

# The effect of nursing management in different levels and areas in emergency treatment of patients with acute ST segment elevation myocardial infarction

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**Objective:** Study on the effect of nursing management in different levels and areas in emergency treatment of patients with acute ST segment elevation myocardial infarction. **Methods:** 200 patients with acute ST segment elevation myocardial infarction admitted by our hospital from January 2018 to October 2019 were divided into observation group and control group according to the nursing mode of patients, with 100 cases in each group. The patients in the control group were given routine emergency care, and the patients in the observation group were given graded and partitioned nursing management. **Result:** The time of emergency treatment, coronary angiography and stent placement were compared between the two groups. The results showed that the time of observation group was significantly shorter than that of control group ( $P < 0.05$ ). The results showed that the time of the observation group was significantly shorter than that of the control group ( $P < 0.05$ ). The incidence of complications was 11.00% in the control group and 1.00% in the observation group. There was statistical significance between the two groups ( $P < 0.05$ ). The nursing satisfaction of the control group was 80.00%, and that of the observation group was 96.00%. There was statistical significance between the two groups ( $P < 0.05$ ). **Conclusion:** The application effect of grading and zoning nursing management in the first aid of patients with acute ST segment elevation myocardial infarction is better. It can effectively shorten the waiting time of patients, reduce nursing complications, improve nursing satisfaction, and effectively improve the effect of first aid, which is worth popularizing.

**Key words:** Nursing management in different levels and areas; Acute ST segment elevation myocardial infarction; First aid  
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Acute myocardial infarction is a kind of serious cardiovascular adverse time in clinic, which will cause a serious threat to the life of patients. If it cannot be treated in time, patients will suffer from cardiogenic shock, heart failure, and sudden death if it is serious<sup>1-5</sup>. In the clinical treatment of patients with acute myocardial infarction, most of

them are treated by emergency percutaneous coronary intervention (PCI). However, it is necessary to ensure the proper nursing effect in the treatment process, especially for patients with acute ST segment elevation myocardial infarction. In this process, hierarchical and partitioned nursing management is an effective nursing method, and

The effect of nursing management in different levels and areas in emergency treatment of patients with acute ST segment elevation myocardial infarction

this paper also studies the effect of its application in the emergency treatment of patients with acute ST segment elevation myocardial infarction. The report is as follows:

## MATERIALS AND METHODS

### General information

200 patients with acute ST segment elevation myocardial infarction admitted by our hospital from January 2018 to October 2019 were divided into observation group and control group according to the nursing mode of patients, with 100 cases in each group. Observation group: 53 male and 47 female patients, age range (56-78) years, average age ( $68.34 \pm 6.02$ ) years; onset time (5-31) hours, average ( $15.93 \pm 3.21$ ) hours; 19 patients with hypertension, 20 patients with diabetes, 11 patients with other diseases. Control group: 55 male and 45 female, age range (55-77) years, average age ( $68.44 \pm 6.12$ ) years; onset time (6-31) hours, average ( $16.01 \pm 3.30$ ) hours; 20 patients with hypertension, 20 patients with diabetes, 10 patients with other diseases. Compared with the general data of the two groups, the results showed that  $P > 0.05$ , there was no statistical difference between the two groups. All patients in this study met the relevant dispute standards, and they also signed the informed consent form to exclude patients with liver and kidney dysfunction or severe infection.

### Method

The patients in the control group received routine emergency care, mainly to strengthen the contact with the hospital when transferring the patients, to do a good job in hospital emergency preparation, after the patients were admitted to the hospital, they need to be handed over to the nursing staff of the emergency department for routine examination, and to carry out emergency rescue work according to the relevant orders. The patients in the observation group were divided into different levels and areas for nursing management. The specific measures were as follows:

The patients with acute ST segment elevation

myocardial infarction were graded according to their condition, SIRS score<sup>6</sup> and ECG examination results. If the score is less than 10, it is grade 1. The main clinical symptoms are persistent heartache, but the ECG examination results have not been abnormal. If the score is 10-20, the clinical symptoms are persistent heartache. If the patient's score is greater than 20, and the clinical symptoms show persistent heartache, and the ECG results also show abnormalities, then it will be rated as level 3.

