Nursing Analysis after Coronary Stent Implantation

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Abstract
This study was designed to provide a transitional care model for patients undergoing coronary stenting and to explore ways to improve patient follow-up, medication, and healthy lifestyle compliance. Improve the quality of life of patients after coronary stent implantation, reduce the rate of readmission, improve the clinical efficacy of the disease, and reduce the economic burden of patients. The transitional care model used a single-blind, randomized controlled trial. In this paper, 100 patients with coronary stenting were collected from the Department of Cardiology of the top three hospitals using a convenient sampling method. According to the random number table, the 100 subjects were divided into a control group (50 cases) and an intervention group (50 cases). The intervention team provided personalized transitional care services based on routine discharge guidance. After intervention, the change of treatment compliance in the intervention group was higher than that in the control group (P<0.05), and the changes in the review and control were significant (P<0.01). After intervention, the total quality of life of the intervention group was higher than that of the control group (P<0.01), and the symptoms, psychosocial function, adverse reactions and treatment satisfaction were significantly changed (P<0.01). After the intervention, the blood pressure of the intervention group was lower than that of the control group (P < 0.05 at 1 month and 3 months after discharge, P < 0.01 at 6 months after discharge). The systolic blood pressure in the intervention group was reduced by 6.57 mmHg from baseline (P < 0.01). After intervention, total cholesterol in the intervention group decreased by 0.65mmol/L compared with baseline (P <0.01). The results show that the implementation of transitional care mode after coronary stent implantation is feasible and can effectively improve the quality of life and treatment compliance. Improving blood pressure, blood lipids, body mass index levels and reducing readmission rates are worth promoting.

Key words: Coronary Artery, Stent Implantation, Nursing Analysis, Transition Period

Análisis de la Atención Postoperatoria del Stent Coronario

Resumen
El objetivo de este estudio es proporcionar UN patrón de atención transitorio a los pacientes con stent coronaria y explorar formas de mejorar el seguimiento de los pacientes, el tratamiento con drogas y el cumplimiento de UN estilo de vida saludable. Mejorar la calidad de vida de los pacientes después de la implantación del stent
coronario, reducir la tasa de readmisión, mejorar la eficacia clínica de la enfermedad y reducir la carga financiera de los pacientes. El modelo de tratamiento de transición se utilizó en UN ensayo randomizado controlado a ciegas. En este artículo se ha utilizado UN método de muestreo fácil para extraer 100 pacientes de stent coronaria implantados en los tres primeros hospitales de cardiología. Los 100 sujetos fueron subdivididos en grupos de control (50 casos) y grupos de intervención (50 casos) según una tabla de números aleatorios. Los grupos de intervención ofrecen servicios de asistencia transitoria personalizados basados en las directrices habituales de aprobación de la gestión. Después de la intervención, los cambios en la conformidad con el tratamiento en el grupo de intervención fueron mayores que en el grupo de control (P<0.05) y los cambios en la conformidad con el tratamiento en el grupo de intervención fueron significativos (P< 0.01). Después de la intervención, la calidad de vida total del grupo de intervención fue superior a la del grupo de control (P< 0.01), con cambios significativos en los síntomas, la función psicosocial, las reacciones adversas y la satisfacción del tratamiento (P< 0.01). Después de la intervención, la presión arterial del grupo de intervención fue inferior a la del grupo de control (P < 0.05 UN mes después del alta y P < 0.01 6 meses después del alta). La presión sistólica del grupo de intervención disminuyó 6.57 mmHg respecto a la línea de base (P < 0.01). Después de la intervención, el colesterol total del grupo de intervención disminuyó 0.65 mmol/L en comparación con la base (P < 0.01). Los resultados demuestran que la implantación de UN stent coronario es viable y puede mejorar la calidad de vida y el cumplimiento del tratamiento de los pacientes. La mejora de la presión arterial, de los lípidos, del índice de masa corporal y la reducción de la tasa de readmitidos son dignos de mención.

