DISCUSSION
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The present study included 40 patients, their age ranging from 38 years to 70 years with mean age of 51 years. These patients were admitted in intensive coronary care unit (ICCU) and emergency ward of M.L.B. Medical College, Jhansi. Out of 40 patients 4 patients were females with an average age of 56 years. These patients were divided into group A and group B on the basis of whether they were treated with thrombolytic therapy or not. The reason for not giving thrombolytic therapy were as follows:

1. Patients arrival in the hospital beyond 6 hours of onset of symptoms.

2. Economic factor - as all the patients had to purchase such costly drug themselves.

3. The severe hypertension - Blood pressure more than 180/110 mmhg was responsible for not giving thrombolytic therapy in two patients.
Comparative analysis of data from various thrombolytic trials

<table>
<thead>
<tr>
<th>Study (year)</th>
<th>Total Patients</th>
<th>Inclusion criteria not met</th>
<th>Arrival after 6 hours</th>
<th>Inclusion criteria met</th>
<th>Contradictions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Murry et al. (3) (1987)</td>
<td>403</td>
<td>65%</td>
<td>39%</td>
<td>35%</td>
<td>11%</td>
</tr>
<tr>
<td>Sainsour et al. (4) (1985)</td>
<td>1105</td>
<td>59%</td>
<td>44%</td>
<td>41%</td>
<td>8%</td>
</tr>
<tr>
<td>Present Study 1995</td>
<td>40</td>
<td>60.2%</td>
<td>60.2%</td>
<td>37.5%</td>
<td>5%</td>
</tr>
<tr>
<td>Wilcox et al. Assett (9)(1990)</td>
<td>13282</td>
<td>46%</td>
<td>46%</td>
<td>54%</td>
<td>4%</td>
</tr>
<tr>
<td>Gissi -2(8) (1990)</td>
<td>38086</td>
<td>41%</td>
<td>41%</td>
<td>59%</td>
<td>11%</td>
</tr>
</tbody>
</table>

In group A all the patients were treated with thrombolytic therapy. Out of 15 patients in this group 14 patients received Streptokinase and only one patient received Urokinase. The Streptokinase was given with an average dose of 1.4 million units while Urokinase was given in the dose of 7.5 lakh units. Thrombolytic therapy was given between 2 hours to 51/2 hours of the onset of symptoms with an average duration of 4 hours. So percentage of patients received thrombolytic therapy within 6 hours is 37.5% while 62.5% did not receive thrombolytic therapy.

In this study there were nine patients were of anterior wall myocardial infarction and 6 patients were of inferior wall myocardial
infarction. One patient died out of 6 patients with inferior wall myocardial infarction. So the study showed that thrombolytic therapy is more beneficial in anterior wall myocardial infarction as compared to inferior wall myocardial infarction. Various clinical trials - initial GISSI Trial \(^{501}\) showed that thrombolytic therapy more successful in anterior wall MI rather than inferior wall MI. This trial shows that there is more successful rate in the anterior wall MI as compared to inferior wall MI. This trial also shows that benefit of thrombolytic therapy appears to be greatest when agents are administered as early as possible with benefit demonstrated if drug is administered less than 4 to 6 hours after the onset of chest pain and even better results are seen when drug is given less than 1 to 2 hours after symptoms start. The impact of early treatment was first clearly shown in initial GISSI Trial \(^{501}\) and confirmed in ISIS - 2 \(^{502}\). The relative benefit of thrombolytic therapy in inferior VS anterior myocardial infarction - initial results from the first GISSI Trial showed no improvement in survival for inferior wall myocardial infarction. More careful analysis of data has subsequently shown that infarct size rather than location is the key variable with no significant benefit in the smallest of infarcts while the benefit (in terms of survival) increases with progressively larger infarcts.

The present study and various trials had shown that thrombolytic therapy is more beneficial in anterior wall myocardial infarction as compared to inferior wall myocardial infarction.
In our study in group A only one patient died due to cardiogenic shock and ventricular techycardia. While in group B 8 patients died due to following complications

i. Cardiogenic Shock
ii. Multiple ventricular ectopics
iii. Post myocardial infarction angina

Among 8 patients 6 were died due to above complications and 2 patients were died due to Lt. ventricular failure, atrial ectopics, R.B.B.B., post myocardial angina and complete heart block. In the GISSI and ISIS-2 trials a wide variety of other clinical benefits appears to patients treated with thrombolytic agents. Including reducing ventricular arrythmias i.e. asystole and cardiac arrest as well as significantly lower incidence of cardiogenic shock. Longer term follow up is now available in early trials, results indication that the early favourable results of thrombolytic therapy sustained over time with one study showing that the benefit of lower mortality is maintained over the 5 years follow up.