After the classification, all patients should be divided into different areas. The first level patients need to be placed in the yellow area; the second level patients can be placed in the red area. In this process, the yellow area patients need to be closely observed, and at the same time, they need to be arranged for other myocardial infarction related tests and diagnosis. For the red area patients, they need to cooperate with clinicians in the nursing process to rescue them. In this process, nurses not only need to carry out symptomatic nursing for patients with chest pain and chest distress, but also need to build venous access for patients according to the doctor's orders, and also need to implement other rescue measures. In this study, all patients need PCI operation accurately, and those who need PCI operation need to complete the preparation work directly and quickly. A kind of

### Observation indicators

The clinical indicators and diagnosis and treatment of the two groups were observed and recorded. The clinical indicators mainly included the time of emergency treatment, coronary angiography and stent placement, while the diagnosis and treatment mainly included the time of triage evaluation, emergency ECG and emergency stay. Secondly, the incidence of adverse events was compared between the two groups, mainly including malignant arrhythmia, cardiogenic shock, heart failure and other complications. To investigate the nursing satisfaction of the two groups of patients, use the self-made questionnaire survey evaluation tool to evaluate the satisfaction. If the patient score is

The effect of nursing management in different levels and areas in emergency treatment of patients with acute ST segment elevation myocardial infarction

greater than or equal to 90 points, it means very satisfied; if the score is 80-89 points, it means satisfied; if the score is less than or equal to 79 points, it means dissatisfied, and compare the satisfaction of the two groups of patients.

Statistical analysis

SPSS 21.0 was used for statistical analysis. The measurement data of normal distribution are expressed by means of mean ± standard deviation, t-test and one-way ANOVA, the measurement data of non-normal distribution are expressed by means of median (interquartile interval), Mann Whitney rank sum test, χ² test for counting data, and multivariate linear regression analysis for correlation analysis. The data results were expressed by means of mean ± standard deviation and median. The difference was statistically significant (P < 0.05).

RESULTS

Comparison of clinical indexes between the two groups

The time of emergency treatment, coronary angiography and stent placement were compared between the two groups. The results showed that the time of observation group was significantly shorter than that of control group (P < 0.05). See Table 1 below for details.

Table 1. Comparison of clinical indexes between the two groups (min)				
Group	Number of cases	Emergency visit time	Coronary angiography time	Stent placement time
Control group	100	52.70±7.46	65.82±10.51	70.60±15.66
Observation group	100	34.45±7.43	34.95±5.82	39.99±10.48
P value	-	<0.05	<0.05	<0.05

Comparison of clinical diagnosis and treatment between the two groups

The results showed that the time of the observation group was significantly shorter than that of the control group (P < 0.05). See Table 2

below for details.

Table 2. Comparison of clinical diagnosis and treatment between the two groups (min)				
Group	Number of cases	Triage evaluation time	Emergency ECG time	Emergency stay time
Control group	100	3.18±0.67	20.85±5.24	7.70±1.20
Observation group	100	0.55±0.20	8.69±1.43	3.53±2.39
P value	-	<0.05	<0.05	<0.05

Comparison of the incidence of complications between the two groups

The incidence of complications was 11.00% in the control group and 1.00% in the observation group. There was statistical significance between the two groups (P < 0.05). See Table 3 below for details.

Comparison of nursing satisfaction between the two groups

The nursing satisfaction of the control group was 80.00%, and that of the observation group was 96.00%. There was statistical significance between the two groups (P < 0.05). See Table 4 below for details.

Table 3. Comparison of the incidence of complications between the two groups					
Group	Number of cases	Arrhythmia	Cardiogenic shock	Heart failure	Total
Control group	100	4 (4.00)	4 (4.00)	3 (3.00)	11 (11.00)
Observation group	100	1 (1.00)	0 (0.00)	0 (0.00)	1 (1.00)
P value	-				<0.05

Table 4. Comparison of nursing satisfaction between the two groups					
Group	Number of cases	Very satisfied	Satisfied	Dissatisfied	Satisfaction degree
Control group	100	40	40	20	80 (80.00)
Observation group	100	76	20	4	96 (96.00)
P value	-				<0.05

