EPIDEMIOLOGICAL INVESTIGATION OF CARDIOVASCULAR DISEASES IN KHATAMOL ANBIA HOSPITAL IN ZAHEDAN CITY IN 2016

Haniyeh Dahmardeh¹, Mohammad Sedaghat²

¹. Ph.D. Student, Department of Nursing, Faculty of Medical Sciences, Tarbiat Modares University, Tehran, Iran
². Professor of Emergency Medicine Zahedan University of Medicine sciences, Zahedan, Iran

ABSTRACT

Background and Objective: Cardiovascular diseases are among the most common diseases around the world and the leading cause of death in Iran. In addition, it is regarded as one of the most preventable non-communicable diseases in humans. The main objective of this research was epidemiological investigation of cardiovascular disease in patients admitted to Emergency Unit of Khatamol Anbia Hospital in Zahedan city.

Methodology: this is a descriptive and retrospective research, in which the medical file of 1512 patients with a primary diagnosis of cardiovascular disease was examined in two-year period since 2013 to 2015. The data were extracted from the medical files using two-part checklist. The first part included demographic information and the second part of the information was related to risk factors and hospitalization duration. Findings were analyzed by using SPSS software.

Findings: research findings revealed that the mean age of the patients (622 females and 890 males) was 56.17 ± 13.81.

Conclusion: by controlling the risk factors such as hypertension, smoking, high level of blood cholesterol, and high weight, cardiovascular disease can be greatly prevented.

To Cite This Article: Haniyeh Dahmardeh, Mohammad Sedaghat, (2017), "Epidemiological investigation of cardiovascular diseases in Khatamol Anbia Hospital in Zahedan city in 2016", Pharmacophore, 8(6), 60-63.
Iran and nearly 3.6 million people with cardiovascular disease are hospitalized annually in hospitals covered by Ministry of Health and Medical Education, accounting for about 46% of deaths (14 and 15). Cardiovascular diseases in younger people have different risk factors and prognosis compared to those of older people. Patients suffering from this complication show non-specific symptoms, except for chest pain, which are often not diagnosed in the primary evaluation. These non-specific symptoms might indicate undesired treatment and prognosis (16 and 17). Heart attack occurs due to inadequate coronary blood flow and as a result of acute coronary artery occlusion due to thrombosis formation. Due to prolonged myocardial ischemia, it causes irreversible damages and necrosis in the heart muscle. When heart damage occurs in all thickness of the myocardium in the form of necrosis, ECG changes would be seen as ascending ST segment, and if necrosis occurs under the endocardium, ECG changes would be seen as descending ST segment (18). Patients suffering from ischemic heart disease are divided into two main groups: 1. Patients suffering from stable angina as a result of chronic coronary artery disease. 2. Patients suffering from acute coronary syndromes including unstable heart angina, acute myocardial infarction, along with ascending ST segment and acute myocardial infarction with and without ascending ST segment. Heart enzyme indices are used to distinguish the unstable angina from acute myocardial infarction with or without ascending ST segment (19). Given the high prevalence of cardiovascular diseases in Iran and death caused by these diseases, the current research was carried out to evaluate the epidemiologic status of cardiovascular disease in Khatamol Anbia Hospital in Zahedan.

Methodology
This research is a retrospective descriptive study. Its population included patients with a primary diagnosis of cardiovascular disease in a two-year period since 2013 to end of 2015, who admitted to Khatamol Anbia Hospital in Zahedan. Their disease was approved by an emergency medical specialist. The sample size was estimated to be 504 people based on findings of the research conducted by Belverdi et al. (20) and based on the formula for estimating the ratio with \( P = 0.16 \) and \( d = 0.032 \). In total, medical files of 1512 patients were examined. Inclusion criteria of the research included medical files of all patients, whose cardiovascular disease was diagnosed by an emergency specialist and they have treated and hospitalized and exclusion criteria included the files of all patients, whose cardiovascular disease was diagnosed by an emergency specialist but they have not been treated and they have discharged with reasons such as personal satisfaction and incomplete information inserted in the medical file. In this research, triage time and the time of patient admission to emergency unit, the time of the first visit by the emergency medical specialist recorded in the medical file, the time of start of therapeutic measures based on time recorded in the physician instructions sheet and the nurse report were recorded and investigated. Clinical history, ECG, interview, and questionnaire were used for collecting the data. In general, data were extracted from files using two-part checklist, which its first part was related to demographic information and the second part was related to risk factors and duration of hospitalization. The file of patients whose information was recorded incompletely was excluded from research. To reduce the confounding effect and to reduce the exclusion rate of the patients, cardiologist was used. In addition, in the case of access to patient, he was interviewed to complete the incomplete information on the medical file. Finally, in the case of incomplete information of the file for any reason, the patient file was excluded from study. SPSS 16 software was used to analyze the data.

