Study of Clinical Profile of Acute Myocardial Infarction in Elderly Male Patients (A Study of 60 Cases)

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Abstract: _Introduction: Heart disease is the leading cause of hospitalization and death in elderly patients. The manifestations of acute myocardial infarction are generally believed to be atypical in the elderly. Apart from diagnostic difficulty of AMI in elderly due to atypical clinical presentation, management of such cases is also challenging. Literature survey: John Hunter, a brilliant English physician of the eighteenth century, was probably the first in Western medicine to paint the clinical picture of chest pain, called angina pectoris, and sudden death. Problem definition: The purpose of this study is to describe the Risk factors, Clinical features, outcomes in AMI in Elderly (>60 years) patients and to study various complications. Methodology: The present study is a descriptive study done in Tertiary Care Hospital.Total 60 cases of Acute ST Elevation AMI getting admitted to ICCU fulfilling the inclusion and exclusion criterions were studied. Elderly male patients having Acute ST Elevation MI in ≥ 60 years of age were selected for study. Result and discussion: In present study clinical profile of 60 elderly male patients with ST elevation MI has been studied. During the study observations & discussion were made with respect to age group, patient characteristics, risk factors, complications. Conclusion: In present study majority of patients i.e 96% presented with typical chest pain of acute myocardial infarction, while 90% were having perspiration, 33% presented with breathlessness, 31% presented with nausea/ vomiting, 8.3% presented with giddiness, 6.6% presented with palpitation while 8.3% presented with other symptoms (drowsiness, unconsciousness, etc.) The prevalence of chest pain, breathlessness, nausea and vomiting has increased in prospective group as compared to retrospective group._

Keywords: Geriatric medicine, myocardial infarction, atherosclerosis

1. Introduction

Apart from diagnostic difficulty of AMI in elderly due to atypical clinical presentation, management of such cases is also challenging. They may be more refractory to medical therapy possibly because of advanced atherosclerotic disease and ventricular dysfunction particularly diastolic dysfunction. Even, they are more intolerant to therapy with multiple anti ischaemic agents. Management decisions during the first 24 hrs have the greatest effect on survival in the elderly as is true with all age group. The major goals of treating elderly patients are to improve survival and reduce symptoms. Since elderly patients with AMI differ in clinical presentation than young patients with AMI, this issue needs perfect understanding. It will help us to reduce mortality and morbidity.

The purpose of this study is to describe the Risk factors, Clinical features, outcomes in AMI in Elderly (>60 years) patients and to study various complications.

2. Literature Survey

Is heart attack a modern plague or does it come down from antiquity? Who first described the clinical picture and who first tied it to disease of the coronary arteries? Angor in the chest–_angina pectoris[1]_–was depicted in accounts from ancient literature but described as related to coronary artery disease only in the latter part of the eighteenth century. In 1940, Blumgort, Schlesinger and Daim described the relation between angina pectoris, coronary thrombosis and myocardial infarction and the importance of the intracoronary collateral circulation.[2]

The myocardium and specific conduction system are perfused by the right coronary artery (RCA), the left coronary artery (LCA) and the left circumflex coronary artery (LCX)[3].

Modern therapy, together with effective secondary prevention, has significantly increased the two-year survival of patients after myocardial infarction by 75% during the past 30 years[4].

Presenting symptoms of acute MI differ in the elderly from those in younger patients. They are more likely to be termed "atypical" because the description differs from the classical one of substernal pressure with exertion.In the Worcester Heart Attack Study, chest pain was reported in 63% of the overall population, but was reported in less than half of the women over age 75 years (45.5%) [5].

2.1 Problem Definition

To study the clinico-epidemiological profile of patients with ST Elevation Acute Myocardial Infarction in elderly male patients in tertiary care hospital with special reference to: Risk Factors Presenting Features Complications Management Outcome.

3. Methodology

The present study is a descriptive study done in Tertiary Care Hospital.

Total 60 cases of Acute ST Elevation AMI getting admitted to ICCU fulfilling the inclusion and exclusion criteria's were studied.

Elderly male patients having Acute ST Elevation MI in ≥ 60 years of age were selected for study.

Written consent for participating in this study was taken of all patients. All patients were informed and explained about the study.

Detailed history & clinical findings of all patients were collected as per Performa.

