

Effect Evaluation of Progressive Rehabilitation Nursing on Cardiac Rehabilitation of Patients with Coronary Stent Implantation

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Abstract: objective: To observe the progressive rehabilitation nursing to promote the effect of cardiac rehabilitation after coronary stent implantation patients. **Selection methods:** Our hospital from May 2011 to May 2015 treated 150 cases of coronary artery stent implantation in patients with documents review, sorting and analysis, were randomly divided into control group and observation group, control group 75 cases, the conventional nursing methods for auxiliary treatment, the observation group of 75 cases in the control group on the basis of using the method of progressive rehabilitation nursing for auxiliary treatment. **Results:** After treatment, through the data contrast, observation group of patients with physical inspection report, bosom is frowsty attack rate, intensity of exercise tolerance is better than that in control group, treatment effect obvious, difference ($P < 0.05$), with statistical significance. **Conclusion:** Patients with progressive rehabilitation nursing after promoting intravascular implantation of cardiac rehabilitation effect is remarkable, popularization should be applied to clinical medicine.

Key words: progressive rehabilitation nursing, coronary artery stent implantation, cardiac rehabilitation effect

Introduction

Coronary atherothrombotic heart disease is a common circulatory disease in clinical medicine. The main reason is that atherosclerosis of coronary artery leads to stenosis or obstruction of vascular cavity. The main clinical features are palpitation, dyspnea, edema, chest pain, oliguria, coughing, etc. Currently, coronary artery stent implantation is one of the most commonly used surgery for the treatment of coronary atherosclerotic heart disease with a certain authority^[1]. However, coronary artery stent implantation can not fundamentally solve the problem of atherosclerosis and can't avoid or prevent the situation of coronary artery stenosis after operation. In addition, patients should pay attention to changing their bad living habits after operation, or it may cause infection or other diseases, or lead to slow recovery. After operation, according to the patient's pathological changes, age stages, physical condition and so on, the method of dynamic and static combined treatment is adopted to help the patients to carry on physical movement, which will help the patients to improve the function of the heart. This paper is based on 150 cases of coronary stent implantation from our hospital during May 2011 to May 2015; after operation, the archival data of these patients who accept the routine nursing mode and rehabilitation nursing mode as adjuvant therapy are reviewed, integrated and analyzed, which can be sorted out to make the

following reports.

1. Information and Methods

1.1 General Information

Select the patient data of 150 cases with coronary stent implantation from our hospital during May 2011 to May 2015; the selected patients meet the diagnostic criteria of coronary heart disease 150 patients with coronary heart disease; the level of their intelligence is normal; they can make daily oral or written communication, and they accept successful percutaneous coronary stent implantation. Among them, 80 patients are male and 70 patients are female, aged 35 to 80 years old; the average age is 51.3 ± 3.1 years old. In addition, the selected patients don't include: patients with acute myocardial infarction, cardiogenic shock and seriously damaged lung function, and the patients without normal language communication for no matter what reason. At the same time, the research is informed and supported by these patients and are approved by the superior department of the hospital. The patients are randomly divided into the control group and the observation group. There are 75 cases in the control group, among which 42 cases are male and 33 cases are female, aged 35 to 78 years old; the average age is 52.6 years old; a questionnaire survey is made to the patients; the risk of coronary heart disease to human body and prevention knowledge are generally understood. Only 3 patients have

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knowledge of intracoronary stent implantation; 63 patients have different degrees of psychological anxiety and negative emotion, among whom 4 patients suffer serious mental malaise, 40 patients have bad living habits and 35 patients like high fat content and salty food. There are 75 cases in the observation group, among which 38 cases are male and 37 cases are female, aged 37 to 80 years old; the average age is 51.4 years old; a questionnaire survey is made to the patients; the risk of coronary heart disease to human body and prevention knowledge are generally understood; most of them could not understand correctly and comprehensively; only 5 cases have knowledge of intracoronary stent implantation; 68 patients have different degrees of psychological anxiety and negative emotion, among whom 5 patients are prone to depression, 42 patients have bad living habits and 30 patients like high fat content and salty food. There is no obvious difference between the general information of the two groups ($P>0.05$), which are comparable.

1.2 Nursing Method

In the control group, the routine nursing method is adopted, and the patient's ECG and blood oxygen saturation are checked strictly by guardianship personnel within 2 days after the operation, and the patient's blood pressure is taken every little time; the changes of vital signs and clinical symptoms of the patients are paid high attention; the body temperature measurement are taken regularly for patients; the patient's pulse and respiratory changes are checked several times; take the venous blood sample of the patient every day to observe the changes of the myocardial enzyme spectrum of the patient, and compare it with the changes of the normal myocardial enzyme spectrum. In case of special circumstances, call medical care personnel to discuss and make formulation of countermeasures. In addition, the medical personnel guide the patient to use and take medicine, and take the corresponding measures to prevent the patient's wound bleeding; the on-duty doctor and nurse record the patient's condition change detail; the clinical manifestations of persistent myocardial angina, acute coronary artery blockage, acute myocardial infarction (AMI), the severe low blood pressure and the disorder of heart rate should be quickly fed back to the attending physician and the corresponding measures should be taken^[2]. The patients receive the treatment for a certain time; when the condition is stable and after patients are examined and obtained hospital discharge approval, the doctor give the patients normal discharge guidance.