So the various trials of thrombolytic therapy as compared to our study is more or less similar.

In our study serum enzymes were investigated at the time of admission in this hospital. These are CPK-MB, SGOT, SGPT the average rise of serum enzymes in group A were as follows: CPK-MB 83 U/L, SGOT 86 U/L, SGPT 85 U/L. While in group B average rise in serum enzymes
were as follows: CPK-MB 71 U/L, SGOT 87 U/L, SGPT 75 U/L. So the average rise of these enzymes in both the groups having equal size of infarct.

AM Heart J - 1992 Apr study done at the university hospital Eppendorf, Hamberg, Germany. 84 cases with acute MI, total creatine kinase, MB creatine kinase and MM Isoform determine at the start of thrombolytic therapy and 30 mins, 60 mins, 120 mins later the total creatine and MB creatine kinase increased significantly at 60 mins. After start of thrombolysis and MMB creatine kinase activity and ratio MMB : MM1 had already increased at 30 mins. After the start of thrombolytic therapy the increased from base line of creatine kinase and creatine kinase MB activity were significantly higher 120 mins after start of thrombolysis. Thus the rise in MMB creatine kinase in the ration of MMB : MM1 can be used for early detection of re-perfusion after intravenous thrombolytic therapy in acute myocardial infarction.

The electro cardiographic changes in both groups in the present study the ECG changes were studied at the time of admission in the hospital. In group A 8 patients having early settlement of hyperacute elivation of S.T. segment with in 6 to 8 hours. While other 7 patients having S.T. segment settlement with in 24 hours. The hyperacute elevation of S.T.
segment in group B settled down between 24 to 72 hours and only 4 patients having S.T. elevation beyond 4 days of acute myocardial infarction.

According to Z Kardio 1944 JUN ; 83(6) study done at Freie university at Berlin. 79 patients with acute myocardial infarction (pain < or = 6 hours). Continuous Holter monitoring of the infarct related S.T. elevation was initiated before or directly after starting thrombolytic therapy. During 24 hours observation period 34 patients (43%) showed episodes of recurrent S.T. elevation after an initial resolution (Group 1) among those with out episodes of S.T. elevation resolved within 4 hours in 34 patients (43%) group 2 and persisted > or = 4 hours in 11 (14% group 3). Episodes of reelevation were more frequently during the first four hours (.25 episodes per hour). Most episodes were transient and short lasting. Only 9 patients showed persistant re-elevation longer than 60 minutes. During hospitalisation in group 1 patients had a higher incidence of reinfarction and severe ischemic events than those without episodes group 1 12/34 (35%) Vs group 2 4/34 (12%) Vs group 3 1/11 (9%), P = .03).

In various trials and in our study showed that there is early return of S.T. segment elevation to the baseline after thrombolytic therapy.

In present study one patient died in group A out of 15 patients so there was only 1 mortality and percentage of mortality in this group was 6.6 percentage. The cause of mortality was cardiogenic shock and
ventricular tachycardia. While in group B 8 patients died out of 25 patients due to following complications like

i. Cardiogenic shock
ii. Recurrent anginal pain (Post MI)
iii. Atrial and ventricular ecotopics
iv. Heart block and R.B.B.B.

So there was 32% mortality in group B and overall reduction in mortality in thrombolytic treated group was 25.4%.

According GISSI 501 and ISIS 502 trials there is no doubt that early intravenous thrombolytic therapy improves survival in patients with acute myocardial infarction. A 30 days and 1 year mortality rate in some of the controlled trials are impressive with survival in 1 treated group as high as 93.1% at 12 months 541 mortality varies considerably depending on patients included for study and adjunctive therapy employed528. The benefit of thrombolytic therapy appears to be the greatest when agents are administered as early as possible. The benefit demonstrated when the drug is administered less than 4 to 6 hours after the onset of pain and even better results are seen when drug is given less than 1 to 2 hours after symptoms begins. ISIS -2 showed number of deaths among 563 patients. There is 8.0% death when the patients treated with Streptokinase along with aspirin and 10.4 % death when Streptokinase given without aspirin and there is 10.7 % deaths when only aspirin given.
According to Int J Cardiol 1992 Nov 92 Department of medicine, Prince of Wales Hospital Chinese University of Hong Kong.

102 patients received thrombolytic therapy; the overall mortality is (18.6%) in the thrombolytic era, and for each sex and that for each sex 18.2% in males and 19.5% in females) were significantly lower than those of pre-thrombolytic era (27.1%, 23.4%, 37.7% respectively).

It has been shown from various trials as compared to our study that there is definite decrease in the percentage of mortality and complications after thrombolytic therapy.