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A study of the clinical profile of Acute Inferior wall myocardial infarction in semi urban population of India.

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ABSTRACT

Amongst all acute myocardial infarction anterior wall myocardial infarction is the most common variant and inferior wall myocardial infarction the second most common. The aim of this study was to study the clinical features, risk factors, complications & overall mortality in acute inferior wall myocardial infarction (IWMI) admitted to a tertiary care center in PIMSR, Islampur between December 2022 to December 2023. In present study out of the total studied 100 patients 66% were male & 34% were female patients with M: F ratio 1.9:1, with mean age 57.4 years. The highest incidence was noted in 51 to 60 years age group (44%), 87% of patients had chest pain, 34% patients had sinus bradycardia & 40% had AV conduction defects. Total mortality rate was 25% with highest incidence in age group 61-70 yrs. Mortality in females was high (29.4) than males (22.6%). Mortality was highest 38.4% in patients without chest pain group. Incidence of mortality in risk factor groups out of 100 cases & out of 25 total deaths showed Tobacco users – 22.8% & 32%, Hypertension – 21.8% & 28%, Diabetes Mellitus – 34.6% & 36%, Alcohol users – 31.5% & 24% respectively. Mortality rate in relation to Killip's class was 41.6% in class III, 75% in class IV. Incidence of atrioventricular defects & intraventricular defects was 45% & 11% with mortality rate of 26.6% & 63.6% respectively. Considering clinical presentation with no chest pain MI having high mortality, high complications & mortality rate in risk groups like Tobacco users, Diabetics & Hypertensive patients, proper educational programs are needed.

Keywords: Acute, Inferior wall, Myocardial infarction, Conduction abnormalities.

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INTRODUCTION

Acute myocardial infarction (AMI) is one of the major public health problems and leading cause of death worldwide & in India. Actual prevalence of CAD has increased from 4% in 1960 to 11% in 2001. That means from every 25th individual in 1960 to every 9th in 2001 can be confidently suspected of having CAD [1]. Prevalence of Anterior wall MI (AWMI) (55%) is the more than inferior wall MI (IWMI) (40-50%) [2]. Inferior wall myocardial infarction (IWMI) have more favorable prognosis than anterior wall MI. It has also been shown that right ventricular infarction occurs exclusively in association with inferior wall myocardial infarction or inferoposterior myocardial infarction [3]. Multiple risk factors are implicated, ranging from Tobacco use, cigarette smoking, hypertension, diabetes mellitus, obesity & various psychosocial stresses imposed by social dynamics and urbanization [4]. Thus the present study deals with clinical profile, risk factors, complications & mortality in acute inferior wall myocardial infarction.

Objectives of the study:

The aim of this study was to study the clinical profile, prevalence of risk factors, complications & mortality in patients with acute inferior wall MI, who were admitted to the Cardiac Intensive Care Unit (CICU) with acute onset of complaints and ECG changes suggestive of acute inferior wall MI (ST elevation in lead II, III and avF).

MATERIALS AND METHOD

One hundred patients of acute inferior wall myocardial infarction admitted to a tertiary care center in PIMSR, Islampur between December 2022 to December 2023 were included in the present study.

The inclusion criteria was all patients with ECG evidence (Leads II, III, AVF) of acute inferior wall STEMI. Patients with Anterior wall MI were excluded. Details of study was explained to patients & relatives. Written consent was taken from both. Permission of study was approved from ethical committee of Prakash Institute of medical sciences & research, Islampur. These cases were studied for clinical features, risk factors, complications, and mortality in relation to acute inferior wall myocardial infraction.

The following data was collected from patients and analyzed -

1. General Information & cardiovascular risk factors such as - age, sex, diabetes mellitus, hypertension, smoking, alcohol, dyslipidemia, family history, postmenopausal state.
2. Clinical features at the time of arrival to the hospital
3. Electrocardiographic changes in the 12 lead ECG.
4. Treatment received in the hospital.

5. During in-hospital stay – Patients clinical course, Complications & mortality rate were evaluated.

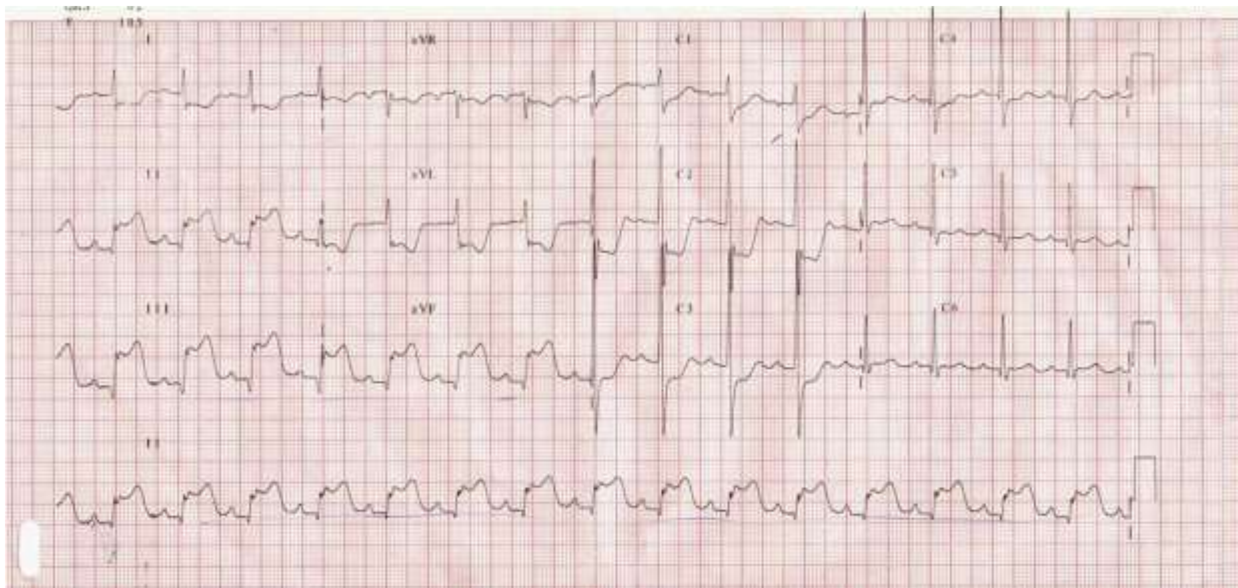

Figure 1: Electrocardiogram showing inferior wall myocardial infarction

Observations

100 cases of acute inferior wall myocardial infraction were studied which are admitted in I.C.U. of Prakash Institute of medical sciences & research, URUN - ISLAMPUR in between. These cases were studied for clinical features, risk factors, complications, A-V conduction abnormalities and mortality in relation to inferior wall myocardial infraction.

Age incidence & mortality -

Cases under study were from varying age groups youngest was 29 years old and eldest was 100 years old. The mean age was 57.4 year.