Findings
In this research, medical files of 1512 patients were investigated. The mean age of patients was 56.17 ± 13.81. Given chi-square test, out of total patients, 622 people were female (37%) and 890 were male (63%). In addition, 63 were single (4.3%) and 1449 (95.7%) were married. Additionally, findings of this test revealed that out of all patients, 1023 people aged less than 60 years (67.7%) and 489 people (32.3%) aged over 60. Additionally, out of all patients, 354 (22.2%) had a history of heart disease and 1158 (77.8%) had no history of heart disease. Moreover, the most common risk factor was found to be hypertension (50.2%), followed by diabetes (19.4%), hyperlipidemia (14.7%), and family history of cardiovascular diseases (6.5%), and smoking (9.2%). Out of total hospitalized patients, 98.6% were discharged and mean duration of hospitalization was 2.5 ± 1.59.

<table>
<thead>
<tr>
<th>Variable</th>
<th>( f )</th>
<th>( Df )</th>
<th>( P )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>890</td>
<td>1</td>
<td>0.00</td>
</tr>
<tr>
<td>Female</td>
<td>622</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single</td>
<td>63</td>
<td>1</td>
<td>0.00</td>
</tr>
<tr>
<td>Married</td>
<td>1449</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Under 60 years</td>
<td>1023</td>
<td>1</td>
<td>0.00</td>
</tr>
<tr>
<td>Over 60 years</td>
<td>489</td>
<td></td>
<td></td>
</tr>
<tr>
<td>History of heart disease</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>354</td>
<td>1</td>
<td>0.00</td>
</tr>
<tr>
<td>Yes</td>
<td>1158</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Discussion
Cardiovascular diseases are currently considered as the most important diseases throughout the world, which will lead to morbidity, mortality, disability and an increase in treatment costs by 2020 (21). This chronic disease has high impact on patients’ quality of life. Out of total patients, 900 were male and 622 were female. In this research, majority of the patients were male, which is in line with findings of other studies found by research review of literature (21 and 22). The mean age of the patients was found to be $56.17 \pm 13.81$. In the research conducted by Belverdi, Ebrahim Zadeh, Emad Zadeh and Phelan, the mean age of patients was found to be similar to that of the current research (23, 20, 24). In the current research, most of the patients were married. Marriage has been recognized as an important social factor associated with mortality. Research on this issue in the United States, European countries, and Japan revealed that mortality risk for singles is 1.2 to 5.2 times more than that in married people. In a study conducted in Japanese on 94062 males and females aged 40 to 79, it was found that men who had never been married were at greater risk of death caused by cardiovascular diseases (25). Identifying the risk factors is means for decreasing the cardiovascular diseases risk through reducing the risk factors and making better decision-making through accurate determination of all risk factors status. Reducing the risk factors is the primary clinical measure for decreasing the mortality and morbidity of cardiovascular diseases. Epidemiological investigations have revealed that hypertension, smoking, and dyslipidemia are considered as the most common risk factors of coronary artery diseases, acting synergistically. Thus, given the increased risk factors of prevalence of coronary heart disease and increased costs, identifying and treatment of people at risk is considered as a national priority (26).

Acknowledgement
The current paper is part of a research project with ethical code of IR.ZAUMS.REC.1395. 82. We hereby appreciate honorable officials of Zahedan University of Medical Sciences and all colleagues in Archival and Medical Records Unit of Khatamol Anbia Hospital, which without their cooperation and assistance, it was impossible to conduct this research.

Reference