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Acute chest pain: what about the time before visiting to the physician?

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ABSTRACT

Acute chest pain is an important medical complaint that needs proper management. The acute myocardial infarction, which is an emergency condition primarily presented with chest pain. The important concerns in management are early diagnosis and prompt treatment. An important factor determining the success of treatment is the time before visiting to the physicians. In this report, the authors summarize on the time before visiting to the physicians. It can be seen that the health education to general people on the danger of acute chest pain is required.

1. Introduction

Acute chest pain is an important medical complaint that needs proper management[1–2]. The acute myocardial infarction, which is an emergency condition primarily presented with chest pain[2–3].

The important concerns in management are early diagnosis and prompt treatment. Pandey et al. proposed that "Diagnosis is easy and based on simple principals of good history, physical examination, early and complete 12 lead electrocardiogram and use of echocardiography which should be available in the emergency triage area[4]." However, the problematic cases and fatal cases can still be seen worldwide. An important factor determining the success of treatment is the time before visiting to the physicians[4–5].

In this report, the authors summarize on the time before visiting to the physicians. It can be seen that the health education to general people on the danger of acute chest pain is required.

2. Materials and methods

This is a retrospective chart review. The authors reviewed medical record of 85 cases with diagnosed of acute myocardial infarction in a medical center. The extracted parameter from each record is demographic data (age, sex) and the recorded time before visiting to the physicians. The descriptive statistical analysis was used where it was appropriate.

3. Results

According to this report, 85 cases (60 males, 25 females, average age = (58.6±10.2) years old) were recruited. The recorded time before visiting to the physicians was mostly

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at 13 h (Table 1).

Table 1
Time before visiting to the physicians.

Time (within, hours)	Number	Percentage
1	0	0.0
2	0	0.0
3	0	0.0
4	2	2.4
5	0	0.0
6	1	1.2
7	1	1.2
8	2	2.4
9	7	8.2
10	15	17.5
11	8	9.4
12	10	11.8
13	24	28.2
14	5	5.9
15	6	7.1
16	4	4.7

4. Discussion

A leading cause of death in many countries at present is the cardiovascular disease. Acute myocardial infarction is an important cardiological disorder with high fatality if there is no appropriate early treatment. According to the standard practice guideline, early thrombolytic therapy and reperfusion treatment is recommended[5]. Goel et al. found that "longer time to reperfusion is not only associated with worsened left ventricular systolic function and new–onset HF at the time of index admission, but also with increased risk of HF and reduced improvement in left ventricular systolic function during follow–up[6]".

Focusing on time before visiting to the physicians, the delayed visit can be expected. According to a study from USA, Goldberg et al. reported that "approximately 20% of patients presented to the hospital within 1 h of acute symptom onset, and slightly more than two thirds presented within 4 h[7]." Based on the present report from less developed country, more delaying can be seen. A less successful treatment can be expected.

It can be seen that the health education to general people on the danger of acute chest pain is required. According to a recent study from Poland, "the main cause of delayed call for help in ACS patients was a poor level of knowledge about MI[8]." McKee et al. noted that the education is very important for correction of the problem of pre–hospital delay in acute coronary syndrome[9]. Ting et al. also noted that education is very important but it is usually insufficient[10].

The data from this study can be useful for further quality improvement of the management of acute chest pain. It calls for management on patient education.

Also, it is also useful information for further assessment of the present cardiac biomarker usage (since the diagnostic value depends on time after chest pain onset).

Conflict of interest statement

The authors report no conflict of interest.

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