

Analysis of Nursing Care of Acute Myocardial Infarction

Xiaoling Zhao*

Department of Emergency, The Second People's Hospital of Yuhuan County, Taizhou, Zhejiang 317605, China

ABSTRACT Objective: To investigate and improve the clinical nursing care method of acute myocardial infarction. **Methods:** Make a retrospective analysis of the clinical data for 69 cases of acute myocardial infarction from January 2009 to December 2012 in our hospital and summarize the clinical nursing method. **Results:** 63 from 69 patients are improved after being rescued and nursed through the above-mentioned method, and improvement rate was 92.0%. 5 patients were died (all of them were died from the heart failure), which the mortality is 8.0%. Wherein the complicated arrhythmia cases were 24, the complicated cardiogenic shock cases were 12, hospitalization time: 4–17 days, and the average hospitalization time is 9.2 days. **Conclusion:** The strengthened nursing cooperation of acute myocardial infarction for patients may enhance clinical improvement rate and improve the prognosis.

KEYWORDS

Myocardial infarction
Nursing care
Clinical improvement

1. Introduction

Acute myocardial infarction is the severe type of coronary heart disease, which refers to the myocardial necrosis, resulted from the severe and lasting myocardial ischemia because of a sharp reduction or interruption of blood supply. Clinical manifestations included the enduring severe pain behind the sternum; myocardial enzymes increased, ECG progressive changes; arrhythmias and occurrence of shock or heart failure. Clinical supervision of ECG should be made timely, observe the variation of patient's vital signs regularly, and make the relevant nursing care of treatment and complications [1]. A retrospective analysis about the clinical nursing care methods of acute myocardial infarction has been made in this paper in order to explore the clinical nursing care methods of acute myocardial infarction and improve the clinical nursing care. Lastly, it is hoped to be helpful for the clinical research, which is reported as follows.

2. Materials and methods

2.1. Information

69 cases of patients with acute myocardial infarction hospitalized from January 2009 to December 2012 in our hospital, including 40 males and 29 females; aged from 47 to 74 years old, with the mean age of 64.8 years old; and time interval from the pathogenesis to treatment is 1–17 hours, with mean time of 5.4 hours. As far as the infarction part concerned, 25 cases were died from the anterior wall infarction, 18 cases are died from the anteroseptal infarction, 24 cases were died from the extensive anterior infarction, 8 cases were died from the inferior wall infarction, 4 cases were died from the inferior wall and posterior wall infarction. Patients and their families are fully aware of the treatment and nursing care measures, who are voluntary to sign the informed consent, patient gender and age difference is not significant ($p > 0.05$), which is comparable.

2.2. The inclusion and exclusion criteria

Inclusion criteria: all of patients are in line with the International Society and Federation of Cardiology (ISFC) and WHO clinical diagnostic criteria, which are in the first pathogenesis with the education level above the primary school, who can listen, speak, read and communicate freely with nurse.

Exclusion criteria: exclude the patients out of inclusion criteria; exclude the serious infections, heart, liver and kidney dysfunction, exclude cancer, peripheral vascular disease, autoimmune disease, and other diseases [2].

Copyright © 2012 Xiaoling Zhao

doi: 10.18686/aem.v1i1.3

Received: June 16, 2012; Accepted: August 15, 2012; Published online: October 9, 2012

This is an open-access article distributed under the terms of the Creative Commons Attribution Unported License (<http://creativecommons.org/licenses/by-nc/4.0/>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

*Corresponding author: Department of Emergency, The Second People's Hospital of Yuhuan County, Taizhou, Zhejiang 317605, China. E-mail: zxl_yuhuan@163.com

2.3. Methods

All patients are taken with the early thrombolysis, pain relief, oxygen inhalation and other treatment.

2.4. Statistical method

Use SPSS 18.0 software to analyze the data collected, of which single element variance analysis is made for the normal distributed data, LSD method of pairwise comparison is made for the statistical significant. $p < 0.05$ means the statistical difference between two groups of data compared.