Table 1: Age incidence & mortality –

Age group in years	No of cases	%	Mortality No of cases	%	% Out of 25 deaths
21-30	01	1	-	-	-
31-40	01	1	-	-	-
41-50	17	17	3	17.6	12
51-60	44	44	10	22.7	40
61-70	24	24	8	33.3	32
71-80	9	9	4	44.4	16
81-90	3	3	-	-	-
91-100	1	1	-	-	-
Total	100	100	25		100

In present study the highest incidence was in age group 51 – 70 Yrs. - 68%.The lowest incidence was in extremes of age group i.e. Age < 30 & > 90 Yrs. 1% in each age group. Mortality was 56% in age group 51-70 yrs. Mortality rate was 22.7% in age group 51-60 yrs. & 33.3% in age group 61-70 yrs.

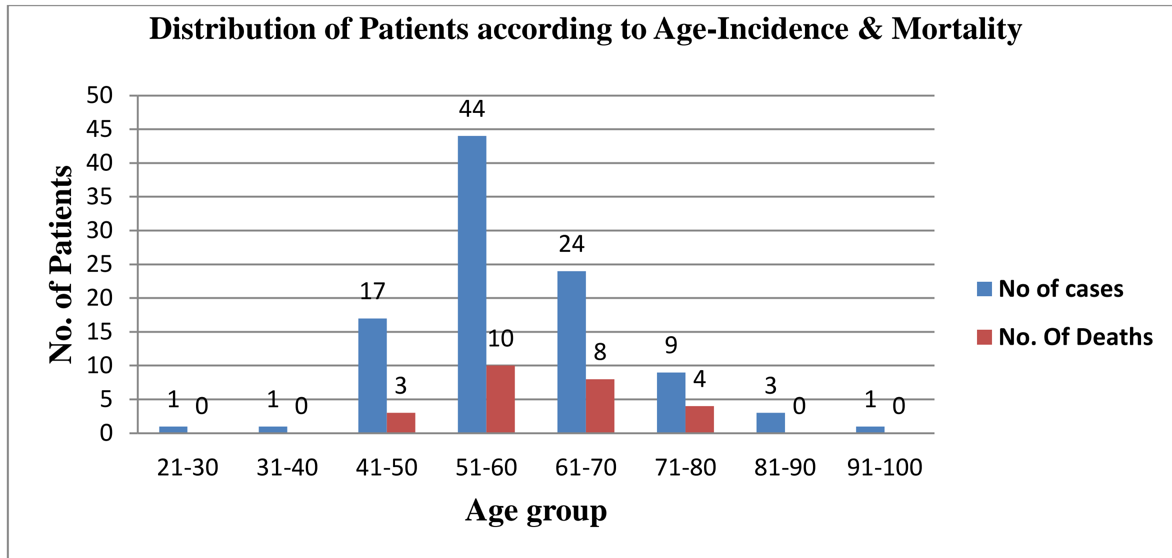

Figure 1: Age incidence & mortality

Table 2: Sex - Incidence & mortality

Sex	No of cases	%	Mortality No of cases	%	% Out of 25 deaths
Male	66	66	15	22.72	60%
Female	34	34	10	29.41	40%

Out of 100 cases 66 were male (66%) and 34 were females (34%). Mortality in males was 15 (22.72%) & in females it was 29.41%. Incidence Ratio of M: F is - 1.94:1 & Mortality ratio of M: F -1.5:1

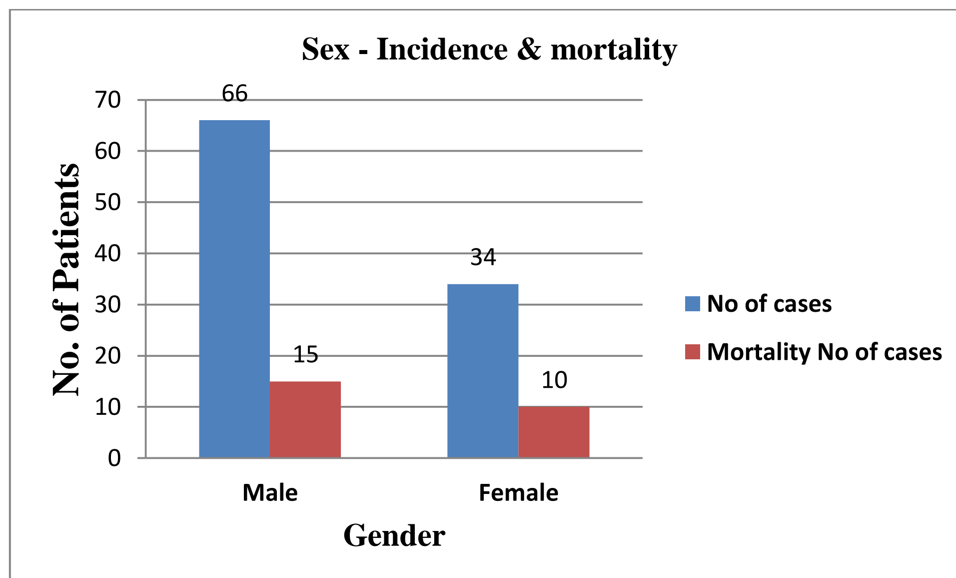

Figure 2: Sex Incidence & Mortality

Table 3: Incidence & mortality among males and females in various age group - Total deaths 25

Age Group	Sex	Incidence	%	Mortality	%	% Mortality out of 25
21 - 30	M	1	1	-	-	-
	F	-	-	-	-	-
31 - 40	M	1	1	-	-	-
	F	-	-	-	-	-

41 - 50	M	13	13	3	23	12
	F	4	4	-	-	-
51 - 60	M	33	33	7	21.21	28
	F	11	11	3	27.27	12
61 - 70	M	13	13	3	23	12
	F	11	11	5	45.45	20
71 - 80	M	5	5	2	40	8
	F	4	4	2	50	8
81 - 90	M	-	-	-	-	-
	F	3	3			
91 - 100	M	-	-	-	-	-
	F	1	1	-	-	-
Total		100		25		

Highest incidence of 33% amongst male was in age group 51-60 yrs. while 11% was in females in each age group of 51-60 & 61-70 yrs. Mortality amongst males was highest i.e. 40% in age group 71-80 yrs. while in female it was 45.45 & 50% in age group 61-70 yrs. & 71-80 yrs. respectively.