Palabras clave: Arteria Coronaria,Implantación de un Stent, Análisis de los Cuidados

1. Introduction

According to the characteristics of the disease and the treatment principles, coronary heart disease is divided into two categories: the first type of chronic coronary artery disease includes stable angina pectoris, ischemic cardiomyopathy and occult coronary heart disease; the second type of acute coronary syndrome includes instability Angina pectoris, ST-segment elevation myocardial infarction and non-ST-segment elevation myocardial infarction [1]. Acute coronary syndrome is the most common clinical type, usually caused by rupture or coronary wall rupture of atherosclerotic plaque to stimulate thrombotic response, leading to ischemic myocardial injury caused by coronary venous thrombosis [2]. Due to its rapid disease, rapid development, and high risk, many fatal complications are easily caused after the onset. The most serious thrombotic complications have become serious diseases that endanger people's lives. With the continuous development of medicine, the diagnosis and treatment of coronary heart disease has also been continuously improved [3]. Among them, percutaneous coronary intervention (PCI) is a technique for rapid diagnosis and treatment in recent years. Includes coronary angiography, percutaneous transluminal angioplasty or PCI. The vascular stenosis can be directly relieved by the peripheral arteries, the inner diameter of the coronary artery can be enlarged, and the blood supply to the myocardium can be improved, and the blood vessel can be quickly opened in an emergency [4]. Revascularization is achieved from a higher perspective to manage and prevent acute myocardial infarction and reduce mortality. It is an important medical issue with social influence and has a wide range of practical significance.

However, coronary stenting does not reverse or slow the progression of atherosclerosis when addressing coronary stenosis and improving blood vessel supply [5-6]. Risk factors for cardiovascular events have not been eliminated and there is still a possibility of coronary restenosis. Although patients can continue to receive treatment or guidance from the community or primary hospitals after discharge, at this stage, China's community health services are seriously inadequate to meet the medical services required after discharge. Therefore, the implementation of scientific transitional care after coronary stent placement in patients is very important to ensure the patient's treatment and quality of life. Studies have shown that patients undergoing coronary intervention during heart disease rehabilitation tend to ignore regular monitoring of blood pressure and blood lipids. At the same time, compliance is reduced, and only a small percentage of people can know exactly the specific values of their blood pressure, blood sugar and cholesterol. This indicates that patients have insufficient understanding of these risk factors and lack the motivation to change their lifestyles [7]. In addition, compliance with medications, examinations, etc. will decrease over time as patients leave the hospital and leave the ward. If during the transition period, the medical staff can periodically assess the patient's needs and systematically adjust the patient's level of care, lifestyle and self-care during the transition period. Dietary choices, medications, exercise, blood pressure, blood sugar, weight and other interventions will effectively prevent postoperative complications. Reduce the incidence of acute heart events.

Today, there are many related researches at home and abroad. Bhanu D et al. determined the predictors of long-term prognosis in patients with coronary artery disease undergoing percutaneous coronary intervention and compared the effectiveness of drug-eluting stents and bare stents. In this large observational study, machine
learning was used to explain unmeasured confounding factors and biases, and the total length of the stent and the number of stents were determined as the most important predictors of 1-year survival, followed by age and employment status. Although the benefit-to-risk ratio is not clear, patients with ST-segment elevation myocardial infarction are routinely treated with anticoagulant therapy after percutaneous coronary intervention [8]. Alexopoulos D et al. evaluated the effect of this strategy on the 30-day results of a pooled patient-level database of two large percutaneous coronary intervention trials. The results suggest that conventional postoperative anticoagulant therapy after percutaneous coronary intervention has an unfavorable "interest-risk" feature and should be avoided unless there is a clear indication [9]. Kern M. J and other scholars compared 591 patients with or without coronary artery bypass grafting and multi-vessel coronary artery disease, or non-care left main (LM) disease, and received impeller-supported PCI in the Nursing II randomized trial and CVAD registry. Clinical outcomes in patients with severely reduced left ventricular systolic function. Patients with previous coronary artery bypass surgery were compared with patients who had not undergone coronary artery bypass surgery. It was found that in patients with high-risk cohort who received hemodynamic support for PCI, previous coronary artery bypass surgery was not associated with worse outcomes. The use of hemodynamic support appears to reduce the increased risk of PCI in previous coronary artery bypass surgery [10].

