Clinical profile of myocardial infarction in elderly of rural population

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Abstract

Background: The elderly with acute myocardial infarction (AMI) have been reported to present with more atypical symptoms. AMI is associated with significantly higher mortality in the elderly compared with the young, yet the elderly are treated less aggressively than the young. Thrombolytic therapy has the greatest effect in the elderly even though there is an increased risk of hemorrhagic stroke. **Materials and Methods:** A total of 50 patients were taken for study, each case was included after detailed history, risk factors, clinical examination and relevant investigation which include ECG, CPKMB, Troponin-T. Patients were followed from the date of admission till the date of discharge. Analysis of all patients was done regarding-risk factors, whether they were thrombolysed or not thrombolysed and their outcomes. **Results:** Patients admitted to B.L.D.E's Shri B.M. Patil Medical College, Hospital and Research Center, Bijapur from 1st July to 31st August 2011 who were diagnosed with Acute Myocardial Infarction and admitted with Chest pain. Risk factors are Hypertension: 29, Diabetes: 23, IHD: 5, Hyperlipidemia: 14, Alcoholism: 5, Smoking and tobacco chewing: 17, All risk factors present: 0. **Conclusion:** Mortality rate in our study group was as high as 38% due to various factors like delay in the initiation of treatment and the lack of facilities of interventional cardiology. Hypertension was found to be the major risk factor for MI in our study group.
Key Words: AMI, ECG, CPKMB, Troponin-T

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INTRODUCTION

The elderly with acute myocardial infarction (AMI) have been reported to present with more atypical symptoms.[1] AMI is associated with significantly higher mortality in the elderly compared with the young, yet the elderly are treated less aggressively than the young. Thrombolytic therapy has the greatest effect in the elderly even though there is an increased risk of hemorrhagic stroke.[2] The benefits of aspirin, angiotensin converting enzyme(ACE) inhibitors and beta-blockers in AMI have been substantiated in numerous trials, but their usage in elderly AMI patients may be lower than in younger patients.[3] Because of the increasing burden on health care systems associated with MIs in the elderly, differences in clinical picture, and difficulties in dealing with elderly patients with myocardial infarction (MI), we analyzed the course of AMI in patients hospitalized in the intensive cardiac care unit (ICCU) of the tertiary care hospital.[4]

AIM AND OBJECTIVE

1. To evaluate risk factor for Myocardial Infarction in elderly of rural population.
2. Outcome of MI in this population.

MATERIAL AND METHODS
Source of data
a) Patients admitted to B.L.D.E's Shri B.M. Patil Medical College, Hospital and Research Center, Bijapur from 1st July to 31st August 2011 who

were diagnosed with Acute Myocardial Infarction and admitted with Chest pain.

b) All the patients were informed about the study in all respects and informed written consent was obtained.

Method of collection of data

c) A total of 50 patients were taken for study, each case was included after detailed history, risk factors, clinical examination and relevant investigation which include ECG, CPKMB, Troponin-T

d) Patients were followed from the date of admission till the date of discharge

e) Analysis of all patients was done regarding-risk factors, whether they were thrombolysed or not thrombolysed and their outcomes.

RESULTS

This study was conducted at B.L.D.E's Shri B.M. Patil Medical College, Hospital and Research Center, Bijapur from 1st July to 31st August 2011 after taking informed consent from the admitted patients.

- Number of patients included: 50
- Number of male patients: 30
- Number of female patients: 20
- ST-segment elevation MI: 28
- Non ST-segment elevation MI: 22

Table 1: Age distribution

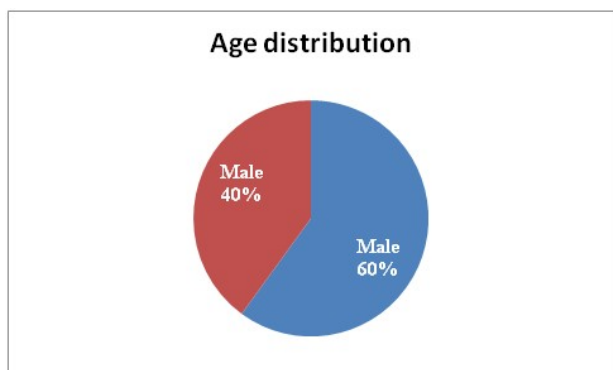| S.No	Gender	N (%)
1	Male	30 (60%)
2	Female	20 (40%)