3. Results

69 cases of patients in the group are rescued and cared by the methods mentioned above, 63 patients were improved, accounted for improvement rate of 92.0%; while 5 patients were died (all of them are died from the heart failure), accounted for the mortality of 8.0%. Wherein 24 cases were complicated arrhythmia, 12 cases were complicated cardiogenic shock, which hospitalization time was between 4 to 17 days, and average hospitalization time was 9.2 days.

4. Discussion

Acute myocardial infarction is a common clinical disease that is one of severe types coronary atherosclerotic heart disease, where higher mortality rate after pathogenesis, and some patients have the poor compliance during treatment due to lack of ideal methods of nursing care. Traditional emergency admissions process is lacking of uniform standardization process and designated person in charge during the nursing care. Besides that, the division of labor is not clear, so nurses can perform the more medical advice mechanically in the nursing process, in which lacking the positive initiative work, cause the processing time of the emergency cannot be effectively shortened, and the treatment time of patients is delayed [3]. Therefore, the clinical patients should be treated actively and effectively, in addition, it is necessary to strengthen patient nursing care, and improve clinical outcomes as follows.

4.1. General nursing

4.1.1. Psychological nursing

Try to keep a nurse to accompany when the patient has severe chest pain, and allow the patient to express inner feelings and behavior, such as moaning and irritability. Introduce ward environment and the role of monitor to patients, and help patients to build confidence to overcome the disease. Explain that bad feelings would increase cardiac load and myocardial oxygen consumption. Health care workers should be calm, cool, intense and methodical for each rescue operation, and they cannot show panic, hectic behavior and information to lose the rescue so that patients have the distrust and insecurity. Do not discuss their ill condition in front of the patients. Guide the patients to relax and distract. Use the prescribed sedatives if necessary [4].

4.1.2. Rest and surrounding

Patients with good economic condition can be arranged in the single emergency room or CIU care unit with ECG, respiration, and blood pressure monitoring. It should make the continuous monitoring within the first 24 hours especially, equipped with necessary rescue equipment and materials, such as oxygen equipment suction device, artificial breathing machine, an ambulance, a variety of rescue equipment package, defibrillators, and pacemakers. Ask the patients to make an absolute bed rest for 3 to 7 days, everything in daily life is helped by the nursing staff to avoid unnecessary flip, limit the visit and prevent mood variation. Encourage the patients to make limbs movement on bed and prevent the thrombosis of lower limbs from the second week.

4.1.3. Diet

It is easy for the elderly to get digestive disorders, which include bloating, belching, and secret knot, especially for the bedridden patients. Patients with myocardial infarction should take the light, low fat, low cholesterol, digestible, semi-liquid food rich in vitamins to avoid bloating. It is not necessary to take much (especially for the dinner), and it is appropriate to take the less food for each time and take many times. Liquid and salt should be determined according to the presence or absence of heart failure. Some elderly people have the special living diet, which should be satisfied as possible without violating the principles of treatment [5].

4.1.4. Nursing care of excrement and piss

The excrement and piss in the acute phase on bed should be unobstructed. Reduce bloating, and avoid the exertion with force. Many elderly patients with myocardial infarction have the chest pain from the exertion with force due to the difficult in excrement and piss. Individual people have the case of accidents. Therefore, it is necessary to observe carefully for the defecation in acute phase. Because some elderly people not used to defecate on bed, and inadequate defecation on bed may increase the burden of the heart. Hence, it is possible for patients to sit on close stool beside the bed to defecate according to habit if no shock, heart failure, arrhythmias and other complications. For the habitual constipation, consume honey water or mild laxatives in the morning [6].

4.2. Thrombolytic nursing care

Cooperate with doctor to perform 18-lead ECG before thrombolysis, monitor the ECG, blood pressure, and blood oxygen saturation, oxygen consumption between 3-5 L/min, check normal specification of blood, CK, CK-MB, liver & kidney function, blood platelets, the clotting time and so on; formulate and infuse the thrombolytic drugs accurately and quickly as the prescription, and pay attention to the infusion speed; observe temperature, pulse, respira-

tion, and blood pressure alteration of patients closely during treatment, and pay attention to hypotension particularly. Moreover, observe chest pain reduction degree and remission time of patients closely, together with the time of arrhythmias and record ECG closely; besides, observe and record the skin mucous membranes, gastrointestinal tract, respiratory tract, urinary tract bleeding and intracranial hemorrhage of patients, record the bleeding level and amount of bleeding. The hemoglobin should be checked in case that the amount of bleeding is increase, at the same time, record the hemostasis, blood transfusion amount etc.; record the ECG once (12–18 leads) of each half-hour after 3 h of thrombolysis, record the ECG once a day for the following 3 d; draw the blood to check liver function, blood, urine, fecal occult blood and the clotting time every day after 3 days of thrombolysis.