On the basis of the control group, the observation group adopts progressive rehabilitation nursing mode to assist the treatment; the medical staff and the patient's family members carry out the seminar, formulate the patient's nursing plan, set the therapeutic effect target that should be achieved by the progressive rehabilitation nursing auxiliary treatment, and

establish the effect evaluation team of the auxiliary treatment; in each stage, make an exchange summary or improvement plan for the result of examination and evaluation, and the division of labor in the group is clear. In addition, follow-up investigation and visit instruction teams are established. After the patients in the observation group are discharged, the team conducts investigation and visit by telephone, new media or door-to-door visit every other time to instruct the patient to carry out the activities of helping to control the illness, supervise the patients to carry out proper and reasonable sports and develop good living habits and behaviors. The contents that are different from the routine nursing mode are as follows:

1.2.1 Universal knowledge of Coronary Heart Disease

During the patient's hospitalization, the doctors and nurses make full use of the opportunity of daily routine examination, medication, dressing, etc. to make contact with the patient to explain the knowledge about the related coronary heart disease, such as the harm caused by coronary heart disease to human body, the cause of coronary heart disease and prevention measures, high incidence of coronary heart diseases, clinical symptoms of coronary heart diseases, the advanced medical concept adopted coronary heart artery stent implantation and so on; medical personnel can also introduce patients to see relevant medical books. After the patient obtains the hospital approval, the medical staff shall pay attention to the problems that should be paid attention to after being discharged from the hospital. According to the treatment plan set up by the medical staff and the patient, follow up regularly and return visits, and remind the patient of what kind of correct method should be taken for controlling the illness. The patient shall be invited and persuaded to participate in the activities of controlling the illness when the hospital holds related lectures, or invite the authoritative experts to hospital.

1.2.2 Psychological Guidance for Patients

Because of suffering from the pain of illness and disabled self-action, the majority of patients have psychological anxiety, fear, irritability and other negative emotions; according to the patient's specific actual situation, medical staff should make positive psychological guidance to the patients. For example, the medical staff should tell the patient how many courses are needed, the duration of each treatment period, the state of illness where patients can be discharged, and tell the patient with the constant development of medical science and technology what kind of advanced method the hospital adopt to treat the coronary heart disease. Our hospital uses the achievements that we treat the coronary heart disease patients with coronary artery stent implantation, and shows the patients related books about how to overcome the disease to encourage patients develop a good mood and improve the self-confidence of overcoming pain^[3]. In addition, the medical staff can guide the patients to vent their negative emotions and lead the

patient's ideological status to positive development, so that the patient has a good mental state.

1.2.3 Dietary intervention for Patients

Food regulates the functioning of the body and limits the amount of heat taken by the patient to reduce the burden of the heart. Medical staff should guide patient to avoid eating high fat, high calorie, high cholesterol and spicy, stimulate food, unable to eat ice or super-cooled food, or too hot food. Have a light-based diet; eat food with more vitamins, cellulose, low fat and low calorie; eat more fruits and vegetables. A consensus should be reached between the medical staff and the patient's family members to exercise strict supervision and control over their diet. For example, if the patient has a bad taste, such as smoking and alcohol, adopt effective measures to compulsorily abstain from smoking and alcohol. The medical personnel can also give the patient explanation of the good eating habits to promote the human body, hold some lectures on healthy eating, constantly strengthen the patient to develop good eating habits.

1.2.4 Supervise and Guide the Patient to Carry Out Proper Exercise

Long-term sedentary or long-term bedridden has a negative effect on the patient's condition; the medical staff and the patient's family should establish a reasonable movement plan according to the actual situation of the patient. For example, we can guide the patient's limb arthrosis on the hospital bed, and the patient can sit on the hospital bed and shake the leg joints, move at a certain speed in the room and do some stretching exercises; the time and frequency are stipulated; patients can take deep breaths, raise the legs, bend the waist and put on the vital capacity to improve the vital capacity, enhance the maintenance capacity of blood cells, constantly improve and ensure cardiomyocytes intake of sufficient oxygen. At the same time, doctors and nurses should guide patients and patients' relatives to pay attention to the rhythm in the process of exercise, avoid the application of intensity; if arrhythmia, myocardial contracture, elevation of blood pressure and palpitation appear in the process of exercise, the exercise should be stopped immediately. Give feedback immediately to medical personnel and check them in time^[4]. After the patient is discharged from the hospital, the daily basic domestic activities can be carried out; patients should live as much as possible in the quiet environment but in the noisy environment; appropriate amount of recreational activities can be carried out and increase the exercise amount according to the actual condition.

