SUMMARY

Summary

Pathological and angiographic studies demonstrated that Q-wave myocardial infarction (MI) is caused by an occlusive thrombus in a coronary artery (CA).

Thus the primary therapeutic objective in a patient with evolving Q-wave MI is early reperfusion restoring ante-grade flow in the occluded infarct related artery (IRA) which subsequently result in limitation of the infarct size and preservation of left ventricular function (LV) with resultant reduction in mortality.

Since both primary angioplasty and thrombolysis can restore ante-grade flow in most occluded coronary arteries (Thrombolysis 70.85%, PTCA 90-95%) there is disagreement about which approach is better for treatment of evolving MI.

In this study, a comparison between both theraputic modalities was done.

Patients with acute myocardial infarction were studied. 30 patients (26 males and 4 females) received S.K. (group I),their mean age was 52.6 years . They were compared to 30 patients (27 males and 3 females) who were treated by primary angioplasty (group 2),their mean age for this group was 61.5 years.

Both group 1 and 2 were matched as regards the risk factors except for hyperlipidemia Which was significantly.

The time from onset of chest pain till treatment was applied was significantly shorter in group 1 (m 237 vs m 336 minutes) p= < 0.01.

There was longer hospital delay till attempted angioplasty took place than the delay needed to administer thrombolysis (m 72 vs 45 minutes).

The total CK, and the CK-MB levels were significantly higher for patients in the thrombolysis group, while the time of CK peaking, was significantly shorter in the angioplasty group.

In hospital complications

There was no significant difference in the incidence of symptomatic LV dysfunction (23.3 % VS 16.6%) in group 1 and 2 respectively.

The incidence of re-infarction was(6.6 % VS 3.3%) for both group 1 and 2 respectively.

The incidence of occurrence of arrythmias was non significant (30% VS 16.6%) for group 1 and 2 respectively, P-value =0.05.

The occurrence of recurrent ischemia (diagnosed by chest pain and ECG changes) was significantly higher for group 1 who received S.K. (36.6% VS 16.6%) than in the angioplasty group.

There was one in-hospital mortality in the angioplasty group while there is 6 deaths in the S.K. group (3.3% VS 20%) for group 2 and 1 respectively.

The mean left ventricular ejection fraction (EF) was measured by : Echocardio-graphy during the first week after treatment was 40.88% for group 1 and 50.2% for group 2 ($p < 0.05$).

LVEF was significantly better (higher) in the angioplasty group.

Pre-discharge angiographic assessment of therapy success:

The IRA patency was assessed by angiography before discharge.

The residual stenosis was 91.5% in group 1 and 37% in group 2, p-value < 0.001.

There was significantly higher incidence of high grade residual stenosis in the S.K. group.

TIMI grade 3 flow or complete reperfusion was achieved in 26.6% in group 1 and in 83.3% in group 2, $p < 0.001$.

In group 2, 5 patients (16.6%) had re-occlusion of the IRA at hospital discharge while in the thrombolytic group 14 patient (46.6%) had totally occluded IRA with TIMI grade 0-1 flow when catheterized before discharge.

From this study, it can be concluded that although it takes longer time to get patients with acute myocardial infarction into the catheterization laboratory (than to give them thrombolysis) still primary angioplasty carries better outcome in patients with AMI when compared to thrombolysis.

There is significant difference in improvement of LVEF, IRA patency, residual stenosis and achievement of TIMI grade 3 flow, which are important prognostic parameters for patients with MI.