

Evaluation of The Effect of Individualized Nursing Combined with Cyclosporine a-nanoemulsion In the Emergency Nursing of Patients with Acute Myocardial Infarction

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Abstract

In recent years, in-depth research and discussion have been made on the improvement of cardiac function and quality of life of patients with myocardial infarction by individualized nursing intervention at home and abroad. It is believed that individualized nursing has a positive effect on cardiac function and quality of life of patients with myocardial infarction. To explore the effect of individualized nursing in the pre hospital emergency nursing of patients with acute myocardial infarction. Methods: from September 2011 to September 2012, 92 patients with acute myocardial infarction in our hospital were selected as the observation group, and individualized nursing was adopted in the pre hospital emergency care; from September 2010 to August 2011, 92 patients with acute myocardial infarction were selected as the control group, and routine nursing was adopted in the pre hospital emergency care. Observe and compare the clinical nursing effect of the two groups. Results: the response time, first aid time and admission time of the observation group were shorter than those of the control group ($P < 0.05$), and the first aid diagnosis rate, transport success rate and first aid success rate of the observation group were higher than those of the control group ($P < 0.05$). Conclusion: the effect of individualized nursing in the pre hospital emergency nursing of patients with acute myocardial infarction is obvious, which can reduce the mortality

Keywords: acute myocardial infarction; pre hospital emergency nursing; individualized nursing.

1. Introduction

Individualized nursing is a higher-level nursing mode which is further developed on the basis of holistic nursing and fully embodies humanistic care. It emphasizes more on the individual attribute, social attribute and the interaction between human and environment.

Foreign research points out that individualized nursing is the best practical way to realize "patient-centered" nursing concept. Cyclosporine A (CSA) is a fat-soluble cyclic peptide, which is composed of 11 amino acids¹⁻⁵ (Estebananz et al, 1987; Jambunathan and Chappy, 2015; Chang and Han, 2009; Buchanan and Dawkins, 2015; Berntsson and Hildingh, 2013). It can specifically inhibit the production and release of helper T cells. It is clinically used for the treatment of anti-host immune rejection and immune diseases after organ transplantation (Wang et al, 2011; Hohenhaus and Frush, 2005; Tokumasu et al, 1979). In recent years, a large number of studies have found that CSA is

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different from the traditional immunosuppressive pharmacological action inhibition of apoptosis (inhibit apoptosis), so it has been more and more applied in the field of cardiovascular such as anti-myocardial ischemia-reperfusion injury, reducing myocardial infarction area, improving left ventricular remodeling, reducing atherosclerosis induced by hyperlipidemia, etc (Wei-He et al,2016; Dougherty et al,2007; Dieter and Albertson ,2011). Because CSA has strong fat solubility and low solubility in water, polyoxyethylene castor oil accounts for more than 65% of the solubilizer in the commonly used clinical cyclosporine injection prescription, and this adjuvant is easy to lead to hypersensitivity reaction, liver and kidney toxicity, etc., therefore, it is urgent to develop a targeted, high-efficiency and low toxicity cyclosporine a preparation (Chan et al,2005; Gallagher and Gallagher ,2005; Collins et al,1987). In recent years, the clinical application of nano drug delivery system has been widely recognized as an ideal drug carrier material. Nano drug delivery system can effectively improve the absorption of insoluble drugs and achieve targeted and targeted drug delivery. Its significance has been widely used in targeting drug delivery system (TDDS) (Han et al,2007; Park and Han ,2003; Boykova and Kenner ,2015). Recently, cyclosporine was prepared by different laboratories with new drug carrier materials

Acute myocardial infarction (AMI) is a common cardiovascular disease, which is caused by many factors. The main clinical symptoms of myocardial infarction include sudden chest pain, fever, sweating, nausea, vomiting and so on ,followed by arrhythmia, heart failure, shock and so on (Jindal et al,1996; Ceylan and Eser ,2016). The disease is characterized by rapid onset, easy to cause sudden death and serious threat to the life of patients. According to the characteristics of acute myocardial infarction, patients often need emergency treatment before admission to ensure that patients can be safely admitted to hospital (Smith et al, 2015). Clinical research shows that effective pre hospital first-aid measures and scientific nursing plan are important links to ensure the life and health of patients. Strengthening the pre hospital first-aid nursing work of patients with acute myocardial infarction has important clinical significance for the further treatment of the disease. From September 2011 to September

2012,92 patients with acute myocardial infarction were treated with individualized nursing, and satisfactory results were achieved. The report is as follows.