1.3 Observation Index

According to the body mass index, blood pressure, tightness frequency, ejection fraction and activity tolerance, medical personnel examine, observe and check the changes of the two groups of patients. Check the patient's activity tolerance by getting the patient to climb stairs. According to

the actual situation of the patients, they climb stairs as much as possible. If patients have polypnea in the process of climbing stairs, they can take a rest. The judgment standard is based on the self-sense of the patient^[5].

1.4 Statistical Research

Make statistics and analysis of the data generated by the two groups by SPSS15.0. In the calculations, the calculated data is represented by the percentage (%) and the group check is done with χ^2 ; if $P < 0.05$, there is a big difference in data, which has the value of statistics.

2. Results

According to the observation indexes, the control group and the observation group have achieved some effects. On the one hand, 15 patients in the control group are able to know the relevant knowledge of coronary atherosclerotic heart disease, understand the causes and preventive measures of the disease; 8 patients know the operation of intracoronary stent implantation, and 10 patients have good state of mind. Most patients still have different degree of psychological anxiety and can not change the bad living habits; their diet is not scientific and reasonable. 63 patients in the observation group are able to know the relevant knowledge of coronary atherosclerotic heart disease, understand the cause of disease and preventive measures, and apply the learned theory to actual life. 65 patients know the operation of intracoronary stent implantation, and 62 patients have good state of mind. There are only 13 patients with anxiety and fear, and 75 patients have good living habits and eating habits. On the other hand, the body mass index of the control group is $(23.1 \pm 1.5) \text{kg/m}^2$, systolic pressure $(152 \pm 8.2) \text{mm-Hg}$, diastolic blood pressure $(95.6 \pm 9.71) \text{mm-Hg}$, chest tightness seizure frequency (10.61 ± 1.5) times per month, ejection fraction (0.68 ± 0.06) , climbing stairs (52 ± 6.3) floor per time. The body mass index in the observation group is $(19.11 \pm 1.25) \text{kg/m}^2$, systolic pressure $(123 \pm 7.1) \text{mm-Hg}$, diastolic pressure $(72.1 \pm 6.9) \text{mm-Hg}$, chest tightness seizure frequency (4.5 ± 1.3) times per month, ejection fraction (0.72 ± 0.08) , climbing stairs (75 ± 5.6) . The specific data are compared between the observation group and the control group, and there are great difference in the related knowledge, living habits, eating habits, body mass index, blood pressure condition, chest tightness seizure frequency, ejection fraction and activity tolerance of coronary atherosclerotic heart disease for patients ($P < 0.05$), which has the value of statistics.

3. Discussion

In the modern medicine, coronary artery stent implantation is one of the most commonly used methods in the treatment of coronary atherosclerotic heart disease, which has the advantages of minimal trauma, rapid recovery and obvious

effects. The coronary stent implantation can strengthen the heart function, bring the hope of rehabilitation to the patient, but after implanting the stent, there are many problems. On the one hand, the stent will damage the vascular endothelial tissue of the heart, cause the accumulation of platelets, cause thrombosis, and cause vascular obstruction, which requires patients to develop a regular and healthy living habits. On the other hand, coronary atherosclerotic heart disease needs to maintain proper amount of exercise, enhance the oxygen uptake of cardiac muscle cells, control blood pressure effectively and reduce the amount of cardiac function; at the same time, patients should pay attention to eating habits and reduce the concentration of serum lipoprotein cholesterol and enhance the oxygen transfer function of red blood cells.

Progressive rehabilitation is carried out mainly from the patient's psychological guidance, dietary intervention guidance, guidance of related diseases and health knowledge, guidance of exercise-assisted treatment and so on, which completely meets the needs of diseases modifying for patients. Through the popularization of the related knowledge of coronary heart disease, it is helpful for the patients to correctly understand the disease and to actively cooperate with the medical staff to treat them, so as to enhance the confidence of curing the disease. Psychological guidance for patients improves the psychological enduring capacity, helps the patient to set a good state of mind and helps the patient to recover; the diet intervention to the patient reduces the concentration of blood lipoprotein cholesterol in the patient, reduces the frequency of illness, and eliminates some unsafe factors for patients. Supervising and instructing the patients to carry on proper amount of exercise improves the patient's physique level, strengthens the patient's myocardial cell oxygen carrying capacity, alleviates the patient's heart load and benefits the improvement of the illness. According to the results of the

study, the patients in the observation group have greatly improved their health awareness, good habits and eating habits, which promotes the recovery of the disease. In addition, the body mass index (BMI), blood pressure (BP), onset frequency, ejection fraction and activity tolerance of the patients in the observation group are significantly higher than those in the control group ($P < 0.05$), which shows that the recovery effects of heart are obvious.

To sum up, the effects of progressive rehabilitation on the recovery of heart are obvious after intracoronary stent implantation.

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