Relationship between creatine kinase, C - reactive protein and leukocytosis with left ventricular ejection fraction in patients with acute myocardial infarction

العلاقة بين كرياتين كيناز، بروتين سي التفاعل وزيادة عدد الكريات البيضاء مع الكسر القذفي للبطين اليسرى في مرض احتشاء عضلة القلب الحاد.

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Abstract:

This work aimed to: Determine the Relationship between creatine kinase, C-reactive protein and Leukocytosis with left ventricular ejection fraction in patients with acute myocardial infarction. Our study included 70 patients who were admitted to CCU of Assiut University Hospital, all patients were presenting with ST elevation acute myocardial infarction. Study includes (58 males and 12 females). Their ages ranged from 23_75 years old with mean age ± SD (56.40 ± 8.83) We excluded all patients with infections such as urinary tract infection and pneumonia, active malignancy and ongoing chemotherapy, patients with chronic renal insufficiency and patients with gastrointestinal hemorrhage in past six months. The studied patients were subjected to the followings: •Complete history taking with special emphasis on the coronary risk factors assessment as regards age, sex, smoking, hypertension, diabetes mellitus and dyslipidemia. •Detailed analysis of the current MI as regards onset of chest pain, characteristic and its duration prior to admission. •Thorough clinical examination including: measurement of blood pressure and local cardiac examination •Laboratory Investigations including (total leukocytic count, C-reactive protein, creatine kinase (CK) and CKMB, troponin, lipid profile, kidney function tests). ECG Electrocardiograms were recorded immediately on admission. Serial electrocardiogram tracing was recorded two hours after the end of intravenous streptokinase then every 6 hours or on recurrence of chest pain Continuous ECG monitoring Continuous ECG monitoring was conducted during stay in the cardiac care unit •Chest radiography Chest radiography for an alternative or complicating diagnosis (eg, aortic dissection, pneumothorax). •Echocardiography Transthoracic echocardiography was performed to all patients. Two dimensional images from the standard parasternal long and short axis views as well as apical views were performed for the assessment; 1.Left ventricular systolic function Left ventricular systolic function was performed with special emphasis on the Ejection fraction .it was measured according to Simpsons method. 2.Assessment of diastolic function. 3.Detection of the complications of MI Mitral regurgitation evaluated by color flow imaging Mural thrombus The results of this study showed that: •As regard CRP levels all patients were classified into three groups. Group A included patients with CRP levels 10 mg/l. median EF was 59 % in group A versus 57 % in group B versus 59 % in group C with p=0.07. Also diastolic dysfunction was higher in group C than in group A. In group A 3 (25.0%) patients had Grade II/ Grade III diastolic dysfunction. In group B 6 (33.3%) patients had Grade II/ Grade III diastolic dysfunction. In group C 16 (40.0%) patients had Grade II/ Grade III diastolic dysfunction. Mitral regurge increased significantly with increase CRP levels. In group A 1 (8.3%) patients had moderate/ severe mitral regurge. In group B 2 (11.1%) patients had moderate/ severe mitral regurge. In group C 10 (25.0%) patients had moderate/ severe mitral regurge •As regard leukocytic count all patients was divided into two groups group A with WBC