2 Data and methods

2.1 Clinical data

92 patients with acute myocardial infarction (AMI) who were received in our hospital from September 2011 to September 2012 were selected as the observation group,56 males and 36 females, aged 46-72 (56.4 ± 6.4) years old. Personalized nursing was adopted in the pre hospital emergency care.

The symptoms of the selected patients during the reception included chest pain, dyspnea, sweating and abdominal discomfort ,The locations of first aid included home, office, hotel, entertainment place, etc.; 92 patients with acute myocardial infarction (AMI) received from September 2010 to August 2011 were selected as the control group,52 males and 40 females, aged 43-73, 56.2 ± 6.6) years old. Routine nursing was adopted in pre hospital emergency nursing. All of them were in accordance with the World Health Organization's criteria for the diagnosis of acute myocardial infarction. There was no statistical significance between the two groups in terms of age, gender and place of onset ($P > 0.05$).

2.2 Pre hospital emergency nursing

After receiving the phone call and arriving at the scene, the medical staff will carry out a detailed examination of the patient's whole body according to the known situation, closely monitor his vital signs, including blood pressure, heart rate and pulse, and immediately conduct 18 lead ECG for the patient. After the professional doctor correctly evaluates the condition, He will immediately take the routine emergency plan, the measures include adequate oxygen inhalation, establishment of venous access, analgesia and sedation, vasodilators, anticoagulation and prevention of complications. Masks and nasal catheters are the most common ways of oxygen inhalation. The flow rate is generally controlled at about 5L / min, and the concentration range is 38% ~ 44%, which is early.

2.3 Personalized nursing

Make scientific and reasonable visiting specifications in time, fully consider the humanistic factors, strengthen the training of medical staff, and improve the quality of medical staff. For example, after receiving the call for help, the staff will briefly and clearly inquire about the condition and dispatch the car quickly. After the ambulance visits, it is necessary to actively contact the family members, inquire about the condition in detail, and instruct the family members how to ensure the patient's safety.

2.4 Observation indexes

The main observation indexes of this study are: Statistics of response time, first aid time and admission time, observation of the first aid diagnosis rate, transfer success rate and first aid success rate of the two groups.

3. Results

3.1 Characterization of nanoemulsion

The emulsion sample was coated on the slide, dyed once with the prepared fat soluble dye and once with the water soluble dye methylene blue, and observed under the microscope. The results are shown in Fig.1 It can be seen from the figure that methylene blue is evenly dispersed in the emulsion, while dyes are lumpy and uneven, which shows that the nano emulsion of ginger volatile oil is type.

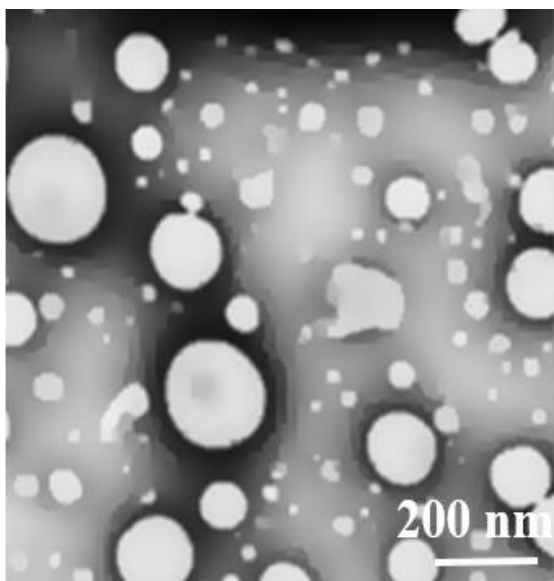


Figure 1. Characterization of nanoemulsion

3.2 Comparison of response time between the two groups.

As shown in Fig.2 The response time of the two groups was statistically analyzed. We found that the response time observed was significantly shorter than that of the control group, and the difference was statistically significant.

