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Heart attack pervasiveness along with associated risk factors in District Headquarter Hospital in Karak, Khyber Pakhtunkhwa, Pakistan

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ABSTRACT

Objective: To investigate the possible risk factors among heart patients of Karak District.
Methods: Different questions were asked from the respondents regarding their educational level, stress taking, smoking, mode of medication and diabetic history. A total of 72 heart patients were included in this study with the confirmed medical history of myocardial disorder/heart attack either once or twice.
Results: It was revealed in this study that a high prevalence of heart attack was observed in respondents at secondary level of education *i.e.* 73.33%. This was followed by the respondents at primary level of education having 63.64% heart patients and then respondents at postgraduate educational level having 61.11% heart patients. Least number of heart patients were found at graduate group *i.e.* 27.78% heart patients. This study revealed that stress takers were at a higher risk of heart attack, while nonstress takers were comparatively healthier than stress takers. About 83.33% stress taker respondents were heart patients, while 76.67% healthy respondents were nonstress takers. Current study also revealed that smoking was a leading cause of cardiovascular diseases as 88.10% heart patients were either occasional smokers or chain smokers, while 66.67% nonsmokers were healthy with no symptoms of heart disease. Self-medication was found an elevated cause of heart diseases as 76.19% heart patients had a history of self-medication.
Conclusions: This practice was found low in healthy respondents where only 23.81% respondents had self-medication in their past history. Diabetes was found the associated disease with the heart patients.

1. Introduction

Heart attack is also called myocardial infarction; it is that disorder which is caused when blood flow to the heart muscles stops, which leads to the damage of heart muscle[1]. Most common indication of heart attack is angina pectoris which can be simply defined as chest pain[2]. The major cause of heart attack is ischemic heart disease or coronary artery disease[3]. The major risk factors of myocardial infarction are smoking, diabetes, use of alcohol, high blood pressure and poor diet[4,5]. Excessive sweating is one of the major symptoms of heart attack[6]. Smoking is reported to be the cause of myocardial infarction by 36%, while 3% is the stress which is the cause of this disorder[7]. Looking at the above facts of myocardial infarction, the current study is designed to investigate the possible risk factors among heart patients of Karak District.

2. Materials and methods

This study was carried out in District Headquarters Hospital Karak Township, Karak, in May 2016. Data were collected from respondents came for their electrocardiography examination. Most of the respondents were confirmed heart patients by their past history, while few of them were confirmed by ECG performed in the same hospital. Different questions were asked from the respondents regarding their educational level, stress taking, smoking, mode of medication and diabetic history. All the data were saved on questionnaire for further processing.

3. Results

3.1. Incidence of heart disease among different educational groups

A total of 72 heart patients were included in this study with the confirmed medical history of myocardial disorder/heart attack either once or twice. Out of 72 respondents, 44 (61.11%) were confirmed heart patients, while 28 (38.89%) were healthy respondents. All patients or respondents belonged to different literacy level starting from primary education to postgraduate. About 22 (30.56%) of them were at primary educational level, of which 14 (63.64%) were heart patients, while 8 (36.36%) were healthy. Similarly, 15 (20.83%) out of 72 had secondary level of education, of which 11 (73.33%) were heart patients, while 4 (26.67%) were healthy. Seven (9.72%) out of 72 respondents had higher secondary level of education, of which 3 (42.86%) were heart patients, while 4 (57.14%) were healthy. Ten out of 72 (13.88%) had graduate level of education, of which 5 (50.00%) were heart patients, while 5 (50.00%) were healthy. From post graduate group of educational level, 18 out of 72 (25.00%) responders were included in the study, of which 11 (61.11%) were confirmed heart patients, while seven (38.89%) were healthy.

3.2. Rate of stress as risk factors among heart patients

Occurrence of stress was investigated by asking different questions from respondents. Out of 42 (58.33%) heart patients, 35 (83.33%) were found stress takers in their daily routine, while the rest of 7 (16.67%) were non-stress takers. Similarly, same questions were also asked from healthy respondents. Out of 30 (41.67%) healthy respondents, only 7 (23.33%) were found stress takers, while 23 (76.67%) were found non-stress takers.

3.3. Smoking as risk factors among heart patients

Smoking was also included as risk factor of heart diseases. Out of 42 (58.33%) heart patients, 37 (88.10%) were found either occasional smokers or chain smokers, while only 5 (11.90%) were nonsmokers. Similarly, out of 30 (41.67%) healthy respondents, 10 (33.33%) were smokers, while 20 (66.67%) were nonsmokers.

3.4. Mode of taking medication as risk factors among heart patients

Medication was always prescribed by a qualified doctor/physician. In most of the cases, medicine was taken without prescription of a doctor. Most of the people acquired self-medication without knowing the side effects of particular medicine. In this study, out of 42 (58.33%) heart patients, 32 (76.19%) were involved in self-medication in their past history, while 10 (23.81%) followed doctors advised medication. Among 30 (41.67%) healthy respondents, this practice was found very low *i.e.* only 8 (26.67%) had used self-medications, while 22 (73.33%) used prescribed medication.

3.5. Diabetes as risk factors among heart patients

Among 42 (58.33%) heart patients, about 21 (50.00%) were also suffering from diabetes mellitus, while 21 (50.00%) didn't have this problem. Among 30 (41.67%) healthy respondents, only 12 (40.00%) had this problem, while 18 (60.00%) didn't have this problem. A total of 33/72 (45.83%) respondents were found diabetic in this study.

4. Discussion

Current study was in agreement with the study of Mehta *et al.*[4] and Mendis *et al.*[5] who symbolised stress and smoking as risk factors of heart attack. No apparent relation was observed between education and heart attack. But it was revealed in this study that a high prevalence of heart attack was observed in respondents at secondary level of education *i.e.* 73.33%. This was followed by the respondents with primary level of education having 63.64% heart patient and then respondents with postgraduate educational level having 61.11% heart patients. Least number of heat patients was found in graduate group *i.e.* 27.78% heart patients. This study revealed that stress takers were at a higher risk of heart attack, while nonstress takers were comparatively healthier than stress takers. About 83.33% stress taker respondents were heart patients, while 76.67% healthy respondents were nonstress takers. Current study also revealed that smoking was a leading cause of cardiovascular diseases as 88.10% heart patients were either occasional smokers or chain smokers, while 66.67% nonsmokers were healthy with no symptoms of heart disease. Self-medication was found an elevated cause of heart diseases as 76.19% heart patients had a history of self-medication. This practice was found low in healthy respondents where only 23.81% respondents had self-medication in their past history. From the obtained results, it may be concluded that diabetes was found the associated disease to the heart patients.

Conflict of interest statement

We declare that we have no conflict of interest.

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