RELATION BETWEEN SELENIUM AND C-REACTIVE PROTEIN IN SERA FROM PATIENTS WITH CARDIOVASCULAR DISEASES

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The serum Se levels in the patients (CRP<0.5 mg/dl) with cardiovascular disease (CVD) (n = 30, 68.7%, p<0.001) and those with coronary artery bypass graft (CABG) (n = 16, 55.9%, p = 0.000) were significantly low in comparison with healthy subjects (n = 30, CRP<0.1, 132.0±18.4 μg/l). The study by hepatoma cell culture revealed the maximal activation of NF-κB DNA binding induced by TNF-α at the Se concentration of 50% of the healthy group, giving the maximal CRP synthesis. Reduced serum Se levels in those with CVD and CABG may accelerate the activation of NF-κB which regulates genes of inflammatory cytokines and growth factors, leading to increased CRP synthesis liver and possibly to hypertrophy in arterial smooth muscle cells.