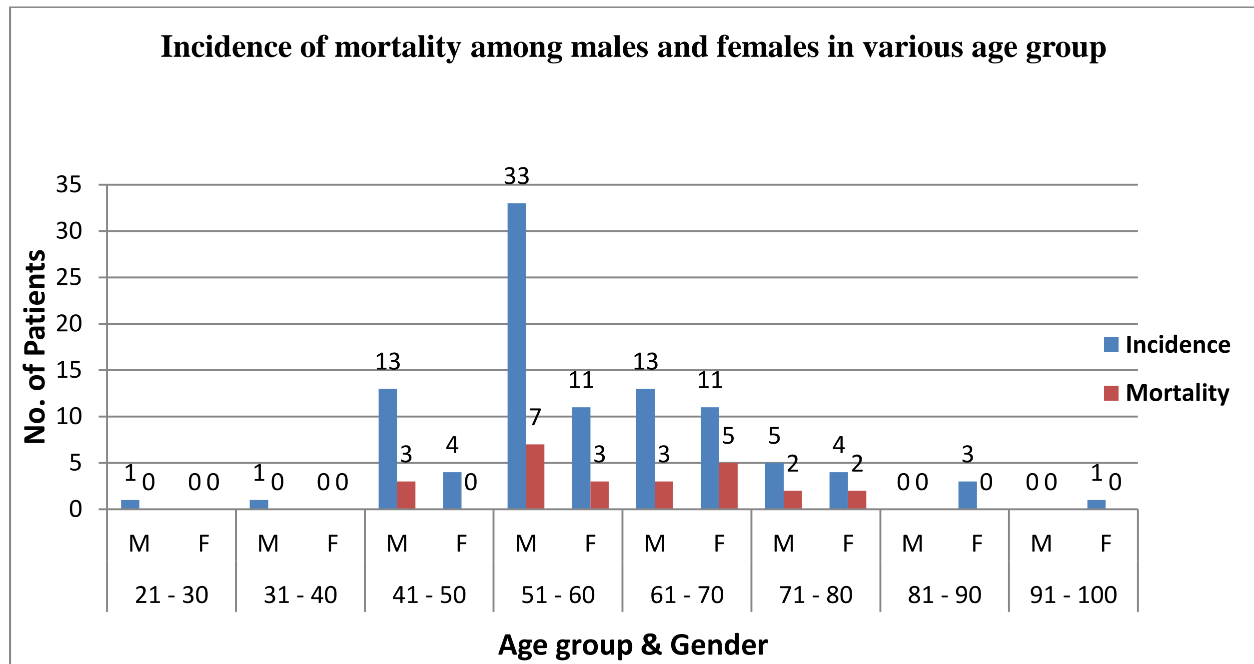

Figure 3: Incidence of mortality among males and females in various age group

Table 4: Time interval between onsets of symptom's and time of hospital admission -

Age Yrs.	<2hrs	2-4 hrs.	4-8hrs	8-12hrs	12-24hrs	24-48 hrs.	48-72 hrs.	>72 hrs.
21-30	-	-	1	-	-	-	-	-
31-40	-	1	-	-	-	-	-	-
41-50	2	4	7	3	-	-	-	-
51-60	1	6	6	10	1	2	2	2
61-70	-	3	7	2	4	2	1	-
71-80	2	1	2	1	2	-	-	-
81-90	-	-	1	1	-	1	-	-
91-100	-	-	-	-	1	-	-	-
Total	5	15	24	17	8	5	3	3

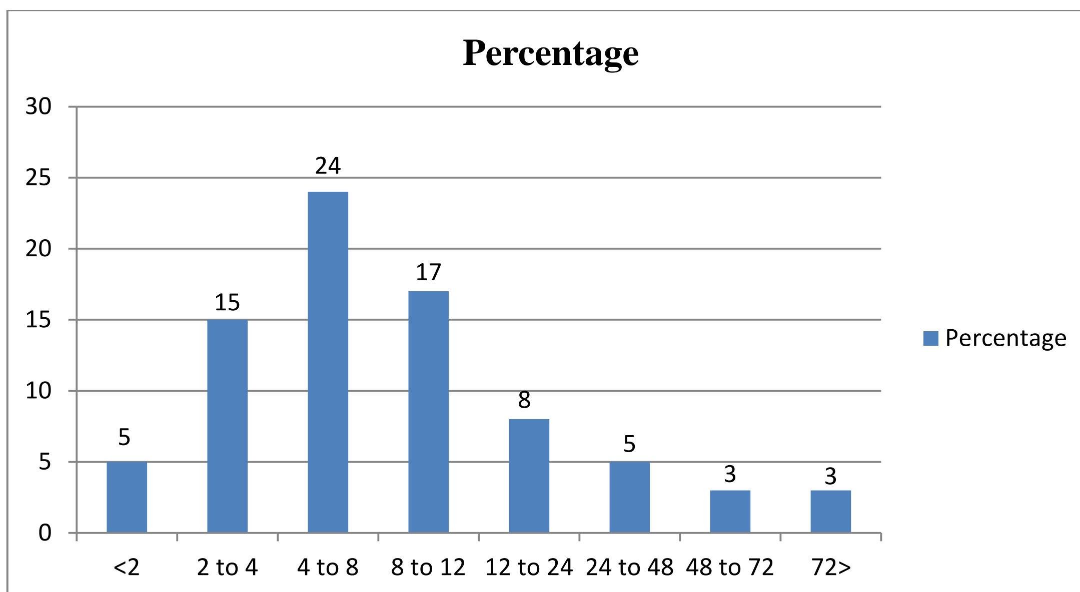

Figure 4: Time interval between onsets of symptom's and time of hospital admission

20% cases admitted within 4 hours,

41% cases admitted within 4-12 hours

61% cases admitted within 12 hours,

8% cases admitted within 12-24 hours

78% cases admitted within 24 hours,

11% cases admitted after 48 hours

Table 5: Incidence of time interval between admission and mortality -

Time	No. of cases and %		% out of 25 deaths
Within 6 hrs.	4	4	16
6-12 hrs.	7	7	28
12 - 24 hrs.	2	2	8
24 - 48 hrs.	2	2	8
48 - 72 hrs.	2	2	8
More than 72 hrs.	8	8	32
Total	**25**		**100**

Mortality in present study showed out of total 25 deaths 11(44%) deaths occurred within 12 hrs & 68% within 3 days.

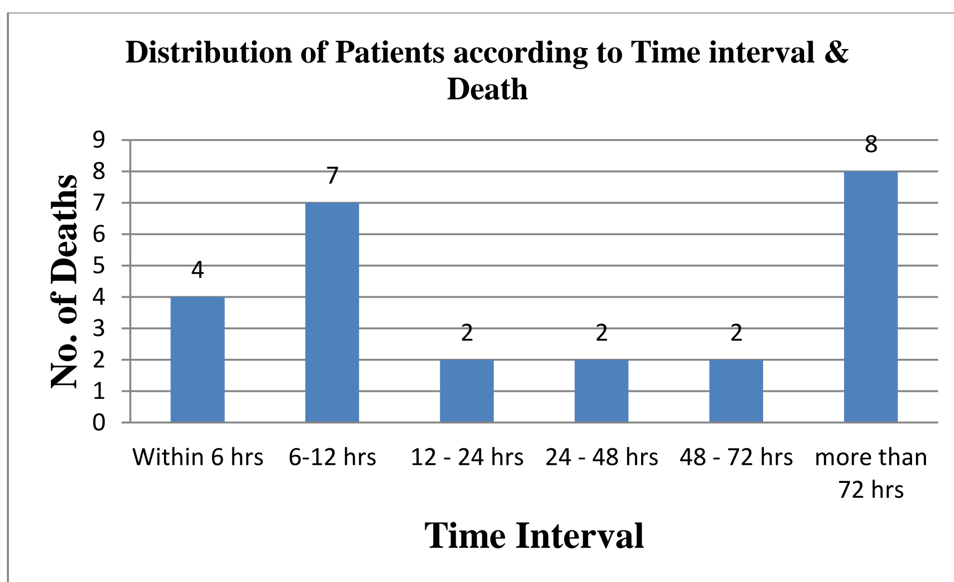

Figure 5: Incidence of time interval between admission and mortality

Table 6: Incidence & mortality in different cardiac symptoms

Symptom	No. of cases	%	Mortality – No of cases	%	% Out of 25 deaths
1. Chest Pain	87	87	20	22.9	80%
2. No Chest Pain	13	13	5	38.4	12%
3. Vomiting	16	16	-	-	-
4. Giddiness	17	17	-	-	-
5. Palpitation	16	16	-	-	-
6. Sweating	58	58	-	-	-
7. Breathlessness	23	23	-	-	-

In present study 87% cases admitted with chest pain & 13% cases admitted without chest pain & Mortality was 22.9% (20 out of 87 cases) with chest pain group & 38.4% (5 out of 13 cases) in patients without chest pain group.