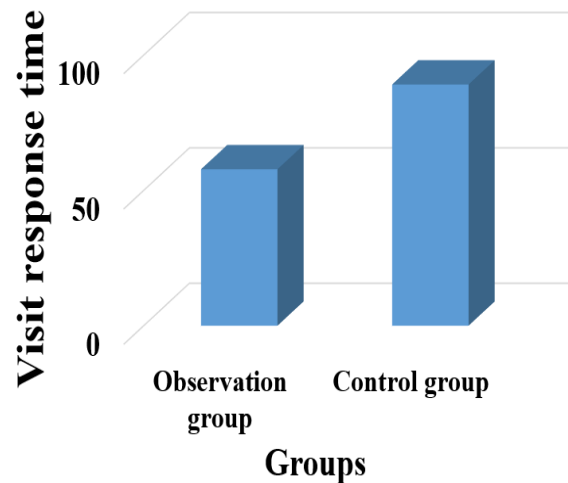


Figure 2. Comparison of response time between the two groups.

3.3 Comparison of first aid time between the two groups.

The first aid time of the two groups was statistically analyzed. We found that the observed first aid time was significantly shorter than that of the control group, and the difference was statistically significant.

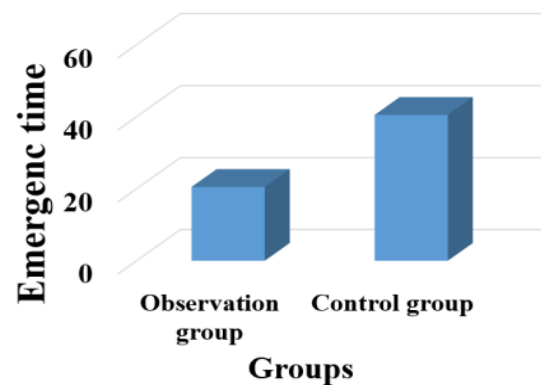


Figure 3. Comparison of first aid time between the two groups

3.4. Comparison of admission time between the two groups.

We found that the admission time of the two groups was significantly shorter than that of the control group, the difference was statistically significant.

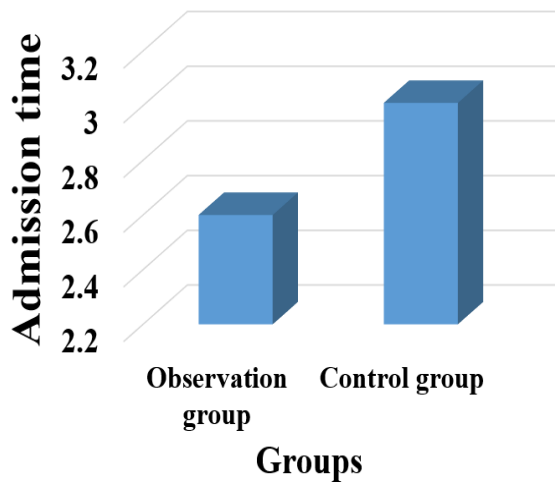


Figure 4. Comparison of admission time between the two groups.

3.5 Comparison of first aid diagnosis rate between the two groups.

As shown in Fig.5 The first aid diagnosis rate of the two groups was statistically analyzed. We found that the response time observed was significantly shorter than that of the control group, and the difference was statistically significant.

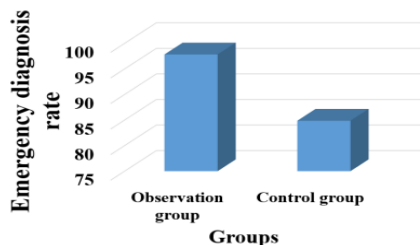


Figure 5. Comparison of first aid diagnosis rate between the two groups.

3.6 Comparison of transfer success rate between the two groups.

As shown in Fig.2 The transfer success rate of the two groups was statistically analyzed. We found that the response time observed was significantly shorter than that of the control group, and the difference was statistically significant.

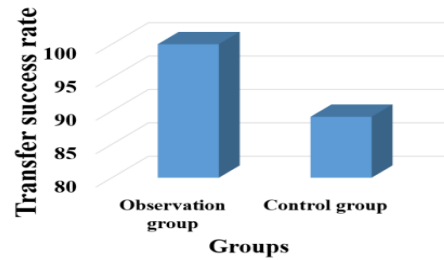


Figure 6. Comparison of Ratio of first aid success rate of the two groups

3.7 Comparison of ratio of first aid success rate of the two groups

As shown in Fig.7 The first aid diagnosis rate of the two groups was statistically analyzed. We found that the response time observed was significantly shorter than that of the control group, and the difference was statistically significant.

