

# AGE RELATED OUT COME IN ACUTE MYOCARDIAL INFARCTION IN TERTIARY CARE HOSPITALS IN PESHAWAR

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## ABSTRACT

**Background:** Myocardial infarction is among the leading cause of morbidity and mortality all over the world. A study was conducted at three tertiary care hospitals of Peshawar. It showed a high incidence of mortality due to MI between the ages of 45-60 years mostly affecting males. This was a pilot study carried out to highlight age related death toll of MI as it is amongst the clinical conditions with the highest mortality rate.

**Aims and Objectives:** 1. To determine the mortality rate, in the age group between 45-60 years.

2. To identify the relationship between gender and mortality rate.

**Methodology:** A retrospective study of admission records of one year from Cardiac care units was undertaken in two of the major Government tertiary care hospitals and one Private tertiary hospital of Peshawar.

**Results:** A total of 245 expirees due to MI were identified from 7132 MI patients. Among which 5 cases (2.0%) were below the age of 45yrs, 66cases (26.9%) were above 60yrs and 174 cases (71.0%) were in the age group 45-60 yrs. In the 245 cases of expirees; 139 (56.7%) were Male while 106 (43.3%) were female.

**Conclusion:** It was concluded that majority of expirees were in the age group 45-60 yrs and the possible explanation for this is the absence of collaterals development up to this age. The study also suggests that there is a little difference in the frequency of mortality rate in both genders i-e expirees being more in males as compare to females. (Male: 56.75% female: 43.3%)

**Key words:** MI, Ischemic heart disease, Hyperlipidemia

## INTRODUCTION

Ischemic heart diseases are one of the leading causes of morbidity and mortality word over<sup>1</sup>. The prevalence rate is increasing in this part of the world because of several reasons including socio-economic instability, illiteracy, poor health care system and prevailing stress due to war and military operations carried out now and then<sup>2</sup>. These entire factors along with smoking and family history of IHD can make a person much more vulnerable to get an attack of Ischemia leading to infarction at a much earlier age<sup>2,3</sup>. Females of 21<sup>st</sup> century is no more limited to house. They are working alongside their men. That's why they are also affected by the same stress and environmental factors now days as men. It has been observed that they are affected by IHD at almost the same ratio as men<sup>3,16</sup>. Pakistan is the front line state in American war against terrorism since 9/11. Khyber Pukhtunkhwa; and Peshawar being the border city has been affected by all sorts of terrorism attacks.

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The population of this part of the country is being under stress due to economic, political and social issues arise from the war.<sup>2,4</sup> A study showed high prevalence of MI risk factors in Pakistan with more than 30% of population (over 45 years of age) is affected and majority of them being males; the difference progressively falling with increasing age i-e equal incidence after 60 years.<sup>4,5</sup> Another study showed that 18% of adult population of Pakistan suffers from hypertension and the main risk factors being smoking, stress and obesity<sup>5</sup>. The study was carried out in three major tertiary care teaching hospitals in Peshawar.

### Objectives

1. To determine the mortality rate, in the age group between 45-60 years.
2. To identify the relationship between gender and mortality rate.

## METHODS AND MATERIALS

### Study Design

A retrospective study of admission records from January 2017 to January 2018 was undertaken in two of the major government tertiary hospitals one private tertiary hospital of Peshawar.

### Study Duration:

Data was collected from one year hospital records i-e january2017- January 2018

### Data analysis

Data was analyzed using SPSS version 20.

## RESULTS

A total of 245 expirees due to MI were identified from 7132 MI patients admitted to three hospitals. Among these 5 cases (2.0%) were below the age of 45yrs, 66cases (26.9%) were above 60yrs and 174

**Table 1: Number of Expirees from MI**

Serial No	Name of hospital	No	Percent-age
1	Lady reading hospital Peshawar	105	42.9 %
2	Khyber teaching hospital Peshawar	119	48.6 %
3	Kuwait teaching hospital Peshawar	21	8.6 %
	Total	245	100 %

**Table 2: Age of Expired Patients**

Seri-al No	Age	Frequency	Percent-age
1	Below 45 yrs	5	2 %
2	45—60 yrs	174	71 .1 %
3	Above 60 yrs	66	26.9 %
	Total	245	100%

**Table 3:**

	No of Expirees	Percentage
Males	139	56.7 %
Females	106	43.3%
Total	245	100%
	Total	245

cases (71.0%) were in the age group 45-60 yrs. In the 245 cases of expirees; 139 (56.7%) were Male while 106 (43.3%) were Female.

## DISCUSSION

Ischemic heart is one of the leading causes of death in general population all over the world<sup>1,6</sup>. study of the disease shows multiple associated risk factors which determine the fate of the patient greater role of smoking, hyperlipidemia, stress, genetic predisposition, hypertension and obesity is being established since long.<sup>5,6</sup> Study of MI in young indicate great role of smoking, familial hyperlipidemia and type A personality<sup>7</sup>. Other

less causative factors like low socioeconomic status, lack of education and hypercoagulable conditions might affect certain individual.<sup>8,9</sup> The people of this part of our country are under stress due to the ongoing war at the border. It leads to multiple social and economic issues especially social inequality. These factors contribute to increase in stress which causes a rise in number of smokers in young adults<sup>4,10</sup>. Female are affected to a great extent by the social and economic problems at home and outside. As most of the females at cities as well as at villages are now a day's helping their families by doing various jobs<sup>11</sup>. All these factors have leaded to increase in Ischemic heart disease among them.<sup>8,16</sup> In this study data of total of 7132 patient with established Myocardial infarction was collected from three teaching hospitals. A total of 245 expirees due to MI were identified. Among them 5 cases (2.0%) were below the age of 45yrs, 66 cases (26.9%) were above 60yrs and 174 cases (71.0%) were in the age group 45-60 yrs. It indicates higher mortality rate in 45-60 yrs age group. This can be attributed to the fact that individuals in this age group are at high risk due lack of collateral circulation<sup>6,12</sup>. Multiple studies conducted in United States of America also indicates high mortality rate in this age group.<sup>11,13,14</sup> According to these studies this age group is much more under stress due to multiple factors at home and working place<sup>15</sup>. They give less attention to the early sign symptom of ischemia. All these health issues add to the risk factors already existing in them and results in increase mortality rate<sup>16, 17, 18</sup>. In these 245 cases of expirees; 139 (56.7%) were Male while 106 (43.3%) were Female. So gender has little effect on the outcome of the disease as shown in studies carried out in western countries.<sup>19,20</sup>

## CONCLUSION

It was concluded that majority of expirees were in the age group 45-60 yrs and the possible explanation for this is the absence of collaterals during this age and exposure to stress. The study also suggests that there is a minimum difference in the frequency of mortality rate in both genders i-e expirees being slightly more in males (male:56.75% female:43.3%).

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