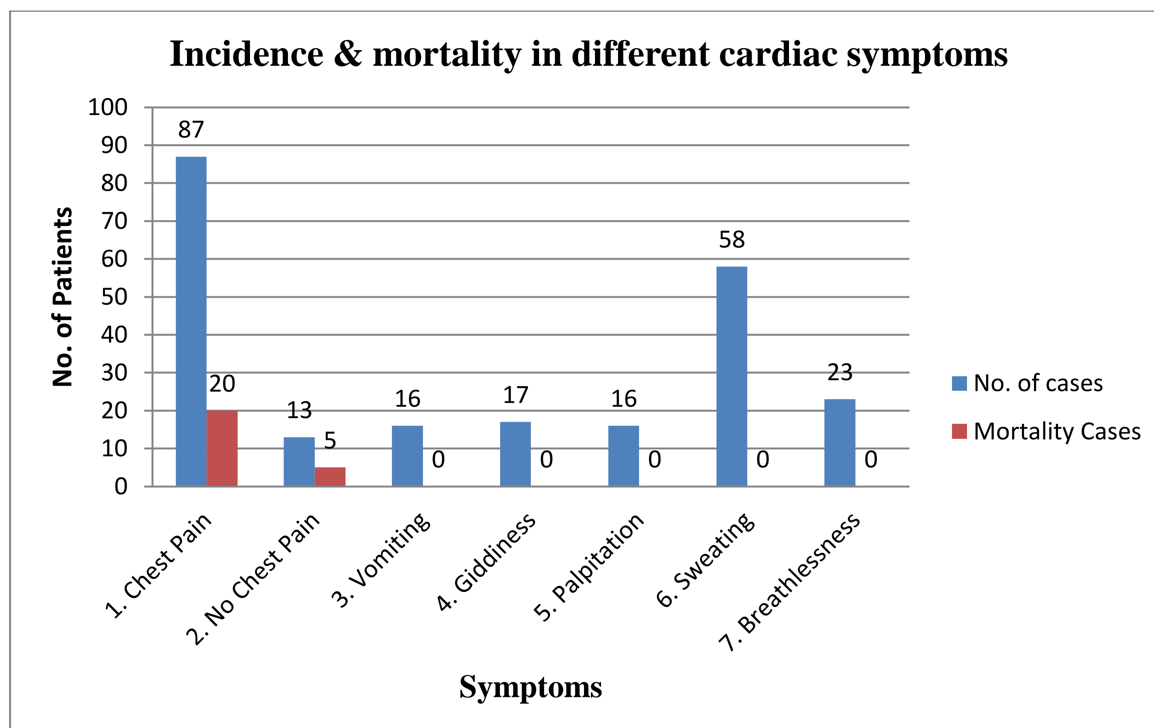

Figure 6: Incidence & mortality of different cardiac symptoms

Table 7: Risk factors - Incidence & mortality

Risk Factors	No of Cases	%	Mortality	%	% Mortality out of 25 deaths
1.Hypertension	32	32	7	21.8	28
2.Diabetes Mellitus	26	26	9	34.6	36
3.Previous H/o Ischemic Heart Disease	16	16	3	18.7	12
4.Chronic Alcohol	19	19	6	31.5	24
5.Tobacco	35	35	8	22.8	32
a. Smokers – Biddy	3	3			
b. Smokers – Cigarette	19	19			
c. Chewer	25	25			

In present study incidence of risk factors are as follows – 35% were using Tobacco either smoking or chewing, 19% were Chronic alcoholic, 32% having Hypertension, 26% had Diabetes Mellitus & 16% were known cases of IHD.

Incidence of mortality out of 100 cases & out of 25 total deaths in our study showed Tobacco users – 22.8% & 32%, Hypertension – 21.8% & 28%, Diabetes Mellitus – 34.6% & 36%, Alcohol users – 31.5% & 24% respectively.

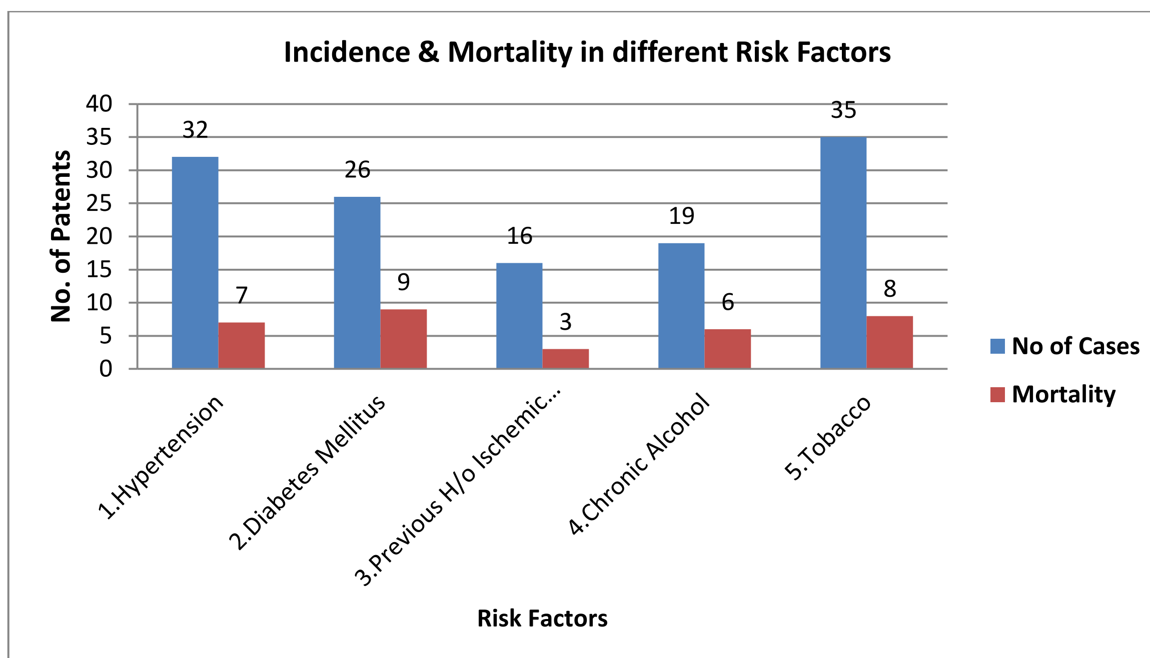

Figure 7: Incidence & mortality amongst Risk Factors

Cardiac status Incidence & mortality

After AMI the insult of myocardium was studied and tabulated as per killip's classification as show in table no. 8

Table 8: Cardiac status - Incidence & mortality

Killip's class	No. cases	Percentage	Mortality No of cases	%	% Mortality out of 25 deaths
I	42	42	-	-	-
II	26	26	5	19.2	20
III	12	12	5	41.6	20
IV	20	20	15	75	60

Class I- No Heart failure.

