Summary

This study was done to evaluate the prevalence of elevated level of homocysteine among patients with acute myocardial infarction and its correlation with short term prognosis.

The studied population comprised 60 patients, they were divided into two main groups:

Group 1 (the control group) comprised 20 healthy subjects free of MI documented by negative clinical chest pain and ECG.

Group(2) comprised 40 patients with acute myocardial infarction documented by clinical chest pain, positive ECG, and /or cardiac enzymes.

All patients were subjected to complete medical history, full clinical examination, laboratory investigations include (CPK , CKMP , Tropinin and serum level of homocysteine just after the onset of the diagnosis of myocardial infarction), and daily resting ECG.

All patients were admitted to the coronary care unit and were followed up during hospital stay for detection of the complications.

Group (2) also sub-divided into another two sub-groups according to the presence or absence of complications : **group2 (A)** comprised patients with complicated hospital course, and **group2 (B)** comprised patients without complicated hospital course.

The main value of serum level of homocysteine in group (2) was 18.2 +/- 4.6 umol/L, and in group (1) was 13.01 +/- 3.4 umol/L with significant statistical difference between the two groups (p value < 0.05).

The main duration of hospital admission was 7.5 +/- 2.5 days. 13 patients had a complicated hospital course, Death occurred in 3 patients (7.5 %), heart failure occurred in 4 patients (10 %), VT in 2 patients (5 %), VF occurred in 1 patient (2.5 %).

The main value of serum level of homocysteine in patients with complicated hospital course (group2 A) was 20.5+/- 4.3 umol/L and was in Patients without complications (group2 B) 18.1+/- 4.8 umol/L, without significant difference (P value > 0.05).

Plasma level of homocysteine in male participants was significantly higher than females (22.7 +/- 5.7 umol/L versus 17.2 +/- 2.8 umol/L, P < 0.05).

Homocysteine level was significantly related to age, HCY in patients > 50 years was significantly higher than in patients <50 years.