Title: Comparmental study of 30–day mortality rate and Left ventricular systolic dysfunction in patients with acute myocardial infraction with regards to C-Reactive Protein (CRP) and Leucocytosis

Abstract

Background and Objectives: Cardiovascular disease (CVD) is one of the main causes of mortality. Its etiologic cause is atherosclerosis.

Inflammation plays a pivotal role in the pathogenesis and progression of atherosclerosis. Recent studies also show that inflammation is related to mortality and other adverse effects of acute myocardial infarction. Therefore the aim of this study was to analyze 30- day mortality and LVSD in patients with acute myocardial infarction (AMI) with regards to elevation of CRP Levels and Leucocytosis.

Material and Method: A prospective cohort study was carried out on 100 patients with diagnosis of acute myocardial infarction (AMI). A blood sample was drawn for leucocyte count and CRP level and echocardiography was obtained. Left ventricular systolic dysfunction (LVSD) was defined as an ejection fraction less than 50% on echocardiography.

Experimental results collected in special forms and 30- days later, patients were followed and finally Analysis was performed on all data's.

Results: In this study 72% of patients had elevated CRP levels (CRP+) and60% had leucocytosis. LVSD was seen in 78%of patients that76.92% were (CRP+) and 64.10% had leucocytosis. In (CRP+) patients, LVSD was significantly more than CRP-patients.

Thirteen percent of patients died during 30 day after AMI, which 12 patients had (CRP+) and 10 patients had leucocytosis. LVSD and 30-day mortality in (CRP+) group significantly occurred more than the (CRP-) group.

Conclusions: In patients with AMI high CRP levels independently related to 30-day mortality and LVSD after acute myocardial infarction.

Key words: Cardiovascular disease- acute myocardial infarction- C-reactive protein- leucocytosis- mortality