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Clinical Presentations in Acute Coronary Syndrome in Young Patients

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ABSTRACT *Cardiovascular disease especially coronary artery disease is a well-known disease entity. It has been an indwelling disease for the past many years upsetting the elderly and those living in urban cities and developed nations. The problem now in this era of time is that, it is spreading like an epidemic to the nonurban that is in rural areas and developing nations and most problematic part is, it is affecting the young generation. It has no longer become a disease of the old and senile*

INTRODUCTION

Cardiovascular disease studies done in young patients are mainly dedicated on the prognosis, the cruelty of illness, the various ways of clinical presentation. Diseases of the cardiovascular system are becoming a matter of concern in the Indian sub-continent, the cause for it being the economic burden on the developing nation. Already this disease is having a mortality rate of 25 % in India. As the prevalence of cardiovascular disease is on the upswing in the developing nations the cost spend on healthcare will keep on tallying and even if you cap the rates, expenditure will keep on adding up as newer technology option for treatment will follow-up.[1,2]

AIMS AND OBJECTIVES

To study the various clinical presentations in young patients with acute coronary syndrome.

MATERIALS AND METHODS

Materials and methods:
Source of Data:
Mahatma Gandhi Memorial Govt. Hospital, Trichy

Study Design:
Unicentric Prospective Observational Study

Period of Study: 40 weeks.

Inclusion Criteria

- Age between 18 and 45 years of both sex, male and female.
- Patient fitting in acute coronary syndrome, diagnosed clinically along with the help of electrocardiograph and cardiac markers.

Exclusion Criteria

- Age > 45 years
- Patient not willing for study

Method

In this study, 70 participants aged 18 – 45 years with features of acute coronary syndrome admitted in Intensive Cardiac Care Unit or Intensive Medical Care unit between august 2014 and august 2015 were studied after getting their consent from patient and their relative. History taking, electrocardiograph and clinical examination was done and recorded in a form of a proforma. History included age, chief complaints, detailed history about pain, family history, history of drug/addiction, past history of any significance. Patients ECG was taken to localise the culprit artery, routine complete hemogram, urea and creatinine levels, fasting blood sugar, chest X-ray, CPK-MB, lipid profile to rule out hyperlipidaemia, echocardiography and BMI was calculated.

Statistical Analysis: Statistical analysis was done by using percentages, mean values, standard deviation, standard error, chi square tests. SPSS version 22 was used to analyse data.

RESULTS AND ANALYSIS

TABLE:1

Particulars	Frequency (n=70)	Percentage (100%)
Chest pain retrosternal In nature	37	52.9
No retrosternal chest Pain	33	47.1

TABLE:2

Particulars	Frequency (n=70)	Percentage (100%)
Chest pain radiating to shoulder and/or arm(CPS)	14	20.0
No chest pain radiating to shoulder and/or arm(NCPS)	56	80.0

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TABLE:3

Particulars	Frequency (n=70)	Percentage (100%)
Chest discomfort (CDI)	16	22.9
No chest discomfort (NCDI)	54	77.1

TABLE:4

Particulars	Frequency (n=70)	Percentage (100%)
Dyspnea (DYS)	21	30.0
No dyspnea (NDYS)	49	70.0

TABLE:5

Particulars	Frequency (n=70)	Percentage (100%)
Nausea (NAU)	25	35.7
No nausea(NNAU)	45	64.3

TABLE:6

Particulars	Frequency (n=70)	Percentage (100%)
Vomiting (VOM)	10	14.3
No vomiting (NVOM)	60	85.7

TABLE:7

Particulars	Frequency (n=70)	Percentage (100%)
Jaw pain(JAW)	10	14.3
No jaw pain(NJAW)	60	85.7

TABLE:8

Particulars	Frequency (n=70)	Percentage (100%)
Diaphoresis (DIA)	63	90.0
No diaphoresis (NDIA)	7	10.0

TABLE:9

Particulars	Frequency (n=70)	Percentage (100%)
Palpitation (PAL)	54	77.1
No palpitation NPA	16	22.8

TABLE:10

Particulars	Frequency (n=70)	Percentage (100%)
Abdominal pain(ABN)	20	28.6
No abdominal pain (NABN)	50	71.4

TABLE:11

Particulars	Frequency (n=70)	Percentage (100%)
Fatigue (FAT)	14	20.0
No fatigue (NFAT)	56	80.0

TABLE:12

Particulars	Frequency (n=70)	Percentage (100%)
Giddiness (GID)	10	14.3
No giddiness (NGID)	60	85.7

DISCUSSION

This study was conducted to determine the various clinical presentations of acute coronary syndrome in young people with age less than 45 years . Myocardial infarction is very lethal in young adults reasons being because of its atypical presentation, refutation of any previous chest pain and the reluctance to take immediate medical attention.[5,6]

Young people are under the impression that they won't get myocardial infarction because it occurs late in life and also, they think that a pain of an heart attack or myocardial infarction will be very severe type of chest pain. This has come into highlight after a study on focus group done by REACT research program.[3,4]

The American Heart Association (AHA) and the American College of Cardiology (ACC) have come together to put forward the guidelines to describe these atypical/uncharacteristic pain of myocardial ischemia[30.] They are as follows:

Pleuritic chest pain (i.e., knifelike or sharp pain brought on by coughing or respiratory movements)

The location of the pain or discomfort is primary not in the chest but in the abdomen particularly in the middle or lower abdomen

Chest pain which can be confined to a small area and pointed out by one finger, usually over the left ventricular apex.

Reproducible chest pain with palpation or movement of the arm or chest wall.

Chest pain lasting for very short period of time from a few seconds to less

Continuous pain without gap longing for several hours.

Radiation of pain in the lower limbs.

Studies and data collected from sample of large population of patients with complaints of acute chest pain specify that the acute coronary syndrome can take place even in those with atypical symptoms at an adequate frequency such that a single factor cannot be sufficient to eliminate the diagnosis of acute ischemic heart disease. General practitioners and clinicians should be watchful for "angina equivalents" such as shoulder or jaw pain in the nonappearance of chest pain or dyspnea, vomiting or nausea, and diaphoresis. A higher mortality rate was established in patients without chest pain who were admitted for myocardial ischemia.

CONCLUSION AND RECOMMENDATIONS

Diagnosing acute coronary syndrome in young patients is very important. A simple ECG will help the patient from DALYs and losing years of life expectancy.

General practitioners and physicians should keep in mind about the atypical pain in young myocardial infarction.

A basic ECG machine for taking ECG if made available at least in a locality can save a lot of time in diagnosing myocardial infarction.

Early diagnosis and better treatment can help the patient in many ways like psychologically, productive life and ultimately economically.

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