

Vitamin D levels in Croatian patients with acute coronary syndrome

Marijana Knežević Praveček*, Irzal Hadžibegović, Đeiti Prvulović, Katica Cvitkušić Lukenda, Ivica Dunder, Krešimir Gabaldo, Božo Vujeva, Pejo Samardžić, Blaženka Miškić

General Hospital "Dr. Josip Benčević", Slavonski Brod, Croatia

Objectives: For the first time in Croatia we are determine serum levels of vitamin D in patients with acute coronary syndrome (ACS). Despite decreasing trends of coronary artery disease (CAD) in Croatia, only limited data are available on the relationship between vitamin D and CAD. Vitamin D deficiency has been linked to an increased risk of CAD and cardiovascular death. Endothelial dysfunction plays an important role in pathogenesis of CAD and vitamin D deficiency is postulated to promote endothelial dysfunction.

Patients and Methods: Sixty patients (43 men and 17 women) with an ACS (35 with STEMI and 25 with NSTEMI) were included. Routine biochemistry including hemogram, lipid profile, blood glucose, renal function test, serum calcium and phosphorous analysis was performed in all patients. Serum 25(OH)D levels were measured at admission by an automated electrochemiluminescence assay (Roche Diagnostics, Mannheim, Germany). Vitamin D deficiency was defined as 25(OH)D level of <50 nmol/L, vitamin D insufficiency as levels between 50-75 nmol/L, while optimal levels were defined as 25(OH)D >75 nmol/L.

Results: In a study of 60 patients with ACS, mean 25(OH)D level was 34.9 nmol/L; vitamin D deficiency was present in 76% and only 8% had optimal 25(OH)D levels. Nearly one-third were severely deficient (36%), with 25(OH)D levels <30 nmol/L. Those with severe vitamin D deficiency had significantly higher prevalence of NSTEMI as compared to those with higher 25(OH)D levels.

Conclusion: We observed a high prevalence of hypovitaminosis D in Croatian patients with ACS. Our results add to the existing evidence suggesting that low vitamin D levels may be a potentially modifiable cardiovascular risk factor.

KEYWORDS: acute coronary syndrome, vitamin D, Croatia.

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*Address for correspondence: Odjel kardiologije, Opća bolnica "Dr Josip Benčević", Andrije Štampara 42, HR-35000 Slavonski Brod, Croatia.

Phone: +385-98-550-328

E-mail: marijana@aip.hr

Literature

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