Vitamin D deficiency in patients with acute coronary syndrome: clinically relevant or just a bystander?

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AIM: The goal of this study was to determine, for the first time in an east European country, the relationship of 25-hydroxyvitamin D (25(OH)D) serum concentration with extent of coronary artery disease and prognosis in patients with acute coronary syndrome (ACS) during a three-year follow up period.¹⁻³

PATIENTS AND METHODS: The study included 60 ACS patients hospitalized at cardiology department for ACS between March 2012 and September 2012; and 60 matched controls without ACS. Standard laboratory testing and vitamin D determination were performed in all study patients. In addition, ACS patients underwent coronary angiography and were followed-up for 36 months of ACS for major adverse cardiac events (MACE).

RESULTS: Patients with ACS had a statistically significant lower mean 25(OH)D level as compared with control group (35.19 nmol/L vs. 58.08 nmol/L, $p < 0.001$). The lowest mean level of 25(OH)D was recorded in diabetic patients with ACS (30.45 nmol/L). After coronary angiography, ACS patients were divided into three subgroups regarding coronary disease severity: single, double and multiple vessel disease with 25(OH)D serum levels of 36.44 nmol/L, 33.65 nmol/L and 31.70 nmol/L, respectively. Event free survival rate at 36 months in the ACS group was 60%. Patients with a MACE had lower 25(OH)D, but that difference was not statistically significant (32.64 nmol/L vs 37.01 nmol/L in event free patients).

CONCLUSION: There is an association between low serum concentration of 25(OH)D and ACS. Vitamin D level is considerably influenced by diabetes comorbidity. There was no significant association between 25(OH)D and MACE at 36 months in ACS patients.

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LITERATURE

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