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COMPLICATIONS DEVELOPED DURING COURSE OF ILLNESS RELATED TO CAD AND DEATH DURING THE HOSPITAL COURSE AT AIMS, DEWAS

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Abstract

Background & Method: Patients admitted in Amaltas Institute of Medical Sciences, Dewas ICCU were subjected to thorough clinical evaluation, standard 12-lead electrocardiography and blood sample was drawn for laboratory evaluation. Patients were also evaluated for major conventional risk factors including Hypertension, Diabetes Mellitus, smoking, dyslipidemias, smoking, obesity and previous cardio-vascular event like previous MI and stroke.

Result: Highest prevalence of young MI was seen between 36-40 years in patients less than 40 years of age. Prevalence of MI increases according to age. There is more than 10 times of risk of MI after 30 years. Majority of the patients were not thrombolysed n=66 (63.5%), only 38 patients were thrombolysed (36.5%).

Conclusion: There is a lesser prevalence of shock in young MI patients <40 years and the risk at least doubles when age crosses 40 years. In our study group, there was no any life threatening complication during the thrombolysis. Hypotension was the most common complication during the thrombolysis and none of the patients had significant bleeding complication.

Keywords: illness, CAD & Complications.
Study Designed: Observational Study.

Introduction

One of the most striking characteristic of coronary artery disease in young Indians is a relatively low prevalence of traditional coronary risk factors such as high cholesterol, cigarette smoking and hypertension in the patient diagnosed to have coronary artery disease[1].

Although this data do not necessarily imply a low prevalence of these and other coronary risk in Indians, they do suggest that the underlying pathophysiologic process might indeed be different than that traditionally accepted for atherosclerosis in the industrialized countries of the West[2]. It has shown by several investigators involved in the field of atherosclerosis that oxidized LDL cholesterol play a key role in atherosclerotic process. The lipid hypothesis has also been supported by epidemiological studies[3&4].

In contrast to uncertainty about the role of LDL cholesterol, recent studies have demonstrated that serum HDL cholesterol level are generally low and serum triglyceride levels are high among the Indians and with young coronary artery disease[5]. Some recent data suggest that Indians with coronary artery disease might have evidence of insulin resistance which is manifested by the presence of hyperinsulinemia, glucose intolerance and truncal obesity[6].

Material & Method

Patients admitted in Amaltas Institute of Medical Sciences, Dewas from Sep 2018 Aug 2019 ICCU were subjected to thorough clinical evaluation, standard 12-lead electrocardiography and blood sample was drawn for laboratory evaluation. A total of 104 Patients were also evaluated for major conventional risk factors including Hypertension, Diabetes Mellitus, smoking, dyslipidemias, smoking, obesity and previous cardio-vascular event like previous MI and stroke.

Patients were managed according to the standard protocols. No interventions were taken as a part of study, which deviates management of patient from standard protocols.

Exclusion criteria

1. All other causes of ICCU admission like arrhythmias and valvular heart disease

2. Patients with severe co morbidities like chronic kidney disease, chronic lung disease, hyperthyroidism.

Inclution criteria

1. Age ≤ 40 years

2. Myocardial infarctions were diagnosed according to ACC/AHA guide lines.

3. Pathological Q waves suggestive of myocardial necrosis have been included. Suspected cases have been confirmed with 2DEcho.

4. Patients with typical chest pain suggestive of myocardial ischemia even without ECG changes mentioned above, was admitted and evaluated.

Results

Table 1: AGE AND SEX DISTRIBUTION

AGE	MALE	FEMALE
15-20	0	0
21-25	0	03
26-30	04	00
31-25	23	07
36-40	57	10

Highest prevalence of young MI was seen between 36-40 years in patients less than 40 years of age. Prevalence of MI increases according to age. There is more than 10 times of risk of MI after 30 years.

Table 2: THROMBOLYSIS OF ACUTE MI

	No. of STEMI patients	Percentage
Done	38	36.5%
Not done	66	63.5%

Majority of the patients were not thrombolysed n=66 (63.5%), only 38 patients were thrombolysed (36.5%).

Table 3: COMPLICATION DURING THROMBOLYSIS

COMPLICATIONS	NO. OF PATIENTS (TOTAL NO=38)	PERCENTAGE
Arythmias during thrombolysis (total)	07	18.4%
AIVR	04	10.5%
VT	02	5.2%
Ectopics	02	5.2%
Allergic reaction	03	7.8%
Hypotension during thrombolysis	08	21%
Bleeding	00	0%
Cardiac arrest during thrombolysis	00	0%

68.1 % patients having complications during thrombolysis.

Discussion

There were total of 92% patients eligible for thrombolytic therapy, of these 32% under gone thrombolysis. Late arrival was the most common cause of not receiving thrombolysis.

In our study group, there was no any life threatening complication during the thrombolysis. Hypotension was the most common complication during the thrombolysis, there was 14% of patients who developed hypotension during thrombolysis, that too were transient. 12%of the patients developed arrhythmias during the thrombolysis, 2% among them was VT without any hemodynamic compromise and recovered within few minutes. 6% had allergic reactions, and none of the patients had bleeding complication[7].

While analyzing the data during the follow up, more patients were in NYHA class 3 (4% vs 11%), and class 4(1% vs 3%). Similarly there were more patients with angina (38% vs 41%), and heart failure (25% vs 32%).

Similar studies by Akram H. Al-Khadra et al[8] Acute MI with ST segment elevation was present in 92.3% of study population. Of the patients, eligible for thrombolytic therapy, only 68.3% received it.

Study done by Jokg-Uwfeu Llhama.et al[9] found that In-hospital complications in patients with and without reperfusion therapy were comparable, with the exception of a higher prevalence of congestive heart failure in patients >40 years (20%) compared to 4% in patients <40 years (p = 0.02), mainly in the subgroups without reperfusion therapy (24 vs. 6%, p = 0.03). No in-hospital mortality was observed in patients with reperfusion therapy irrespective of age, where as 6.2 and 7.2% of the group <40 years and group >40 years of patients without reperfusion therapy died during hospitalization. They also found that there is no any significant difference of survival benefit among the patients of<40 years and >40 years for those who are thrombolysed. But the survival benefit is significant in those patients <40 years as compared to >40 years in those who are not thrombolysed**.**

Conclusion

There is a lesser prevalence of shock in young MI patients <40 years and the risk at least doubles when age crosses 40 years. In our study group, there was no any life threatening complication during the thrombolysis. Hypotension was the most common complication during the thrombolysis and none of the patients had significant bleeding complication.

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