The transitional care model used a single-blind, randomized controlled trial. In this paper, 100 patients with coronary stenting were collected from the Department of Cardiology of the top three hospitals using a convenient sampling method. According to the random number table, the 100 subjects were divided into a control group (50 cases) and an intervention group (50 cases). The intervention team provided personalized transitional care services based on routine discharge guidance. After intervention, the change of treatment compliance in the intervention group was higher than that in the control group (P<0.05), and the changes in the review and control were significant (P<0.01). After intervention, the total quality of life of the intervention group was higher than that of the control group (P<0.01), and the symptoms, psychosocial function, adverse reactions and treatment satisfaction were significantly changed (P<0.01). After the intervention, the blood pressure of the intervention group was lower than that of the control group (P < 0.05 at 1 month and 3 months after discharge, P < 0.01 at 6 months after discharge). The systolic blood pressure in the intervention group was reduced by 6.57 mmHg from baseline (P < 0.01). After intervention, total cholesterol in the intervention group decreased by 0.65mmol/L compared with baseline (P <0.01). The results show that the implementation of transitional care mode after coronary stent implantation is feasible and can effectively improve the quality of life and treatment compliance. Improving blood pressure, blood lipids, body mass index levels and reducing readmission rates are worth promoting.

2. Proposed Method

2.1. Coronary Artery

Coronary artery refers to the blood vessels that supply the heart nutrients. We call it the coronary artery. The coronary artery is the nutrient blood vessel of the heart. The coronary artery starts from the aorta and is divided into two left and right, one is the left coronary artery and the other is the right coronary artery. Usually, the left coronary artery originates from the left coronary sinus, the left coronary artery is divided into the anterior descending and circumflex branches of the left coronary artery, and the right coronary artery usually originates from the right coronary sinus, thus forming a left and right blood vessels surrounding In the case of the surface of the heart, the heart is supplied to the heart through the coronary artery.

1) Branch of the coronary artery

The first pair of branches of the aorta is the left coronary artery and the right coronary artery.

The left coronary artery is the short stem from the left aortic sinus, located between the beginning of the pulmonary artery and the left atrial appendage. Immediately after 3 to 5 mm along the left side of the coronary sulcus, it is divided into anterior interventricular branch and circumflex. The anterior interventricular branch descends along the interventricular sulcus, and the apex to the apex of the heart aligns with the posterior interventricular branch of the right coronary artery. Issued along the way:

1) The conic branch of the artery, distributed to the arterial cone;
2) The lateral branches are distributed in the anterior wall of the right ventricle near the anterior wall of the left ventricle and the anterior interventricular sulcus;
3) Ventricular septal branches, distributed 2/3 before the interventricular septum. The branch branches are arranged along the left side of the coronal groove, and when bypassing the blunt edge of the heart, the thick left edge branches are distributed around the left edge; when the heart is behind, the smaller branches are assigned to the left and left ventricles. The right coronary artery begins at the right aortic sinus, passes between the root of the pulmonary artery and the right atrial appendage, and travels along the right coronary sulcus, bypassing the right edge of the heart. Continue walking in the coronal sulcus of the face and send the posterior descending branch near the intersection of the atrioventricular (ie, the interventricular branch).
The right coronary artery is issued along the way:
1) The conical branch of the artery distributed in the arterial cone coincides with the branch of the same name of the left coronary artery.
2) The right edge branch, which is thicker, tending to the heart along the left edge of the lower edge of the heart;
3) Sinus node branch, separated by the trunk near the starting point;
4) Atrioventricular node, from the right coronary artery to the deep to the atrioventricular node.
5) The interventricular branch as the last branch of the right coronary artery coincides with the anterior interventricular branch of the left coronary artery. A branch along the posterior wall of the left and right ventricles and the compartments are spaced apart to 1/3 of the septum.

(2) Coronary function

Human tissues and organs must maintain normal life activities, and the heart needs to be constantly beating to ensure blood supply. The heart, as a muscle-powered organ that pumps blood, also needs enough nutrients and energy. A coronary artery is an artery that supplies blood to the heart. An outer and middle myocardium that distributes the ventricular wall in the plexus; one type is perpendicular to the wall of the chamber and reaches the endocardium (i.e. the perforator) and the diameter is hardly reduced. The arcuate network is formed beneath the endocardium and other perforations, and then the arterioles and capillaries are separated. When the coronary artery walks within the myocardium, it is significantly affected by myocardial contraction.

The capillary density of the human myocardium is very high, about 2500 / mm2, which is equivalent to a capillary in each cardiomyocyte, which is beneficial to the intake of oxygen and exchange substances by cardiomyocytes. Although the coronary arteries are small, the blood flow is large. It accounts for 5% of blood output, which ensures that the heart has enough nutrients to maintain its powerful all-weather ability. Coronary veins are accompanied by coronary collection and venous blood metabolism, which return to the coronary sinus and return to the right atrium. If coronary occlusion is slowly formed, the lateral branches can be gradually expanded and a new collateral circulation can be established to compensate.