Figure 1: Age distribution

RISK FACTORS

- Hypertension: 29
- Diabetes: 23
- IHD: 5
- Hyperlipidemia: 14
- Alcoholism: 5

- Smoking and tobacco chewing: 17
- All risk factors present: 0

Table 2: Risk Factors

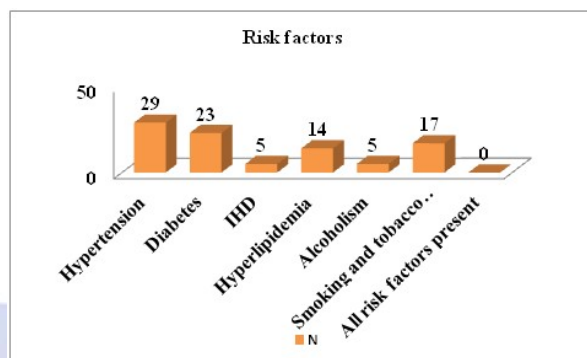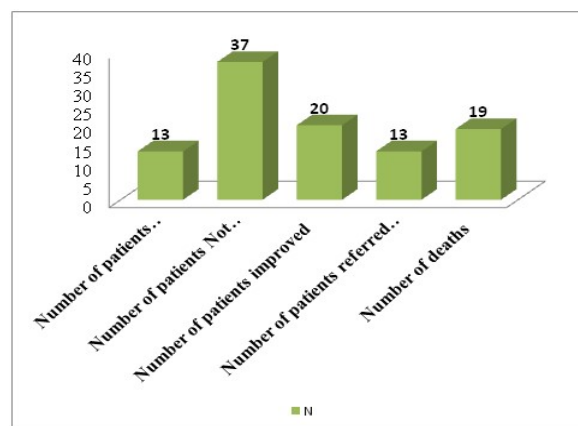| S.No	Risk Factor	N
1	Hypertension	29
2	Diabetes	23
3	IHD	5
4	Hyperlipidemia	14
5	Alcoholism	5
6	Smoking and tobacco chewing	17
7	All risk factors present	0

Figure 2: Risk factors

OUTCOME:

- Number of patients Thrombolysed: 13
- Number of patients Not Thrombolysed: 37
- Number of patients improved: 20
- Number of patients referred to higher center: 13
- Number of deaths: 19

Table 3: Outcome

1	Number of patients Thrombolysed	13
2	Number of patients Not Thrombolysed	37
3	Number of patients improved	20
4	Number of patients referred to higher center	13
5	Number of deaths	19

DISCUSSION

Heart disease is the leading cause of hospitalization and death in elderly patients. The role of conventional cardiovascular risk factors in older persons is incompletely understood because only fragmentary and inadequate data are available in most instances.[5,6] The manifestations of acute myocardial infarction are generally believed to be atypical in the elderly. Although the typical onset of crushing substernal or epigastric pain is still fairly common in the aged, other modes of presentation (such as acute confusion, syncope, atypical chest pain, congestive heart failure, vomiting or weakness) are frequently encountered.[7,8] Since the presentation is variable, the diagnosis of myocardial infarction is often overlooked. The elderly are also believed to have a higher rate of complications and higher mortality.[9] The present study shows that with increasing age the preponderance of male among patients with AMI admitted to the hospital decreases and sex ratio becomes smaller. This possibly reflects a higher percentage of males in an elderly population and also a very likely a more equal distribution of risk factors for AMI between both genders at high age.[10] In the present study, the overall mortality in elderly with MI was found to be higher than young. Structural changes of the heart related to the process of aging contribute to a great extent to the high early and late mortality of AMI in the aged. Mortality in elderly population was due to various factors like delay in initiation of treatment because of neglect of elderly, lack of interventional cardiology facilities in the rural area, less aggressive treatment in the form that the elderly are not Thrombolysed often for risk of developing complications. However age related changes in other organs and deterioration of their adaptive mechanisms to ventricular failure also play a role. This is reflected in the discriminate analysis of our data by the fact that ages itself, independent of parameters reflecting cardiac dysfunction was an independent predictor of 30 days mortality.

CONCLUSION

Mortality rate in our study group was as high as 38% due to various factors like delay in the initiation of treatment and the lack of facilities of interventional cardiology. Hypertension was found to be the major risk factor for MI in our study group.

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