## DISCUSSION

Acute ST segment elevation myocardial infarction mainly refers to a kind of myocardial ischemia caused by acute occlusion of human myocardial coronary artery, and finally a kind of myocardial necrosis <sup>7</sup>. Patients with acute ST segment elevation myocardial infarction have typical manifestations of ischemic chest pain. Moreover, the duration is also very long. In addition, the timeliness of diagnosis and treatment will have a significant impact on the prognosis, so the requirements for first aid are also high <sup>8</sup>. The patient's condition is very critical and changes rapidly, so PCI is often used to treat the patient in the early stage of myocardial infarction, so as to open the occluded coronary artery of the patient and let the patient's myocardial reperfusion, so as to effectively improve the patient's heart function and effectively reduce the patient's mortality <sup>9-13</sup>. However, at present, PCI emergency care resources are relatively scarce in China, so it is easy to delay the best treatment time, and eventually lead to complications or death of patients. Therefore, the reasonable emergency nursing management is very important in the whole emergency process, which can shorten the emergency treatment time of patients to the greatest extent, so that patients can be treated as soon as possible.

Acute ST segment elevation myocardial infarction is a more serious and critical disease in clinical. It has a higher requirement for emergency time in the treatment process. The early and correct identification of the disease can better promote the efficient implementation of the treatment work. Therefore, classified and zoned nursing management is a very effective treatment method, which can effectively improve the clinical efficacy <sup>14</sup>. In recent years, the management mode of classified and partitioned nursing is a common method of first aid developed by relevant scholars. In the process of using it, the severity of the patient's condition needs to be evaluated first, so as to form a good understanding and grasp of the whole patient's condition development and prognosis,

and then based on it, the medical resources can be reasonably allocated, so that the whole emergency can be optimized Care process. In the process of this study, our hospital used the hierarchical and divisional nursing management mode to nurse the patients with acute ST segment elevation myocardial infarction. In the process of nursing, we first graded the subjects according to the SIRS score and ECG examination results, and then arranged senior doctors and nurses of Cardiology to carry out the first aid. In the process of first aid In order to ensure the success rate of rescue, we should divide the patients' condition into different levels, combine the results of classification, and then make a reasonable emergency nursing plan. At the same time, we should use the professional rescue process to deal with the patients' condition, so the whole efficiency of first aid has been improved. The results of this study showed that the clinical indicators and diagnosis and treatment of patients in the observation group were significantly better than those in the control group. The comparison between the groups was statistically significant ( $P < 0.05$ ). The reason for this is that in the process of classified and partitioned nursing, doctors have classified and partitioned the patients' condition, give priority to emergency treatment to the patients whose condition is more urgent, and have prepared the contrast room and stent in advance, so as to effectively improve the whole rescue efficiency. Therefore, the final results show that the emergency treatment time and coronary angiography time of observation group patients The time of stent implantation, triage evaluation, emergency ECG and emergency stay were significantly shorter than those of the control group. In addition, the results of this study also showed that the incidence of complications in the control group was 11.00%, the incidence of complications in the observation group was 1.00%, there was statistical significance in the comparison between groups ( $P < 0.05$ ); the satisfaction of nursing in the control group was 80.00%, the satisfaction of nursing in the observation group was 96.00%, and there was statistical significance in the comparison

The effect of nursing management in different levels and areas in emergency treatment of patients with acute ST segment elevation myocardial infarction

between groups ( $P < 0.05$ ). These two results are due to the timely treatment of patients in the observation group under the hierarchical and divisional nursing management mode, so the occurrence of complications has also been controlled, and the success rate of first aid has been improved, so the patients and their families are naturally very satisfied with the clinical nursing work.

In conclusion, the effective application of hierarchical and zoned nursing management can better optimize the whole emergency treatment process, shorten the waiting time of patients, effectively avoid the complications caused by the delay of emergency treatment time, and promote the early recovery of patients.

## CONCLUSION

To sum up, the application effect of grading and zoning nursing management in the first aid of patients with acute ST segment elevation myocardial infarction is better, which can effectively shorten the waiting time of patients, reduce nursing complications, improve nursing satisfaction, and effectively improve the first aid effect, which is worth popularizing.

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