WHIOCE PUBLISHING PTE. LTD.
PROVIDING
FIRST-CLASS SCIENTIFIC INFORMATION
FOR TOP SCHOLARS

2026 Volume 11, Issue 1
Journal of Medicines Development Sciences
ISSN: 2382-6371(Online) ISSN: 2382-6363(Print)

The Rescue Effect of Integrated Medical and Nursing Emergency Care Process in Patients with Acute Myocardial Infarction

Huahua Xia*
Yangzhou Hospital of Traditional Chinese Medicine, Yangzhou 225000, Jiangsu, China

**Author to whom correspondence should be addressed.*

A**bstract:** *Objective:* To study the impact of the integrated medical and nursing emergency care process on the rescue effect in patients with acute myocardial infarction. *Methods:* 60 patients with acute myocardial infarction in the emergency department of our hospital were selected as research samples, and effective grouping was conducted, and all patients were divided into a conventional group and an observation group. Thirty patients who used routine emergency care were named the conventional group, and 30 patients who used the medical-nursing integrated emergency care process were named the observation group. Afterwards, the nursing effects of the two groups of patients were compared and analyzed. *Results:* The first aid-related time index of the observation group was shorter than that of the conventional group ($P < 0.05$). The rescue success rate was 96.67% in the observation group and 76.67% in the conventional group ($P < 0.05$). Moreover, the complication rate of the observation group was 3.33%, which was lower than that of the conventional group (20.00%) ($P < 0.05$). *Conclusion:* The integrated medical and nursing emergency care process significantly shortens the first aid time for patients with acute myocardial infarction, improves the success rate of rescue, and reduces the incidence of complications. It is of great significance for improving first aid efficiency and improving patient prognosis.
Keywords: Integration of medical care; Emergency care process; Acute myocardial infarction; Rescue effect

Online publication: March 16, 2026

1. Introduction

Acute myocardial infarction is a common cardiovascular emergency in clinical practice. Due to acute and persistent hypoxia and ischemia in the coronary arteries of patients with acute myocardial infarction, the patient develops myocardial necrosis. Its clinical manifestations are complex and diverse, including systemic symptoms such as sweating, nausea, vomiting, fever, as well as typical chest pain, dyspnea, arrhythmia, hypotension and shock, heart failure, and other symptoms [1]. Because of the critical and complex condition, patients with acute myocardial infarction need timely treatment after the onset. Early diagnosis and treatment have a positive impact on improving clinical treatment effects [2]. The efficiency of rescue work will directly affect the patient's prognosis. Therefore, during the treatment of patients with acute myocardial infarction, it is necessary to

unblock the patient's blood vessels as soon as possible to help the patient restore normal blood supply as soon as possible. This can effectively improve the survival rate of patients with acute myocardial infarction and help medical staff make more timely, accurate, and reasonable judgments about the condition of patients with acute myocardial infarction. In the traditional emergency care model, there is a lack of effective communication between medical and nursing staff, which can easily cause delays in the treatment process. In recent years, the integrated model of medical care has played an important role in the emergency rescue process. It has been reported that the integrated medical and nursing emergency care process is a set of standard, standardized and specific emergency care models. By building an integrated medical, nursing and patient model, the first aid efficiency is improved, the emergency stay time is shortened, and the rescue success rate is improved [3]. Therefore, this article explores the effects and advantages of the integrated nursing process by using different nursing methods in 60 patients with acute myocardial infarction during the rescue process.

2. Materials and methods

2.1. General information

This study was conducted on patients with acute myocardial infarction treated in our hospital between May 2021 and May 2024, a total of 60 cases. Effective grouping was done randomly and divided into a regular group and an observation group. Among the 30 patients included in the conventional group, the male-to-female ratio was 17:13. The oldest patient was 71 years old, and the youngest was 35 years old. The median age was (50.36 ± 1.36) years old. Among the 30 patients included in the observation group, the male-to-female ratio was 16:14. The oldest patient was 70 years old and the youngest was 36 years old. The median age was (50.45 ± 1.25) years old. The data comparison between the two groups showed balance, and the statistical results showed $P > 0.05$.

Inclusion criteria: (1) All the above patients have obtained the consent of the patients themselves or their families to participate in this study, and all signed informed consent forms; (2) All the above acute myocardial infarction patients selected as the subjects of this study have been diagnosed with acute myocardial infarction; (3) The patient's personal information is complete. Exclusion criteria: (1) Patients with severe combined sexual insufficiency are excluded; (2) Patients have cardiogenic shock due to hemodynamic instability; (3) Patients have language communication disorders or other types of mental illness.

2.2. Method

Patients in the conventional group apply routine emergency care. First, the medical staff conducts a comprehensive assessment of the vital signs of patients with acute myocardial infarction to help patients receive orderly medical treatment. They then guide the patients to perform corresponding routine examinations according to the doctor's orders, including electrocardiograms and blood items. They quickly establish intravenous access for the patients, and at the same time provide the patients with oxygen therapy, ECG monitoring and other measures. When the vital signs of patients with acute myocardial infarction are abnormal, they need to be fed back to the doctor in a timely manner, and corresponding treatment measures are taken for the patients.

