# Correlation of 25(OH)D serum levels and hypertension in acute myocardial infarction

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**Background:** Already several clinical investigations have suggested that there is an association between hypovitaminosis D and acute myocardial infarction (AMI). Not only has it been linked to incident AMI, but also to high blood pressure, increased morbidity and mortality in this clinical setting. Moreover, vitamin D deficiency seems to predispose to recurrent adverse cardiovascular events, as it seems to be associated with post-infarction complications in patients with AMI.[1-3] The aim of this study was to evaluate correlation of 25(OH)D serum levels to severity of hypertension and diastolic function in patients with acute STEMI successfully treated with primary PCI.

**Patients and Methods:** This study included 88 consecutive patients admitted to our ICU with acute ST-segment elevation myocardial infarction (STEMI) treated successfully with primary PCI. Vitamin D serum levels were measured in all patients after admission and prior to treatment. Echocardiography was performed by specialists in our institution 1-3 days after admission. Patients were followed in ICU for 3-4 days. The endpoints were mean systolic and diastolic pressure continuously monitored and mean E/A ratio as a measure of diastolic function.

**Results**: Lower 25(OH)D serum levels were significantly associated with higher mean systolic and diastolic blood pressure compared to higher 25(OH)D serum level (p=0.004; p=0.006). Lower 25(OH)D serum levels were significantly associated with lower E/A ratio compared to higher 25(OH)D serum levels (p=0.001).

**Conclusion:** Low vitamin D serum level, after adjustment for the main confounding factors, significantly correlates with severity of hypertension and diastolic dysfunction in patients with STEMI.

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## LITERATURE

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