Class II- Mild to mod. Heart failure.

Class III- Pulmonary edema (LVF)

Class IV- Cardiogenic Shock.

- 42% cases were normal while 58% cases had Gr II, III, and IV Killip's cardiac status.
- Mortality rate was 75% in Killip's class IV& 41.6% in class III.
- Out of total 25 deaths 15 deaths i.e. 60% were from Killip's class IV.

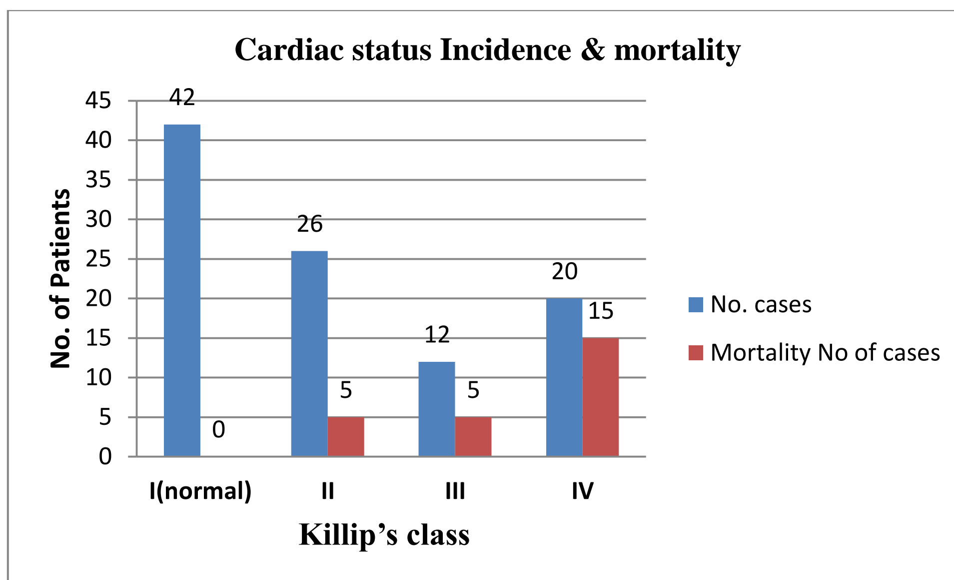

Figure 8: The Cardiac Status-Killip's class

Incidence of individual arrhythmias –

During hospital stay various arrhythmias found in IWMI cases are shown in Table no – 9

Table 9: Incidence of individual arrhythmias –

Type of Arrhythmias	Number of cases	%
Sinus Bradycardia	34	34%
Sinus Tachycardia	17	17%
Vent. Ectopic	7	7%
Vent. Fibrillation	1	1%
Vent. Tachycardia	2	2%
Supraventricular Tachycardia	5	5%
Junctional/Nodal Rhythm	20	20%
Total	86	86 %

Highest incidence was of Sinus Bradycardia 34% & of Junctional/Nodal Rhythm – 20%

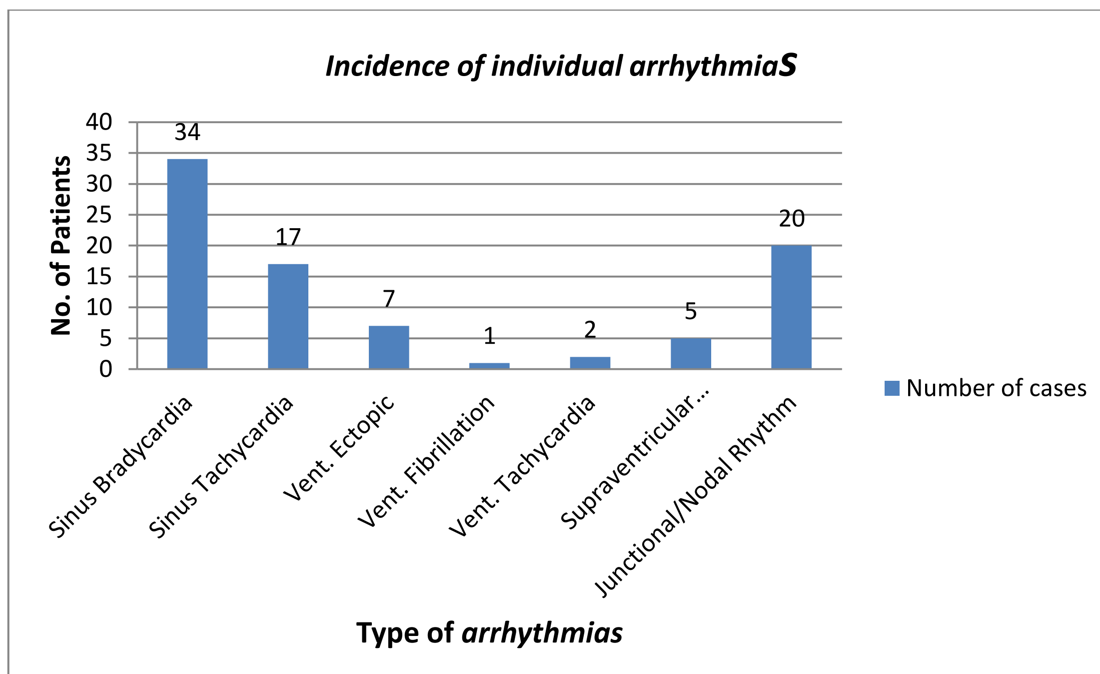

Figure 9: Incidence of individual arrhythmias

Incidence & mortality in individual A-V conduction defects

During hospital stay various arrhythmias found in IWMI cases are shown in Table no – 10

Table 10: Incidence & mortality in individual A-V conduction

Type of conduction	Number of cases	%	Mortality No of cases	%	% Mortality out of 25 deaths
I HB	21	21%	-	-	-
II HB	8	8%	-	-	-
Mobitz type I	3	3%	-	-	-
Mobitz type II	5	5%	1	20%	4%
III HB	16	16%	7	43.75	28%
RBBB	8	8%	6	75%	24%
LBBB	3	3%	1	33.33%	4%
Total	64	64%	15	23.43	60%

In present study highest incidence was of Ist & IIIrd degree heart block i.e. 21% & 16% respectively while highest mortality was in IIIrd degree heart block & RBBB i.e. 43.75% & 75% respectively.