The patients in the observation group used the integrated medical and nursing emergency care model. The specific contents include the following points:

(1) Establish an integrated working group, mainly composed of one emergency doctor and five nursing staff, clarify each person's job responsibilities, conduct training and scenario drills, increase mutual understanding, and jointly discuss possible problems and solutions during the first aid process.

(2) Optimize the emergency first aid process: According to the respective responsibilities of members, optimize the routine emergency care process and formulate a standardized emergency care process. The head nurse coordinates work allocation and ensures the unification of medical and nursing information; emergency doctors are responsible for rescue and rational use of drugs; nurses are responsible for monitoring vital signs, collecting electrocardiograms, and establishing intravenous access.

(3) Implement emergency care: Give the patient continuous oxygen inhalation and control the oxygen flow at 4-6 liters/min to increase blood oxygen content and improve myocardial ischemia. Administer nitroglycerin tablets, aspirin enteric-coated tablets and other drugs as directed by your doctor to help relieve chest pain and prevent platelet aggregation. Establish a double-tube intravenous channel, collect blood samples first, and then infuse for subsequent thrombolytic treatment. Monitor and report patients' vital signs in real time, implement various nursing operations, and ensure the successful completion of first aid work.

(4) Thrombolytic treatment and monitoring: Under the guidance of a doctor, prepare thrombolytic drugs, such as urokinase, etc. Take 0.3 g of aspirin orally as directed by your doctor. Use a syringe to withdraw lidocaine and set aside. Prepare thrombolytic drugs and perform intravenous injection and intravenous drip.

(5) Condition observation and rescue preparation: Closely monitor the patient's vital signs such as blood pressure, heart rate, pulse and blood oxygen saturation. Observe whether the pain is relieved, whether the chest tightness and shortness of breath are improved, whether the urine output increases, etc. There are emergency medicines and equipment at the bedside, so you can be ready for rescue at any time. If the patient experiences an emergency such as cardiac and respiratory arrest, cardiopulmonary resuscitation should be performed immediately.

(6) Transfer and handover: After the patient's condition stabilizes, prepare to be transferred to the ward or intensive care unit. Record changes in the patient's condition and vital signs in detail to facilitate subsequent treatment and care. Explain relevant knowledge about acute myocardial infarction to patients and their families, including medication guidance, dietary guidance, life guidance, etc. Teach patients and their families to identify changes in their condition, teach patients to monitor vital signs such as blood pressure and heart rate, and conduct regular follow-up and reexaminations.

2.3. Observation indicators

The rescue time (including pre-examination and triage time, time from consultation to electrocardiogram examination, intravenous thrombolysis and PCI treatment), complications (including arrhythmia, cardiogenic shock, heart failure) and rescue success rate were compared between the two groups.

2.4. Statistical methods

The statistical software used in the statistical stage of this article is SPSS26.0 to process relevant data. The rescue success rate and complication rate are described in the form of rate (%), and the χ^2 test is implemented. The first aid situation is expressed in the form of mean ± standard deviation (SD). A t test is performed. $P < 0.05$ is considered statistically significant.

3. Results

3.1. Comparison of first aid time

After nursing, the first aid time in the observation group was shorter than that in the conventional group ($P < 0.05$). See **Table 1** for details.

Table 1. Comparison of first aid time between two groups [(mean ± SD), min]

Group	Pre-examination triage time	Time from consultation to ECG examination	Intravenous thrombolysis time	PCI treatment time
Observation group ($n = 30$)	1.07 ± 0.23	4.61 ± 0.35	22.05 ± 2.86	47.03 ± 7.92
Regular group ($n = 30$)	2.34 ± 0.45	6.77 ± 0.34	29.16 ± 4.84	60.24 ± 9.13
t	13.764	24.246	6.927	5.986
P	0.000	0.000	0.000	0.000

3.2. Comparison of rescue success rates

After nursing, 29 patients in the observation group were successfully rescued, and 1 patient failed to be rescued, with a rescue success rate of 96.67%; in the conventional group, 23 patients were successfully rescued, and 7 patients failed to be rescued, with a rescue success rate of 76.67%. The rescue success rate of the observation group was higher than that of the conventional group ($P < 0.05$). See **Table 2** for details.

Table 2. Comparison of rescue success rates between the two groups (n/%)

Group	Number of successful rescue cases	Number of failed rescue cases	Rescue success rate
Observation group ($n = 30$)	29	1	96.67
Regular group ($n = 30$)	23	7	76.67
χ^2	-	-	5.192
P	-	-	0.023

3.3. Comparison of complications

After nursing, the total incidence rate of complications in the observation group was 3.33%, which was lower than the incidence rate in the conventional group, 20.00%, $P < 0.05$. See **Table 3** for details.

