

Comparing high and low dose of Atorvastatin effect on hs-CRP level and its 3 month`s outcome in patients with acute coronary syndrome

Abstract

Introduction: Acute coronary syndrome (ACS) include in myocardial infarction with and without ST elevation and unstable angina. In 2001 in America, nearly 1,680,000 patients have been diagnosed with acute coronary syndrome. Chest pain has been the second chief complain in emergency of North America hospitals. The findings obtained from researches indicate that inflammation process is one of the most important molecular interaction mediated in atherosclerosis. Thus, the inflammation indexes of plasma level such as hs-CRP is regarded to predict the risk of cardio-vascular diseases.

Material and Methods: Current study is a clinical trial type which carried out on 180 patients who referred to Imam Khomeini hospital in Ardabil because of the chest pain, and after the clinical examination them, has been diagnosed acute coronary syndrome. In this study, patients were divided in 2 groups randomly, which received atorvastatin with high and low dose, and then atorvastatin with low dose (20mg) and high dose (40mg) which associated with routine treatments were gave to first and second groups respectively. The hs-CRP level also was evaluated in hospitalized time and third month of hospitalization. During supervision, patients were evaluated in terms of heart disease prognosis and atorvastatin sight effects.

Results: In this study 40 patients (22.2%) with STEMI, 8 patients (4.4%) with N/Q WMI and 132 patients (73.3%) with U/A was assayed. Between them 125 cases were male and 64 cases were female. The age average of patients in this study was 59.09 ± 8.12 years. 74, 21, 20, 35, 14, 113

patients had high blood pressure, diabetes mellitus , hyper lipidemia, smoking background, heart disease in family and the background of surgery on heart (CAG, CABG and PCI) respectively. After medication the atorvastatin with 40mg dosage to these patients, during 12 weeks were under follow up. In receiving atorvastatin group with low dose, 81 patients improved clinically, 8 patients (8.9%) caught acute coronary syndrome and 1 patient deceased also.

In receiving atorvastatin group with high dose, 85 patients improved and also 5 patients relapse acute coronary syndrome. The atorvastatin with high dose could lessen as a 40% the hs-CRP ratio and LDL level as a 23%, as well as it increased HDL level 9%, whereas the atorvastatin with low dose was effective to decreasing 13.3% of the hs-CRP ratio and 10% of LDL as well as increasing 6% of the HDL level. This difference in the hs-CRP and LDL decreasing and HDL increasing by different dosages of this medicine were obtained significant statistically.

Conclusion: In this study high dosage of atorvastatin could lessen the hs-CRP and LDL ratio and increased the HDL ratio than atorvastatin with low dosage significantly.

Key words: High-sensitive CRP, Atorvastatin, Acute coronary syndrome