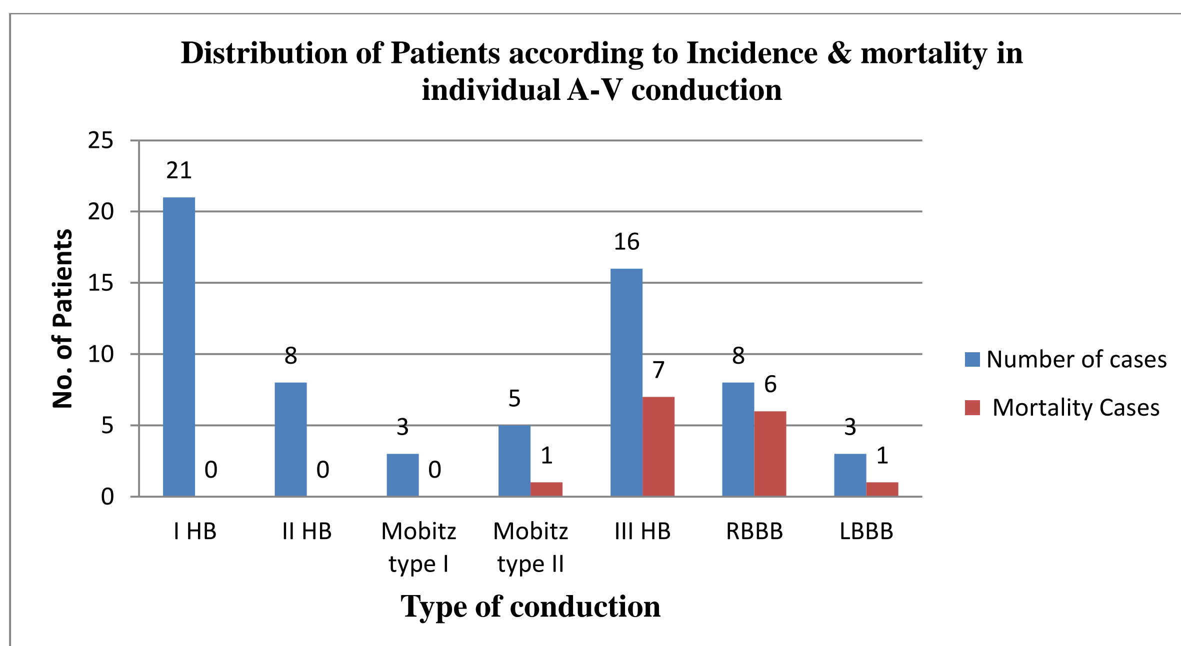

Figure 10: Distribution of Patients according to Incidence & mortality in individual A-V conduction

Table 11: Incidence of clinical course

Clinical Course	No. of cases out of 100	%
Complicated	65	65%
Uncomplicated	35	35%
Death	25	25%

Highest mortality was in complicated group i.e. 65%.

Incidence of clinical course

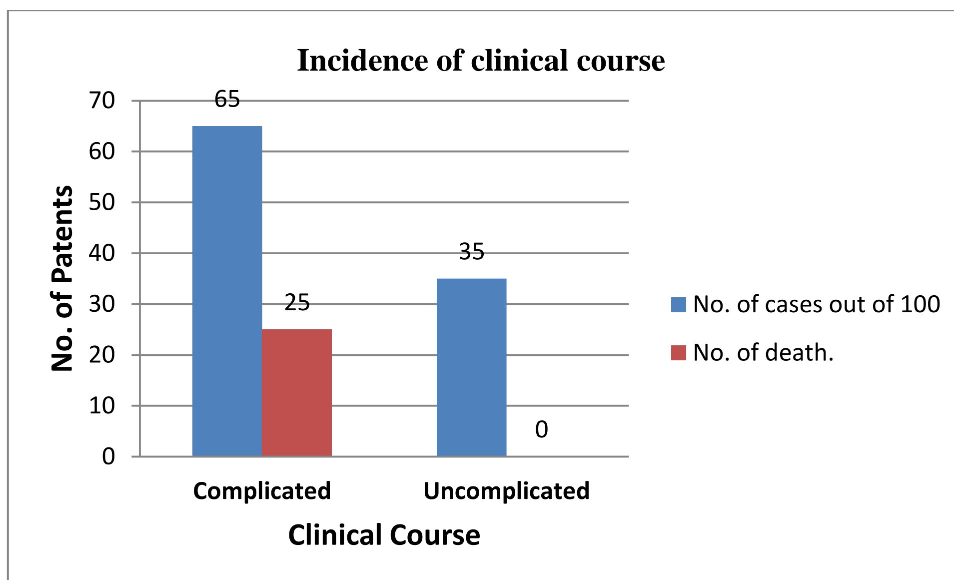

Figure 11: Incidence of clinical course

Incidence & mortality in relation to Thrombolysis, Cardiac pacing, Q & non Q Infarct, Conduction defects, Hypotension -

Table 12: Conduction defects, Hypotension

Group	No. of cases	%	No. of deaths	%	% deaths in 25 total deaths
Thrombolysed	16	16%	2	12.50	8%
Not Thrombolysed	84	84%	23	27.38	92%
Cardiac Pacing	8	8	5	62.5	32
Q Infarct	57	57	16	28	64
Non Q Infarct	43	43	9	20.9	36
Conduction defects	40	40	17	42.5	68
Hypotension	18	18	10	55.5	40

Highest mortality was found in non Thrombolysed group i.e. 27.38% & 28% in Q wave infarct group.

