Influence of preventive therapy with quinapril on IL-6 level in patients with chronic stable angina

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Abstract:
We hypothesized that beneficial role of angiotensin converting enzyme inhibitors in stable coronary artery disease (CAD) therapy may involve (among others) their anti-inflammatory effects, which may be reflected by serum interleukin-6 (IL-6) levels. For that reason, we have investigated the influence of short-term administration of quinapril on serum IL-6 concentration. 124 patients suffering from stable CAD and matched for some of CAD risk factors were enrolled in our study. Patients were randomized to treatment with quinapril or control (placebo administration). Blood samples were taken twice: before and after four weeks of quinapril administration. The effect of quinapril administration was assessed under double-blind placebo-controlled conditions. We observed that quinapril reduced serum IL-6 concentration in almost all studied subgroups of patients (p < 0.001). Interestingly, such an effect was not observed in smokers. Additionally, we found that baseline IL-6 levels were higher in: smokers as compared with nonsmokers (p < 0.001), patients with total cholesterol (TC) to high density lipoprotein (HDL)-cholesterol ratio (TC/HDL-ch ratio) above 5 as compared with subjects with TC/HDL-ch ≤ 5 (p = 0.001), and in patients who did not report any statin therapy in comparison with patients undergoing statin treatment (p = 0.023). In conclusion, quinapril may interfere with cytokine release by lowering IL-6 levels, which may be of particular importance for secondary prevention of stable CAD.

Key words:
inflammation, coronary artery disease, angiotensin converting enzyme inhibitors, interleukin-6