Original Paper

Homocysteine and high sensitivity C –reactive protein in patients with systemic lupus erythematosus, and their relation with diseases activity and cardiovascular risk factors

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Abstract

Background and Objective: Systemic lupus erythematosus (SLE) is an inflammatory multi-system disease with an unknown origin. In patients with lupus disease cardiovascular events is an important cause of mortality and morbidity. This study carried out to measurement of high sensitivity C –reactive protein (HsCRP) and homocysteine in patients with SLE and their relation with diseases activity and cardiovascular risk factors.

Materials and Methods: This case control study carried out on 60 patients (55 females and 5 males) with lupus disease which referred to Clinical Research Center of Rheumatology, Mashhad, Iran and 30 controls (26 females and 4 males) during 2007-08. Information of subjects were gathered using SLEDAI questionare. HsCRP and homocysteine of subjects were measured. The level of low density lipoprotein (LDL), Triglycerid, hypertension and Body mass index (BMI) was assessed. Systemic lupus erythematosus activity was assessed by using SLEDAI so that if the score was higher than 10, lupus was called as active disease.

Results: Mean age was 28.8±10.3 and 33.8±9.13 years in SLE and control groups respectively. The mean of HsCRP in SLE patients were 3±2.42 mg/dl versus in controls were 1.58±2.1. The serum level of homocysteine were 12.3±1.93 µmol/L and 24±8.13 µmol/L in SLE patients and controls ($P<0.001$). Mean disease activity was 15.37. There was no any associtation between homocysteine and HsCRP and disease activity. LDL, Triglycerid, hypertension had significant association with homocystein ($P<0.05$). BMI and Triglycerid had significant association with HsCRP ($P<0.05$).

Conclusion: This study showed that there is no linear significant corrolation between homocysteine, HsCRP and disease activity, but there is significant corrolation between increase of homocysteine and HsCRP and cardiovascular risk factors.

Keywords: Systemic lupus erythematosus, Homocysteine, HsCRP, Disease activity

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