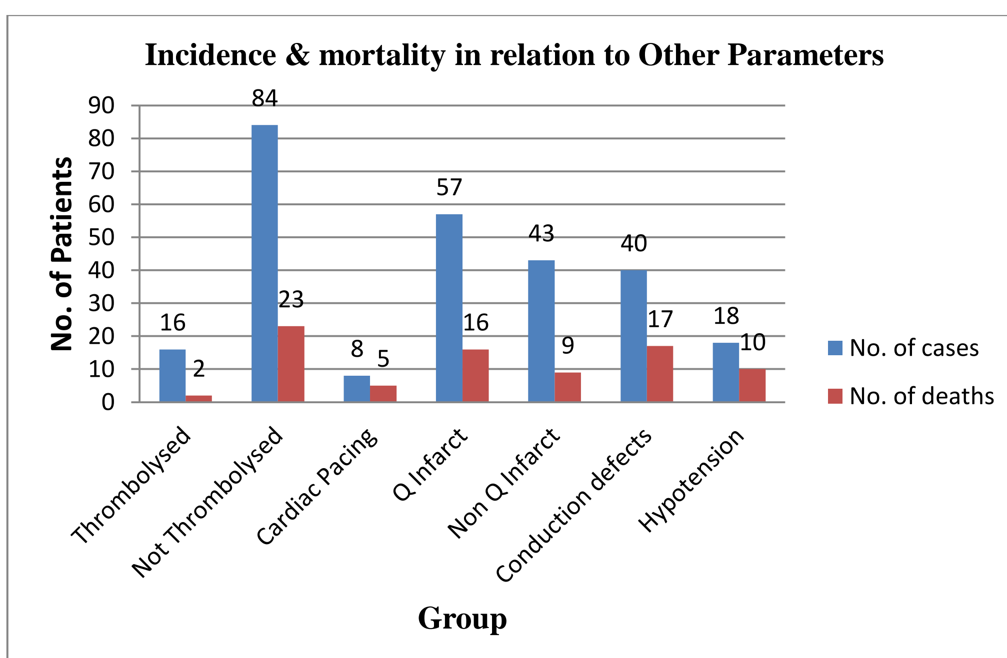

Figure 12: Incidence & mortality in relation to Other Parameters

DISCUSSION

Age- In present study the maximum number of cases of acute IWMI were from 51-60 & 61-70 years age group i.e. 44% % & 24% respectively. The youngest and oldest patients were of 29 years and 100 years age respectively. We found low incidence in extremes of age group. The mean age was 57.4 year. In our study mortality was 22.7% in age group 51-60 yrs. & 33.3% in age group 61-70 yrs. Mortality rate in study done by Agrawal B.J et al – 1978 was 48.7% in age > 60 yrs. & by Jhathkia K.U. et al – 1969 found 40% in age group 50-60 yrs. Norris et al [5] recorded 24.6% mortality in Inferior wall MI. Delay in hospital admission, lack of prehospital coronary care, illiteracy, non-recognition or negligence of disease symptoms, poor transportation in rural area increases death rate.

Sex: In present study there were 66% males and 34% females with male to female ratio of 1.94:1. Klein H. H. et al [6] in 1977-78 found M: F ratio 2.3:1 & in 1988-89 found 2.4:1. From this study it shows that males are more commonly affected than females. Cause is according to Friedberg men's are Tobacco chewers, heavy cigarette smokers, high blood pressure, more exposed to competitive stress of industrialization and urban life. Difference in sex hormones, predominance of estrogen in female protect coronary atherosclerosis possibly through lipid metabolism and blood clotting and low estrogen in post-menopausal women increases incidence in females in latter age. Mortality in present study showed out of total 25 deaths 15 deaths out of 66 males (22.72%) were males & 10 deaths out of 34 (29.4%) were females with M:F ratio 1.5:1. Higher death rate in females than males with M: F death ratio of 0.7:1. Puletti M. et al [7] in 1984 found M: F ratio 1:2.5. In age wise male & female distribution highest incidence of 33% amongst male was in age group 51-60 yrs. while 11% was in females in each age group of 51-60 & 61-70 yrs. Mortality amongst males was highest i.e. 40% in age group 71-80 yrs. while in female it was 45.45 & 50% in age group 61-70 yrs. & 71-80 yrs. respectively.

Time interval between symptoms and arrival to hospital:

In present study 5% cases were admitted within 2 hours while 56% cases were admitted within 2-12 hours & 11% cases admitted after 24 hours. D. C. fluk and olsen E. et al (1967) [8] observed that 21 patients out of 50 i.e. (42%) were admitted within 6 hours & in the series of Gupta et al (1972) 76 out of 165 monitored cases (46%) were admitted within 24 hours and 52 were admitted on 2nd day and 30.8% latter. This early admission of infarction patient's may help in reduction in mortality because of early treatment of reversible but potentially lethal arrhythmias [9]. Mortality in present study showed out 100 patients 11% & out of total 25 deaths 44% occurred within 12 hrs. 68% within 3 days respectively. According to study

done by Ball et al (1958) death rate was 42% within 24 hrs. & 69% within first week, while Agrawal & Mishra (1978) found death rate was 50% within 24 hrs.

Symptoms in acute inferior wall myocardial Infarction:

In present study 87% cases admitted with chest pain & 13% cases admitted without chest pain. 16% had vomiting, 17% had giddiness/ syncope, 16% had palpitation, 58% had sweating & 23% had breathlessness. More than 85% of patients with acute myocardial infarction present's with chest pain & 15-20% present without chest pain [10] such painless infarcts are more common in diabetics due to autonomic nervous dysfunction, elderly people or when AMI follows severe shock. Painless myocardial Infarctions are dangerous because of high mortality rate as compared to AMI with chest pain. Mortality in present study showed 22.9% (20 out of 87 cases) & 38.4% (5 out of 13 cases) in patients with chest pain & without chest pain respectively.

Risk factors:

Tobacco, Hypertension, Diabetes mellitus and known cases of Ischemic Heart Disease forms the major risk factors for myocardial infarction. There was marked overlapping of groups of risk factor. In present study incidence of risk factors are as follows – 35% were using Tobacco either smoking or chewing, 19% were Chronic alcoholic, 32% having Hypertension, 26% had Diabetes Mellitus & 16% were known cases of IHD. Incidence of risk factors studied by Stephen Schedit [11] showed 25% in tobacco users, 29% were Hypertensive, 15% were DM, while Kennelly FM [12] found 85% using Tobacco, 11% hypertensive & 29% known IHD. The mortality rate is directly proportional to individual risk factors & it increases with combination of various risk factors. Incidence of mortality out of 100 cases & out of 25 total deaths in our study showed Tobacco users – 22.8% & 32%, Hypertension – 21.8% & 28%, Diabetes Mellitus – 34.6% & 36%, Alcohol users – 31.5% & 24% respectively. Agarwal B.L et al (1978) found mortality rate of 27.45% in Smokers, 33% in Hypertensives while Mortality rates in Diabetics by various study was – Rytter L et al (1985) – 40%, Smith J.W. et al (1984) – 25%, Agrawal B.L. et al (1978) – 34.21%, Norris et al (1969) [13] - 28%.

Cardiac status:

In present study cardiac status assessed as per killip's classification showed case incidence class I - 42%, class II -26%, class III – 12% & class IV – 20% patients. Killip Thomas - 1967 [14] showed in his study that total incidence of the same classes of all acute myocardial infarction to be class I – 33%, class II – 38%, class III – 10% and class IV – 19%. Mortality in present study showed 19.2% in class II, 41.6% in class III, and 75% in class IV. While other groups showed mortality rate in Class IV - by Thomas Killip [14] - 55.1%, Michel

Oliver - 1967 [15] – 45.7%, Hurtado L [16]. – 77.2%, while mortality in class III – by Norris R.M. 1969 [13] – 31.5%, Hooshang Booloski 1971 - 29.1%.

Arrhythmias*:*

In present study 34 cases i.e. 34% were presented with Sinus bradycardia. This finding correlates with finding of Louis & Lomberg et al -1972, Desmond Jullean et al [17] Jewitt et al [18], Rittman et al – 1972, - 30%, 25%, 34%, 28% respectively. This may be due to occlusion of A-V nodal artery which supplies A-V Node, also due to increased vagal tone. Low heart rate may be due to sinus bradycardia, A-V Nodal rhythm and High grade of A-V Block. Sinus tachycardia is common with anterior wall infarction than inferior wall infarction. The cause may be hypertension, hypotension, augmented sympathetic activity, anxiety, persistent pain, pericarditis, hypovolemic atrial infarction, pulmonary embolism or administration of cardio accelerator drugs e.g. atropine, dopamine or epinephrine. In present study 17% cases presented with sinus Tachycardia. Finding by Desmond Jullean et al [17] - 41%, Jewitt et al [18] – 26.7%. Incidence of sinus bradycardia was more than sinus tachycardia. Junctional Rhythm here A-V node assumes a role of dominant pacemaker when the sinus node is depressed. In present study 20% presented with junctional rhythm. While Desmond Jullean et al, R.Moral et al found 11 & 10% respectively [17].Ventricular tachycardia (VT) and Ventricular Fibrillation (VF) in present study was 2% & 1% respectively. Finding by Desmond Jullean et al [17] – 4.5% & 9%, Jewitt et al [18] – 5.3% & 9.3% respectively.