(3) Factors affecting coronary blood flow

1) Physical factors

Resistance of the coronary vascular bed: under normal conditions, changes in vessel length and blood viscosity are negligible, and coronary resistance is primarily determined by the vessel radius. Therefore, the diameter of the coronary vessels is a determinant of coronary blood flow, and the diameter of the coronary vessels is regulated by relaxation of coronary vascular smooth muscle. It is also squeezed by extravascular myocardial contractions. During the cardiac cycle, myocardial rhythm relaxation has a large effect on coronary flow resistance [11]. The systolic left ventricular coronary vascular resistance is greater than the diastolic coronary vascular resistance, and the diastolic phase is longer than the systolic phase. The right ventricular wall is thinner, the tension generated during contraction is smaller, and the degree of compression of the coronary vessels is smaller, so the effect of right ventricular coronary contraction on coronary blood flow is not as obvious as that of the left ventricle [12].

Coronary effective perfusion pressure: it refers to the pressure difference between the inflow end and the outflow end of the coronary artery, that is, the pressure difference between the aortic pressure and the atrium. When the effective perfusion pressure fluctuates within the range of 8 to 24 kPa (60 to 180 mmHg), the coronary blood flow remains relatively constant. If the perfusion pressure is below this range, the coronary arteries will be expanded to the maximum to prevent a decrease in coronary blood sedimentation; if the perfusion pressure exceeds this range, the intravascular pressure may be greater than the contractile force of the vascular smooth muscle, causing the blood vessels to swell and the blood flow to increase.

2) Metabolic factors

In myocardial metabolism, it releases a variety of vasodilator metabolites such as CO2, lactic acid, H+ and adenosine. Among them, adenosine is the most important and the most intense vasodilator substance. When myocardial metabolism is enhanced and cells are hypoxic, ATP is broken down into ADP and AMP in cardiomyocytes by the action of 5-nucleotidase in the perivascular interstitial cells of coronary vessels. AMP is broken down to produce adenosine, which easily diffuses through the cell membrane into the intercellular space and acts on resistant vascular smooth muscle.

3) Neurological factors

The coronary arteries are controlled by the vagus nerve and sympathetic nerves. The direct effect of vagus nerve stimulation on the coronary arteries is the dilation of blood vessels. Therefore, the vagus nerve has little effect on coronary blood flow. Sympathetic nerve excitation, the total effect is to increase coronary blood flow. On the one hand, it directly leads to coronary vasoconstriction. More important is to increase myocardial oxygen consumption, while increasing metabolites and secondary coronary vasodilation. Therefore, direct vasoconstriction of the sympathetic nerve is masked by the strong vasodilation caused by enhanced myocardial metabolism.
4) Body fluid factors

Adrenalin and norepinephrine increase coronary blood flow by increasing myocardial metabolic activity and oxygen consumption. Antidiuretic hormone can cause coronary vasoconstriction and reduced coronary blood flow [13]. PGI2 has a dilated coronary effect. The main cause of coronary artery contraction is thromboxane A1. Coronal endothelial cells can synthesize PGI2, and the synthesis and release of PGI2 increases during myocardial ischemia, thereby expanding the coronary arteries, which is also an important regulation of coronary blood flow.

2.2. Vascular Stent

A vascular stent refers to placing an inner stent in a diseased segment to support the blood vessel in the stenosis and occlusion segments, reducing elastic contraction and remodeling of the blood vessel, and maintaining blood circulation in the lumen. Some internal stents also have the function of avoiding becoming narrow again. In general, materials used to produce coronary stents are metal enamel, medical stainless steel, and nickel titanium alloy. Coronary metal stents have achieved significant results after entering clinical treatment, but after more than a decade of application, they have gradually exposed the shortcomings of some metal stents, such as thrombosis, increased restenosis rate, and vessel wall damage [14]. In response to the above drawbacks, coated stents and biomaterial stents have been developed. Depending on how the vessel is deployed, the type of stent can be divided into two types: self-expansion and balloon dilation. The former, such as Z-shaped stents and mesh stents, can self-expand in blood vessels. The latter is inelastic and attaches to the blood vessel by expanding the balloon to a certain diameter. According to the surface treatment, the stent can be divided into a bare type, a coating type and a film type. The exposed surface is only polished; the coating type is coated with a substance such as heparin or titanium oxide on the metal surface; the film type is a polymer film which is degradable or non-degradable on the outside of the metal stent. Depending on the function, it can be divided into a simple support type stent and a therapeutic type stent, and the therapeutic stent includes a drug coated on the outer surface of the stent or a stent or a radioactive stent carrying the therapeutic substance using a membrane external to the stent.