4.3. Observe the patient's condition

Observe the illness closely and carry out the necessary checks, such as the patient's mental state, pulse rate and rhythm, body temperature, blood pressure, respiration, and pay attention to the skin tone, sweat and so on. Understand the situation, location, and operation of superficial and deep vein of patients when check in order to prepare for emergencies. Be careful to check and operate to minimize the turning times for patients. The disease changes more and faster in the acute phase, especially, the elderly response slowly, so the night patrol should be more for the patients.

4.4. Symptomatic nursing care

4.4.1. Pain

Patients should rest absolutely and keep warm, and take the drugs to relieve pain as prescribed, such as isosorbide dinitrate, and severe cases can be used with morphine.

4.4.2. Cardiogenic shock

Patient's head and legs are elevated 30° to 40°, take the high-flow oxygen, observe the vital signs, consciousness, urine output closely, ensure the unobstructed intravenous infusion and the infusion rate should be slow. Besides, patients with good economic conditions may be monitored via central venous or pulmonary capillary wedge pressure. Patients should maintain good skin and oral care together turn over on time to prevent pneumonia and the other complications, as well as record the 24 h monitoring [7].

4.4.3. Observe the changes in vital signs carefully

Prevent complications, such as papillary muscle dysfunction or rupture, cardiac rupture, aneurysm, and embolism.

4.5. Health guide

Guide patients to develop rehabilitation goals, establish a new life behavior, take the food with low salt, low fat, calorie restriction, be full for 70% to 80%, restriction from alcohol and smoke and prevent from constipation. Besides that, adhere to an appropriate amount of physical activity step by step, however it should avoid the strenuous activities, competitive sports, weightlifting or long time activities. The restoration of part or light work appropriately after 2 to 4 months of physical activity or exercise and jobs with mental stress or excessive workload should be replaced. Patients may recover the sex life if without any discomfort to walk up and down for two floors, or walk for two kilometers. Keep optimistic and calm mood. Control the atherosclerosis risk factors actively, such as hypertension, high cholesterol, diabetes, take the drug to decrease blood pressure and blood lipids and anti-platelet aggregation drugs as prescribed by doctor, and review regularly.

In summary, strengthened nursing care cooperation of acute myocardial infarction for patients may enhance patient's clinical improvement rate and improve the prognosis of patients.

References

1. Han GY, Wang Y. Nursing care cooperation for ventricular septal perforation surgery of acute myocardial infarction complication. *Nurses Training Magazine*. 2010;15(12):1098–1100.
2. Li L, Ouyang F. Experience of early thrombolysis nursing care of acute myocardial infarction. *Chongqing Medicine*. 2010;39(10):1319–1320.
3. Xu YL. Nursing care of malignant arrhythmia of acute myocardial infarction complication. *Community Health Care*. 2010;9(4):292.
4. Okura N, Ogawa H, Katoh J, et al. Long-term prognosis of patients with acute myocardial infarction in the era of acute revascularization (from the Heart Institute of Japan Acute Myocardial Infarction [HIJAMI] registry). *International Journal of Cardiology*. 2012;159(3):205–210.
5. Luo YC, Zhao XN. Nursing care cooperation for reperfusion arrhythmias in emergency surgery PCI of acute myocardial infarction. *Nursing Practice & Research*. 2012;09(17):133–134.
6. Xie H, Qian XM. Risk factors of hospital infection of patients with acute myocardial infarction & nursing countermeasures. *Chinese Journal of Hospital Infection*. 2011;21(17):3611–3613.
7. Hu DY. Chinese expert consensus for elevated ST-segment of acute myocardial infarction thrombolysis treatment. *Chinese Clinicians*. 2010;38(10):70–73.