

ORIGINAL ARTICLE

Characteristics of Patients with Myocardial Infarction Admitted to the Emergency Department; a Five Years Epidemiological Study

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Abstract

Introduction: Health care planning for management of patients visiting emergency department (ED) requires accurate statistics and data more than anything. Since chest pain is one of the most common complaints of patients in this department, the present study was done aiming to epidemiologically assess the patients presenting to ED following chest pain with the final diagnosis of myocardial infarction (MI).

Methods: In this retrospective cross-sectional study, to evaluate the characteristics of MI patients, medical profiles of all the patients presenting to ED of Shahid Mofatteh Hospital, Varamin, Iran, during 2011 to 2015, with complaint of chest pain and final diagnosis of acute MI were assessed. A pre-designed checklist was used that included demographic data, pain characteristics, history of cardiac diseases and risk factors of cardiovascular diseases, treatments received, time interval between symptom manifestation and presentation to ED, history of similar complaint, duration of hospitalization in ED, site of MI, troponin level on arrival, and final outcome. **Results:** 168 patients with the mean age of 58.05 ± 12.46 years (range: 28 – 85) with complaint of chest pain and final diagnosis of acute MI visited the center during the study period (76.8% male). Before hospitalization in the cardiac care unit, these patients stayed in ED for an average of 12.6 ± 6.5 hours (range: 0.2 – 23.5). Most patients were in the > 50 years age group (74.3%) and had an education level less than high school diploma (91.7%). Mean duration of being affected with hypertension, diabetes, cardiac diseases, hypercholesterolemia, and smoking for the studied patients were 6.1 ± 4.7 (1-20), 6.34 ± 5.9 (1-30), 7.1 ± 5.2 (1-21), 4.1 ± 3.3 (1-14), and 21.5 ± 11 (2-50) years, respectively. Mean time interval between symptom manifestation and ED visit was 12.9 ± 6.3 (1-24) hours. Patients reported their history of similar pains to go back to about 6.9 ± 3.4 (1-12) months prior. In most patients, pain site was in anterior chest (88.7%), with sweating (61.01%) and without radiating to arms or jaws (86.3%). Most common dysrhythmia observed in this group of patients was ventricular tachycardia (24.4%). Since angiography and surgical intervention equipment were not available, all patients underwent thrombolytic therapy. Only 16 (9.5%) patients had positive troponin on arrival. Finally, 9 (5.4%) patients died. **Conclusion:** Based on the findings of the present study, most cases of MI in the studied center were male, over the age of 50 years, smokers, and had an education level less than high school diploma. The most common site of MI was in the anterior heart wall with anterior chest pain and ventricular tachycardia. In this evaluation, mortality rate of patients with MI was calculated to be 5.4% in the studied center.

Key words: Myocardial infarction; epidemiology; emergency department; Mortality; Chest Pain