(1) Coronary artery stent

With the improvement of material living standards and lifestyle changes, the incidence of cardiovascular diseases is getting higher and higher [15]. Coronary heart disease caused by cardiovascular stenosis has become one of the major diseases that endanger human health. At present, the treatment of coronary heart disease can be roughly divided into three categories: drug treatment, surgery and interventional therapy. The drug treatment cycle is long, the effect is slow, the side effects are large, and the patient is easy to rely on drugs; the surgery will cause permanent damage to the patient; the interventional treatment has become a new method for treating cardiovascular stenosis due to small trauma and good effect. Coronary stents are implanted into the stenotic region of the vessel by conventional balloon dilatation catheters to prevent restenosis after percutaneous transluminal coronary angioplasty.

Indications for coronary stenting:

In most patients with asymptomatic myocardial ischemia or mild angina, patients with significant ischemia confirmed by running test or 24-hour ambulatory electrocardiogram, in order to reduce the risk of serious cardiac events, such as coronary angiography of severe lesions, should be Consider coronary stenting.

Angina: Many moderate to severe stable angina or unstable angina are unsatisfactory in response to drugs, and most patients have single or multiple coronary lesions. It is generally suitable for coronary artery coded stenting, with high success rate, low risk, and obvious relief of postoperative angina.

Myocardial infarction: coronary stenting is a very effective means of restoring coronary blood flow and is suitable for 90% of patients with acute myocardial infarction. The method can obtain the immediate effect of the treatment of acute myocardial infarction, so that the myocardial blood perfusion is more, the myocardial ischemia time is reduced, and the myocardial infarction mortality is greatly reduced.

(2) Implantation method

In percutaneous transluminal coronary angioplasty (PTCA), the tubular metal support for implantation into the human body is a coronary stent. Typically, the stent is mounted on a balloon catheter and delivered through a balloon catheter to a vascular lesion site, and the balloon is infused by a pressure pump to inflate the balloon. In addition, the stent and blood vessels in the stenosis of the lesion are opened, the balloon catheter is taken out, and the stent is permanently placed on the lesion to achieve the purpose of expanding the narrow blood vessel. During the procedure, X-ray imaging is used to monitor the catheter from the small artery into the human aorta and finally to the entire process of occluding the coronary artery. The balloon at the end of the catheter is then inflated to dilate the obstructed coronary artery, allowing blood to pass through the blood vessel into the myocardium. If a large enough coronary lumen is not obtained after balloon angioplasty, the doctor will insert a small metal stent into the coronary artery. The stent is placed in advance on the balloon, so the stent placement process is very similar to balloon angioplasty and the stent will remain permanently in the blood vessel.
(3) Precautions
1) After surgery, the patient must rest in bed and cannot bend or move.
2) In order to avoid acute stent thrombosis, antiplatelet drugs must be taken regularly and blood dose adjustments should be taken regularly.
3) The catheter sheath was removed 6 hours after surgery.
4) After the operation, the patient can return to a normal diet, drink plenty of water, and promote the discharge of the developer in order to reduce the burden on the kidneys.

(4) Years of use

Because coronary stenting is one of the most effective methods for the treatment of coronary heart disease, patients will always ask: “How many years can the stent be?” The clinical efficacy of the stent in the treatment of coronary heart disease is obvious, but the disadvantage is that the stent is implanted. In-stent restenosis may occur 6 to 8 months after entry. This means that there can be re-clogging in the bracket. In the early years, the incidence of metal stent restenosis was about 20% (15% to 40%); the incidence of drug stent age restenosis has dropped to about 9%. If coronary angiography is reviewed six months after surgery, there is no in-stent restenosis. In general, restenosis rarely occurs.

