

To study ECG outcome of patients of ACS aged \leq 45 years admitted in CCU of Department of Medicine, I.G. Medical College, Shimla

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Abstract

Background: To study outcome of patients of ACS aged \leq 45 years admitted in CCU of Department of Medicine, I.G. Medical College, Shimla.

Methods: The hospital based observational study was carried out in patients of ACS aged \leq 45 years, admitted to Cardiac Care Unit (CCU) of Department of Medicine I.G. Medical College Shimla from 1st June 2013 to 31st May 2014.

Results: Fourty seven(94%) patients recovered and were discharged on treatment of CAD. Two (4%) patients left against medical advise and 1(2%) patient who presented in Killip class IV, died of cardiogenic shock

Conclusion: In ACS in young, 2 % patients died.

Keywords: ACS, LAD, outcome.

Introduction

Patients with ACS generally have symptoms and signs of myocardial ischemia either at rest or with exertion. These symptoms and signs are similar to chronic angina symptoms, consisting of sub-sternal chest pain or discomfort that may radiate to the jaw, left shoulder or

arm. Dyspnea, nausea, diaphoresis or syncope may either accompany the chest discomfort or may be the only symptom of ACS. About one-third of patients with MI have no chest pain perse and they tend to be older, females, diabetics.^{1,2}

Many hospitals have developed chest pain observation units to provide a systematic approach towards serial risk stratification to improve the triage process. In many cases, those who have not experienced new chest pain and have insignificant ECG changes and no cardiacbiomarker elevation, undergo treadmill exercise tests or imaging procedures to exclude ischemia at the end of 8- to 24-hour period and are discharged directly from the Emergency Department (ED) if these tests are negative.³

Material and methods

The hospital based observational study was carried out in patients of ACS aged $<$ 45 years, admitted to Cardiac Care Unit (CCU) of Department of Medicine I.G. Medical College Shimla from 1st June 2013 to 31st May 2014. Total of 50 cases (male= 44, female= 6) of young ACS were included in study. This study was approved

by Institution Ethics Committee. The Informed consent was taken from all patients.

Patient Selection

Inclusion Criteria

- Age of patient was 45 years or below.
- Patients who fulfilled the criteria of Acute Coronary Syndrome were included

Acute, evolving, or recent MI defined as the typical rise and/or fall of biochemical markers of myocardial necrosis with at least one of the following:

- Symptoms of ischemia.
- Electrocardiographic changes indicative of ischemia and/or infarction.
- Development of pathologic Q waves in the ECG.
- Imaging evidence of new loss of viable myocardium or new regional wall motion abnormality.

Unstable Angina (USA) was defined as angina pectoris (or equivalent type of ischemic discomfort) with at least one of three features:

- Occurring at rest (or minimal exertion) and usually lasting >10 minutes.
- Being severe and of new onset (i.e. within the prior 4-6wks).
- Occurring with a crescendo pattern (i.e., pain that awakens the patient from sleep or that is more severe, prolonged, or frequent than previously).

NSTEMI- If a patient with USA develops evidence of myocardial necrosis, as reflected in elevated cardiac biomarkers.

Exclusion Criteria

- Patients not giving informed consent.
- Patients with advanced co morbid conditions, including malignancies, advanced heart failure or valvular heart diseases.
- Patients already on statins.
- Patients with secondary causes of cardiovascular

diseases like thyroid disorder, renal disorders, liver disorders, Cushing's syndrome, on estrogen administration which affect lipid metabolism.

- Patients with expected transfer to another hospital within 48 hours or if followup not possible.

Statistical analysis

Data collected was managed on a Microsoft Excel spreadsheet. All analysis was performed with the SPSS 10 version. Data were expressed using mean \pm standard deviation for continuous variables and frequency (percentage) was used to describe distribution of categorical variables. Association of risk factors of disease was carried by using Chi-Square Test.

Results

Table 1: Distribution Of Patients According To Outcome

Outcome	No. of Patients (N=50)	Percentage
Recovered	47	94%
Lama	2	4%
Died	1	2%
Total	50	100%

Forty seven (94%) patients recovered and were discharged on treatment of CAD. Two (4%) patients left against medical advice and 1(2%) patient who presented in Killip class IV, died of cardiogenic shock.

Discussion

In our study group, 10(20%) patients were subjected to thrombolysis with streptokinase and 2(4%) were thrombolysed with tenecteplase. Out of 50 patients, 18(36%) patients presented with post MI angina and 8 (16%) patients with LVEF. In our study group of total 50 patients, 47 patients improved after treatment, 2 patients left against medical advice. One patient, who

presented in cardiogenic shock, died. Mortality rate was 2% in our study group. In studies by Hochman S et al and Chun P W the mean left ventricular function (E F) was 44% (SD 10%) with 3% incidence of heart failure and 4.5% incidence of cardiogenic shock with low in hospital mortality (1.2%).^{4,5}

Conclusion

In ACS in young, 2 % patients died.

References

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