Table 3. Comparison of complications between the two groups (n/%)

Group	Arrhythmia	Cardiogenic shock	Heart failure	Overall incidence rate (%)
Observation group ($n = 30$)	1	0	0	1 (3.33)
Regular group ($n = 30$)	3	2	1	6 (20.00)
χ^2	-	-	-	4.043
P	-	-	-	0.044

4. Discussions

Acute myocardial infarction is a disease with a sudden onset and a dangerous condition. The onset is sudden and the patient's condition progresses rapidly. For patients with acute myocardial infarction, time is life, and minimizing the time of each link is one of the important factors to improve the rescue effect [4]. Therefore, during emergency rescue, nurses should actively explore and refine patient care cooperation, so as to help patients shorten the time it takes to receive rescue through complete care, in order to gain valuable rescue time for patients [5]. The integrated medical and nursing emergency care model provides a more rapid, scientific, and accurate treatment plan for patients with acute myocardial infarction, optimizes the nursing process for patients with acute myocardial infarction, and does its best to save the patient's life. Compared with conventional emergency care, this model strengthens real-time communication and decision-making synchronization between doctors and nurses, effectively shortens the delay time of assessment, diagnosis, and intervention, thereby more efficiently grasping the golden window period of myocardial reperfusion [6]. As a new emergency care model, it lays a more solid foundation for the later treatment of patients with acute myocardial infarction, and provides more targeted emergency care management for patients with acute myocardial infarction.

It can be seen from the research results of this article that the time-consuming of various first aid procedures for patients in the observation group is shorter than that of the conventional group. The first aid success rate of the observation group is higher and the incidence of complications is lower, $P < 0.05$. The analyzed reason is that the conventional group adopts the traditional emergency care model, which results in slower information and data transmission and each emergency link takes longer. The observation group adopts integrated medical and nursing emergency care, which can start

the medical team in advance. Medical staff can work closely together to effectively connect various emergency procedures, reduce meaningless stagnation time in the emergency, improve emergency first aid efficiency, and strive for more rescue time, so that patients can receive corresponding emergency treatment as soon as possible, allow myocardial reperfusion as soon as possible to improve cardiac function, avoid various complications that lead to disease progression, and play a key role in emergency first aid work [7]. In this process, nursing staff and doctors jointly formulate and implement first aid plans to ensure the accuracy and timeliness of first aid measures. The integrated medical and nursing emergency care process also focuses on the monitoring of patients' vital signs. Through regular and systematic monitoring of vital signs, nursing staff can timely detect changes in the patient's condition and provide doctors with accurate diagnostic basis [8].

5. Conclusion

In summary, the integrated medical and nursing emergency care process significantly improves the rescue efficiency and effectiveness of patients with acute myocardial infarction by optimizing first aid paths, strengthening team collaboration, and clarifying time points. It can reduce first aid time and provide a strong guarantee for patients' life safety and recovery. In the future, we can further explore the integration of more informatization and intelligent means based on this model, such as using mobile medical devices to transmit information in real time and intelligent reminders of key time nodes, so as to continuously improve the quality of emergency care for acute myocardial infarction.

Disclosure statement

The author declares no conflict of interest.

References

[1] Song QY, Peng XL, Chen LL, 2024, The Impact of Optimizing the Emergency Nursing Process on Patients with Acute Myocardial Infarction. Basic Medical Theory Research, 6(2): 48–50.

[2] Su LJ, Cai L, Feng Q, et al., 2024, Effect of Integrated Medical and Nursing Emergency Care Process on the Rescue Success Rate of Patients with Acute Myocardial Infarction. Chinese Disaster and Rescue Medicine, 11(08): 922–924.

[3] Sun L, Wan X, 2024, Analysis of the Effect of Applying Integrated Medical and Nursing Emergency Care Processes on Improving the Success Rate of Rescue in Patients with Acute Myocardial Infarction. Electronic Journal of Cardiovascular Diseases of Integrated Traditional Chinese and Western Medicine, 12(09): 5–8.

[4] Yang J, Liu H, Gao R, 2024, Application Effect of Integrated Medical and Nursing Emergency Care Process in Patients with Acute Myocardial Infarction. Electronic Journal of Cardiovascular Diseases of Integrated Traditional Chinese and Western Medicine, 12(09): 51–53 + 39.

[5] Wu ZC, 2023, The Rescue Effect of Integrated Medical and Nursing Emergency Care Process on Patients with Acute Myocardial Infarction. Famous Doctors, (19): 126–128.

[6] Feng X, 2023, Analysis of the Impact of the Integrated Medical and Nursing Emergency Care Process on the Success Rate of Rescue for Patients with Acute Myocardial Infarction. Famous Doctors, (01): 111–113.

[7] Geng XL, Wang YN, 2024, Application of Emergency Care Process Based on Medical and Nursing Integration in Patients with Acute Myocardial Infarction. Clinical Nursing Research, 33(17): 28–30.

[8] Liu WW, Huang YM, Lin JJ, 2025, The Effect of Integrated Medical and Nursing Emergency Care on Improving the First Aid Efficiency of Patients with Acute Myocardial Infarction. Primary Medicine Forum, 29(12): 102–105.