So is there never any restenosis? The answer is no. Zeng Jin, in-stent restenosis occurred in patients implanted for 9 years. However, the reason for this may not be entirely due to the bracket itself. If the patient fails to take the medication after the stent is implanted, the lifestyle will not change, and blood pressure, blood lipids and blood sugar will not be well controlled. The original normal blood vessels may produce new lesions, and it is not difficult to understand the restenosis of the stent. Therefore, the occurrence of restenosis may be caused by a variety of factors.

3. Experiments

3.1. Experimental Setup

(1) Research object

One hundred patients with coronary stenting who were hospitalized between September 2018 and November 2018 were enrolled. The digital randomization method was divided into groups of 50 patients, including 32 males and 18 females; aged 46-77 years, mean (64.37±2.84) years old. There were 33 males and 17 females in the control group; the age ranged from 45 to 78 years old, with an average of (65.26±2.43) years old.

All patients signed informed consent and volunteered to participate in principal and interest studies. Statistical analysis of the general data of the two groups of patients was performed prior to the study.

<table>
<thead>
<tr>
<th>Group</th>
<th>Number of patients</th>
<th>Male</th>
<th>Female</th>
<th>Age range</th>
<th>Average age</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control group</td>
<td>50</td>
<td>33</td>
<td>17</td>
<td>45-78</td>
<td>64.37±2.84</td>
</tr>
<tr>
<td>Intervention group</td>
<td>50</td>
<td>32</td>
<td>18</td>
<td>45-77</td>
<td>65.26±2.43</td>
</tr>
</tbody>
</table>

(2) Selection criteria

The first patients who underwent successful coronary stenting and surgery; those who did not have other types of disease; those who were not comatose or unconscious and had normal language skills; patients who voluntarily accepted and cooperated with the survey.

3.2. Intervention Program

According to the principle of informed consent, patients are told that they can withdraw from the study at any time, and the patient's data will be kept strictly confidential. The intervention is divided into two phases.

The first stage (before discharge): on the second day after surgery, postoperative common problems such as diet, exercise, medication, and prevention of complications. The method of face-to-face education for patients is usually performed for 20 minutes, and the “Handbook of Transplantation Health Education for Coronary Stent Implantation” is distributed (if the patient is illiterate, the reading materials are provided to their families, and the content is explained to the patient and his/her family, and repeatedly stressed the precautions during the transition period.

The second stage (after discharge): use the phone and home visit. The follow-up contents are mainly as follows: (1) To assess the learning needs of patients; (2) To guide patients to establish good living habits, such as smoking cessation, lifestyle, etc.; (3) Healthy diet guidance, low salt, low fat, light diet, avoid high Salt foods such as kimchi, dried radish, instant noodles, etc. Try to avoid eating out, and emphasize the diversity of diet, eat
more fruits and vegetables and crude fiber foods rich in vitamins and potassium ions; (4) Exercise habits, mainly aerobic exercise, walking, cycling, swimming and tai chi fist. The number of exercises per week is 3 to 5 times, 20 to 40 minutes each time, and the patient is taught to self-measure the pulse to calculate the exercise rate by calculating the target heart rate of the medium exercise intensity; (5) Drug guidance; (6) Providing health at any time Education and counseling services; (7) Notify and supervise regular review to monitor blood pressure, blood lipids and body weight; (8) Explain early symptoms of coronary heart disease, emphasize early detection and early treatment; (9) Guide patients to actively respond to health risk factors. In addition, the patient is provided with a phone number to inform the patient if there are any problems after discharge.

4. Discussion

4.1. Comparison of Clinical Indicators between the Two Groups before and After Intervention

The main clinical indicators include systolic blood pressure (SBP), diastolic blood pressure (DBP), total cholesterol (TC) and triglyceride (TG), high-density lipoprotein (HDL), low-density lipoprotein (LDL), body mass index (BMI). The independent sample t test was used to compare the two groups of data. There was no significant difference between the two groups (P<0.05). Baseline clinical indicators were well comparable between the two groups, as shown in Table 2.

After the test, the systolic blood pressure of the intervention group was lower than that of the control group, and the difference between the two groups was significant at 6 months after discharge (t = -4.142, P <0.01). Compared with baseline, the blood pressure of the intervention group decreased significantly at 6 months after discharge, with a difference of (6.57±16.03) mmHg.

