



Acute and Stable Ischemic Heart Disease

IS VITAMIN D DEFICIENCY A RISK FACTOR FOR SEVERE CORONARY ARTERY DISEASE AND ACUTE CORONARY SYNDROME

Poster Contributions
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Introduction: Low vitamin D status has been shown to be associated with increased risk of cardiovascular disease. Data from India are scanty and conflicting. The aim of this research was to study if low vitamin D blood levels are associated with acute coronary syndromes and if can predict the severity of CAD.

Material and Methods: Patients undergoing coronary angiography for any of chest pain syndrome were included prospectively in this study. Blood samples were collected for vitamin D levels (25-OH-vitamin D) in all patients before the angiogram. Significant CAD was defined as at least one vessel showing diameter stenosis with >70%, while severe CAD as left main and/or Triple vessel disease, as evaluated by coronary angiography. Those who had taken vitamin D supplements in the recent past were excluded from the study

Results: Total 320 patients were included in this study from February 2015 to January 2016, out of which 208 (65%) were males and 112 (35%) were females. The mean age was 57.2 ± 10.4 years (range 24-75 years). Total 86 (26.8 %) presented with ACS. The mean vitamin D levels were 16.7 ± 8.7 ng/mL. Normal vitamin D levels > 30 ng/ml, insufficiency (21-29ng/ml) or deficiency (<20ng/ml) were observed in 37 (11.5%), 104 (32.5%) and 179 (60%) patients; the corresponding figures for the ACS and CSA patients were 7 (8.1%) ,26 (30.2%), 53(61.6%) and 30 (12.8%), 78 (33.3%) ,126 (53.8.3%) respectively. In those with normal vitamin levels 7 (18.9%) presented with ACS; those who had insufficiency or deficiency had ACS in 26(25%) and 53(29.6%). Further analysis showed that severe vitamin D deficiency (Vitamin D level < 10 ng/mL) was associated with STEMI ($p=0.001$). Extended Mantel-Haenszel Chi-square trend analysis showed linear correlation between vitamin D deficiency and severe CAD (Chi square= 51.2, $p=0.01$).

Conclusions: Vitamin D deficiency is an important risk factor for ACS and severe CAD. Larger studies are needed for firm conclusions.