

# Turkish Journal of Medical Sciences

Turkish Journal  
of  
Medical Sciences

Serum Total Homocysteine and Premature Coronary Heart Disease: Prospective Study in Middle Aged Patients

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 [Keywords](#)  
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**Abstract:** Homocysteine was found to be an independent risk factor for coronary artery disease in many epidemiological studies. The aim of the present study was to examine the relationship between total homocysteine levels and premature coronary artery disease events. A case - control study was carried out in patients aged 35 to 50 years with angiographically shown coronary heart disease and in age and sex matched control subjects with normal coronary angiography. Samples from 38 patients with coronary heart disease, and their paired controls were analyzed for homocysteine. Plasma homocysteine was measured by high performance liquid chromatography. Mean serum total homocysteine was slightly higher in cases (16.7 mmol/L) than in controls (15.9 mmol/L), but the difference did not reach statistical significance (P=0.6). Twenty (52.6%) coronary heart disease patients and 14 (44%) control subjects had homocysteine levels above 15 mmol/L. In conclusion, homocysteine is not a major risk factor for premature coronary heart disease in the Çukurova region of Turkey. Larger studies are warranted to establish the role of homocysteine for premature coronary heart disease.

**Key Words:** Homocysteine, Premature Coronary Artery Disease

Turk J Med Sci 2002; **32**(1): 53-55.

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