ST Elevation Myocardial Infarction was defined according to the European Society of cardiology/ACCF/AHA/World Heart Federation Task Force for the Universal Definition of Myocardial Infarction.

4. Result and Discussion

Acute Myocardial Infarction is a most common cardiovascular emergency seen in medical emergency ward and it has become the leading cause of death accounting for 50% of death due to cardiovascular disease in India.[6]

In present study clinical profile of 60 elderly male patients with ST elevation MI has been studied. During the study, following observations were made with respect to age group, patient characteristics, risk factors, complications. Mean age is 68.3 years which reflects sedentary life style of men. Chest pain remains the hallmark symptoms in all the studies of AMI. This is followed by perspiration (90%), Breathlessness (33%) and nausea/ vomiting (31%). Smoking remains the most important risk factor in elderly male patient, although incidence varies from 76% and 66% in binquan and present study respectively except the study of Bhatia et al where its less common than Hypertension and hypercholesterolemia.In present study as well as in all other studies incidence of anterior wall MI was highest followed by inferior wall MI.Cardiac Failure is most common complication.

Majority of deaths in present study was attributed to cardiogenic shock (62.5%) while 31.2% deaths due to ventricular tachycardia and 6.3% deaths was due to cardiac failure. Mortality rates has decreased owing to better diagnostic facility, increasing awareness of people, early and timely thrombolysis and better control of cardiac arrhythmias and heart block.

5. Conclusion

1) The present study is clinical profile of acute myocardial infarction in elderly males (>=60 yrs) in which 60 such cases were studied.

2) Mean age of elderly male patients was 68.3 years which is nearly same as seen in other studies.

3) Sixty five percent Elderly males resented within 6 hours of onset of symptoms as compared to previous study Bhatia 2013(47%). This explains increase awareness among elderly males patients and earlier arrival in enhanced ICCU facilities.

4) In present study majority of patients i.e 96% presented with typical chest pain of acute myocardial infarction, while 90% were having perspiration, 33% presented with breathlessness, 31% presented with nausea/ vomiting, 8.3% presented with giddiness, 6.6% presented with palpitation while 8.3% presented with other symptoms (drowsiness, unconsciousness, etc.) The prevalence of chest pain, breathlessness, nausea and vomiting has increased in prospective group as compared to retrospective group.

5) In the present study major risk factor was smoking (66.6%) followed by hypertension (43%). 16.6% elderly males were having positive family history for CAD and 36.6% with past history of IHD. 33% elderly males had obesity and 16% had diabetes.As compared to retrospective group incidence of Obesity (5.6% vs 33%) is significant.

6) In present study majority of patients presented with anterior wall MI (46.6%), in which 11.6% were extensive anterior wall, 10 % were anteroseptal wall and 28.3% anterolateral wall. While 41.6 % presented with inferior wall MI, 11.6 % presented with posterior wall MI.

In present study as well as in all other studies incidence of anterior wall MI was highest followed by inferior wall MI.

- Thus over years there is no change in anatomical involvement.

1) In present study majority of patients i.e 26.6% were having cardiac arrhythmia in form of VPCs, Ventricular Bigeminy, Accelerated Idioventricular Rhythm and heart block. While 20% had cardiogenic shock, 23% presented with left ventricular failure, and .6 % heart block.

  - As compared to retrospective study incidence of LVF (13% vs 19%) has been increased.
  - Incidence of mortality in present study was 26% which was around 31% in retrospective group.
  - Majority of deaths in present study was attributed to cardiogenic shock while few percent to ventricular tachycardia and cardiac failure.
  - Mortality rates has decreased owing to better diagnostic facility, increasing awareness of people, early and timely thrombolysis and better control of cardiac arrhythmias and heart block.

2) Its concluded that
  - Smoking is major risk factor for elderly MI patients.
  - Increasing awareness of conditions, alertness and enhanced ICCU facilities resulted in earlier reporting of patients in hospitals as compared to past years.
  - Most of elderly patients had chest pain a/w breathlessness and giddiness as before.
  - Majority of elderly males have multiple risk factors like DM, HT, obesity and hypercholesterolemia.
  - Incidence of DM and Obesity has significantly increased owing to sedentary lifestyle as compared to past

- Incidence of anterior wall MI is same as before.

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