<table>
<thead>
<tr>
<th></th>
<th>Intervention Group</th>
<th>Control Group</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>SBP(mmHg)</td>
<td>127.31±20.12</td>
<td>130.85±16.88</td>
<td>-1.179</td>
<td>0.247</td>
</tr>
<tr>
<td>DBP(mmHg)</td>
<td>76.76±9.67</td>
<td>79.72±10.59</td>
<td>-1.911</td>
<td>0.063</td>
</tr>
<tr>
<td>TC(mmol/L)</td>
<td>4.21±1.26</td>
<td>4.36±1.19</td>
<td>-1.392</td>
<td>0.166</td>
</tr>
<tr>
<td>TG(mmol/L)</td>
<td>1.88±1.35</td>
<td>1.84±1.23</td>
<td>-0.134</td>
<td>0.894</td>
</tr>
<tr>
<td>HDL(mmol/L)</td>
<td>1.02±0.16</td>
<td>1.20±0.38</td>
<td>-1.120</td>
<td>0.265</td>
</tr>
<tr>
<td>LDL(mmol/L)</td>
<td>2.67±1.10</td>
<td>2.70±0.1</td>
<td>-1.908</td>
<td>0.058</td>
</tr>
<tr>
<td>BMI(kg/m²)</td>
<td>23.76±3.01</td>
<td>24.07±4.13</td>
<td>-0.844</td>
<td>0.390</td>
</tr>
</tbody>
</table>

Figure 1. Comparison of SBP and DBP indicators between the two groups after intervention
The difference was significant ($t=3.430$, $P<0.01$). The difference between the control group and the patient before and after the intervention was (2.90±11.16) mmHg, the difference was statistically significant ($t=2.174$, $P<0.05$). The intervention group compared to the obvious decline. The diastolic blood pressure was lower than that of the control group, and the difference was statistically significant ($P<0.05$). There was significant difference between the 3 months and 6 months after discharge ($P<0.01$). Compared with pre-intervention, the intervention group decreased by $1.89 \pm 9.84$ mmHg 6 months after discharge. Six months after discharge, there were statistical differences in total cholesterol, triglyceride, high-density lipoprotein and low-density lipoprotein between the two groups ($P<0.01$).

### 4.2. Analysis of Patient Self-Management Score after Nursing Intervention

(1) Overall score

The self-management ability of the control group was 83 points, the lowest was 49 points, the average score was (68.25±6.36), and the self-management level was medium. Among them, 11 cases were lower than 60 points, accounting for 22%; 3 cases were higher than 80, accounting for 6%. The intervention group had the highest self-management score of 91 with an average score of (76.61 ± 7.24). Three of them were below 60 points, accounting for 6%; 14 cases were higher than 80 points, accounting for 28%. See Figure 3 for details.
(2) Scores in each dimension

![Scores for each dimension](image)

**Figure 4.** Scores for each dimension

The bad habits of the management group were (13.54±2.95) and the life management score was (12.76±2.63). The disease knowledge management score was (9.52±1.97) points and the symptom management score was (10.46±2.02) points. The treatment adherence management score was (9.67±1.87) and the emergency management score was (10.58±2.49) points. The emotional cognitive management score was (11.72±2.12) points. The management of bad habits scored the highest in all aspects (13.10±2.95) and the lowest in the treatment adherence score (8.57±1.87). The details of the control group and the intervention group are shown in Figure 4.

5. Conclusions

(1) The transitional nursing model was applied to patients after coronary stent implantation, demonstrating the effectiveness of the transitional care model for patients after coronary stenting. It better solves the problem of patient safety transition to normal work and life, enriching the actual content of the transitional care model. This study used a single-blind randomized controlled design. Confounding factors can be evenly distributed to each group to avoid impact on the results of the study.

(2) Compared with conventional nursing, the transitional nursing model is more targeted, providing patients with a full range of nursing services from the aspects of patient psychology, nursing staff business level, and drug care. In this study, patients in the intervention group receiving the transitional care model had a higher postoperative quality of life than the control group receiving routine care. The incidence of complications was significantly lower than that of the control group, demonstrating the advantages of a transitional care model after coronary stent implantation.

(3) The results of this study indicate that transitional care models in patients undergoing coronary stenting are superior to traditional care. Its effectiveness has been further validated, providing a good guidance and framework for clinically orderly and effective interventions. And consider extending it to the health management of other chronic diseases.

References