Individual conduction defects in acute inferior wall myocardial infarction:

Inferior wall myocardial infarctions are due to ischemia and infarction to the inferior region of the heart. In 80% of patients, the inferior wall of the heart is supplied by the right coronary artery via the posterior descending artery (PDA), while in the other 20% of patients the Posterior descending artery (PDA) a branch of the circumflex artery supplies the blood. Heart block is caused by a disturbance of conduction of excitatory impulse through the bundle of his or its main branch. Right coronary artery perfuses the sinoatrial node so heart block and bradycardia may occur with occlusion of it. A high degree heart block defined as a second or third-degree block, are common with acute inferior wall MI. The amount of collateral circulation to the AV impacts the rate of heart blocks.

Comparison between our findings with others are shown in -

Table 14

Author	Year	Ist^0 HB	IInd^0 HB	IIIrd^0 HB
Desmond Jullean et al [17]	1964	22.7%	18%	16%
Jewitt D.E et al [18]	1967	16%	9.3%	6.7%
Prem Gupta et al [19]	1976	-	6%	8.5%
Our finding	2023	21%	8%	16%

First degree heart block

It occurs in 4-14 % of patients with AMI admitted to CCU. It is due to prolonged atrioventricular conduction. All impulses are able to pass but there is delay in their passage due to disturbances in conduction above the bundle of His i.e. intranodal. First degree heart block seldom causes any symptoms and rarely result in any significant alternation of cardiac function. In present study first degree heart block was noted in 21 cases (21%) of acute inferior wall myocardial infarction with no mortality, out of which few reverted to normal & few progressed to next level.

Second degree heart block

It presents in two types - 1) Mobitz type I or wenkeback type. 2) Mobitz type II. The second degree heart block is common in posterior inferior wall myocardial infarction [17]. In the present study it was noted in total 8 cases (8%) out of this Mobitz type I was in 3% & Mobitz type II was in 5% cases. First degree and type I second degree A-V block do not appear to affect survival, are most commonly associated with occlusion of the right coronary artery and are caused by ischemia of the A-V node. It is intermittent, transient and rarely progress to complete A-V block. Mobitz type II heart block originates from a lesion in the conduction system below the bundle of his and often progresses suddenly to complete A-V block and is almost always associated with anterior rather than inferior infarction, so it should be treated with temporary demand pacemaker. Mortality rate in present study in Mobitz I & Mobitz II was 0% & 20% respectively which indicates Mobitz II block is dangerous if ignored.

Third degree heart block (complete HB):

In present study 16 cases (i.e.16%) developed this type of block. Third degree heart block is common in inferior wall myocardial infarction because the A-V node and bundle of His is mainly supplied by the ramus septi fibrosi, a branch of right coronary artery and small twing of left coronary artery (Maurice lev). Complete A-V block can occur in patients with either anterior or inferior infarction because of dual blood supply from right and left anterior descending coronary artery. Complete A-V block develops in 5-8% of patients with AMI. The prognosis depends on the anatomical location of the block in the conduction system and size of the infarction. In general complete A-V block in patients with inferior wall infarction results from an intranodal or prenodal lesion [20]. The mortality is approximately 15% unless right ventricular infarction is present in which case the mortality may be doubled [21]. In present study total mortality rate with acute inferior wall myocardial infarction due to CHB was 7 out of 16 Patients i.e. 43.7% & and 7 out of total 25 deaths i.e. 28%. Thus incidence of mortality was higher in patients with CHB than without CHB. Incidence of mortality rate with and without heart block in various studies are as follows - Beher S. et al [22,23] - 27% : 11%, Clemensen P. et al [24] - 20% : 4% respectively.

Intraventricular block:-

Bundle branch block – When conduction of the excitatory impulse is impaired or delayed through the left or right branch of the bundle of his, known as bundle branch block causing both ventricles to beat asynchronously, one contracting before the other. This result in prolongation of QRS complex. In present study total 11 cases (11%) were presented with intraventricular conduction defects with RBBB – 5% & LBBB – 3%.

Various studies showing different incidence of intraventricular blocks as shown in table no 3

Table 15

Author Group	Year	RBBB	LBBB	RBBB+LAH	LBBB+LPH
James Atkin et al (25)	1973	0.7%	4.2%	7%	0.2%
Carlos A.E. Basualdo et al(26)	1975	1.2%	2.9%	4.0%	0.6%
Jones M.E et al (27)	1973	1.6%	4.1%	6.1%	4.5%
Our finding	**2023**	**8%**	**3%**	**0%**	**0%**

The right bundle branch and left posterior division of left bundle branch have a dual blood supply from the left anterior descending and right coronary artery, whereas the left anterior, division is supplied by septal perforation originating from the left anterior descending coronary artery. In present study 8 (8%) cases were of RBBB while 3 (3%) cases were of LBBB. The incidence of RBBB is more in acute inferior wall myocardial infarction. Also incidence of RBBB is much higher than LBBB in AMI. This is because left bundle has more diffuse structure than right bundle. So that development of LBBB usually requires more extensive damage. Main left bundle branch almost invariably has double blood supply. Anterior one receives blood supply from first septal branch of anterior descending artery and posterior from A-V nodal artery. Thus presence of LBBB is only expected as a complication of large infarction involving the most of the complete heart block is frequently preceded by left bundle branch block.

In present study mortality rate in RBBB group was 6 out of 8 cases i.e. 75%, out of 25 total deaths incidence is 24% & in LBBB group was 1 out of 3 cases i.e. 33.3%, out of 25 total deaths incidence is 4%. Thus incidence of mortality was higher in RBBB group patients. Godman et al shown that mortality with RBBB was high i.e. 53.8% with inferior wall infarction than anterior wall i.e.34.2%. In LBBB patients no mortality in inferior infarction group but 25% in anterior wall infarction group (28).

CONCLUSION

In present study titled "A study of the clinical profile of Acute Inferior wall myocardial infarction in semi urban population of India." - males were more affected than female, most of the patients were from 51-60 years age group (44%)with mean age 57.4 years, most of the males (33%) were from 51-60 years group while most of the females were from 51-60 (11%)

and 61-70 (11%) age group, most of the patients were (87%) admitted with complaints of chest pain. Complications and in-hospital mortality rates were more in patients with conduction blocks. Atrioventricular defects were common than intraventricular conduction defects i.e. 45% and 11% with ratio 4.06: 1 respectively. Mortality intraventricular conduction defects is higher 63.6% than with Atrioventricular defects26.6% with ratio 2.39:1. Mortality is 25% with acute inferior wall myocardial infraction. The limitation of this study in determining risk factors, complications & conduction defects for CAD is relatively small number of patients. We suggest the conduction of larger multicenter epidemiological studies to determine statistical significance of risk factors.

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