, No. 117 Tong Road, Xuancheng, Anhui 242000, China
Email: yydsyjin696@163.com
(China)