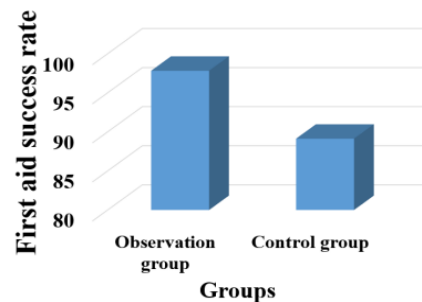


Figure 7. Comparison of Ratio of first aid success rate of the two groups.

Discussion

As a common cardiovascular disease, acute myocardial infarction (AMI) is a serious disease, which brings great pain to patients and seriously affects their life and health. The clinical report points out that the mortality of the disease is relatively high and the prognosis is poor, which is closely related to the pre hospital emergency treatment of the disease(Koo et al,1992;Kärkkäinen and Bondas ,2005;Weldam and Lammers ,2017). It is clinically confirmed that the possibility of death

of patients with acute myocardial infarction before admission can be as high as 45%, which shows the importance of doing well in pre hospital emergency work. In the past, prehospital first aid paid more attention to first aid measures, for example, oxygen inhalation, the establishment of venous access, analgesia and sedation, vasodilators, anticoagulation and prevention of complications, etc., the importance of pre hospital emergency care is insufficient (Nanni et al, 1988).

According to the statistics, the response time, first aid time and admission time of the observation group were significantly shorter than those of the control group ($P < 0.05$). In the personalized nursing plan, the improvement of humanized consciousness and quality of the first-aid nurses was strengthened, so that the medical staff fully realized the importance of nursing work, and the people-oriented service concept was implemented throughout the first-aid process (Cook et al, 1986; Konno and Hagiwara, 2014). In the process of individualized nursing, our hospital has strengthened the nursing of patients' psychological emotions. The pain caused by acute myocardial infarction is severe. Patients' psychological emotions are often tense, fidgety and other adverse emotions. In serious cases, they will have resistance to first aid (Klim et al, 2013). Through effective psychological nursing, their psychological adverse reactions can be alleviated to a certain extent, which is conducive to the development of first aid measures. Moreover, it has a better promoting effect on the admission treatment of patients (Beran et al, 1980; Esslinger et al, 1979). The transportation of patients in the process of pre hospital emergency treatment has a great influence on the successful treatment of acute myocardial infarction. During the transportation process, we should pay special attention to all kinds of nursing of patients, take a comprehensive and sexual nursing plan, effectively reduce the adverse complications in the transportation process, effectively respond to some

emergencies, and improve the rescue possibility of patients (Misciali et al, 1996). There is a positive correlation between the response time and the timely visit. In the past, some measures of the visit were lack of humanistic care, and the care for the patients and their families was not perfect. Because the patients and their families did not know how to

deal with it, they did some unnecessary or even life-threatening treatment, which had an impact on the pre hospital emergency treatment. Personalized nursing can shorten the time of first aid and hospital admission, because personalized nursing strengthens the training of medical staff's first aid operation skills, and pays more attention to the needs of patients and family members in the process of first aid. Through personalized nursing observation group patients' clinical indicators such as first aid diagnosis rate, transfer success rate and first aid success rate have also been significantly improved, which is inseparable from the scientificity of personalized nursing program.

4. Conclusion

In conclusion, the application effect of personalized nursing in pre hospital emergency treatment is obvious, which shortens the admission time of patients, improves the success rate of rescue, and wins the time for the admission treatment of patients with acute myocardial infarction. The program is full of humanization, and wins the affirmation of patients and their families. It is worthy of clinical application that the medical staff only strengthen the relationship with patients and their families in the emergency treatment process. Only through communication can we master the disease and diagnose it. Only according to the diagnosis results can we make effective measures. All these links are related to the success rate of first aid. In addition, the satisfaction of the observation group was significantly better than that of the control group ($P < 0.05$), indicating the patient's decision on this nursing.

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