

## **Plasma Vitamin D Levels and Myopathic Complications among Statin Users in Israel**

*Eisen, Alon; Lev, Eli; Iakobishvili, Zaza; Porter, Avital; Brosh, David; Hasdai, David; Mager, Aviv  
Rabin Medical Center, Petah Tikva, Israel*

**Background:** Myalgia and creatine kinase (CK) elevations occur commonly among patients treated with HMG CoA reductase inhibitors (statins). Low plasma levels of vitamin D have been recently implicated as a possible risk factor for these myopathic complications. However, other factors including the genetic background may play a role, both in determination of vitamin D levels and in myopathy.

**Objective:** To examine the possible relationship between low plasma vitamin D levels and myopathic complications among statin users in Israel.

**Method and results:** Included were unselected patients without hypothyroidism, malabsorption or renal failure, attending our clinic, in whom plasma vitamin D (25-OH) was measured as part of their evaluation. Data on CK levels and muscle complaints were obtained from the patients files.

**Results:** The sample included 250 patients (126 men) aged 31-89 years. Plasma vitamin D levels ranged between 10 nmol/l and 102 nmol/l (mean 48.1nmol/l; normal range 75-200 nmol/l). Vitamin D levels tended to be higher in women (50.4±19.7 vs 45.7±19.0 nmol/l, p=0.052) Age had no effect on plasma vitamin D levels (46.2±19.4 vs 49.9±19.4 nmol/l in younger vs older patients, p=0.13). Myalgia was reported by 82 patients. Vitamin D levels were similar in patients with and without myalgia (47.5±17.2 vs 48.1±20.5 nmol/l, p=0.8). This held true among women as well as men. The prevalence of myalgia was not increased even among patients with very low levels of vitamin D (<25 nmol/l). Data on CK levels were available for 247 patients. CK elevation developed in 70 of them. There was no difference in plasma vitamin D levels in patients with and without CK elevation (47.7±17.4 vs 48.1±20.4 nmol/l, p=0.8).

**Conclusions:** Low levels of vitamin D are very common in this population. However, no association appears to exist between vitamin D levels and muscle complications related to Statins in men as well as in women.