

PP-094

Mean Platelet Volume is Independently Associated with Renal Dysfunction in Stable Coronary Artery Disease

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Background: It has been suggested that athero-thrombotic risk progressively increases as the glomerular filtration rate (GFR) declines. Mean platelet volume (MPV) is used measure of platelet size, and higher MPV value is independent risk factor for athero-thrombotic disease such as myocardial infarction. We aimed to evaluate the association between estimated GFR and MPV in patients with stable coronary artery disease showing normal to mildly impaired renal function.

Methods: A total of 471 patients (288 males and 183 females; mean age: 62.5±9.5 years) with angiographically proven CAD were included. The patients were divided into 2 groups according to the estimated GFR value (GFRlow group: GFR <60 mL/min per 1.73 m² and GFRhigh group: GFR ≥60, mL/min per 1.73 m²). Estimated GFR was calculated according to Cockcroft-Gault formula. MPV, high sensitive C-reactive protein (hsCRP) and other biochemical markers were measured in all patients. Prevalent of CAD was determined by the SYNTAX score.

Results: Patients with GFRlow group were of older age, had higher incidence of female gender, current smoker, diabetes, hypertension and hyperlipidemia, lower values of total cholesterol, LDL cholesterol, hemoglobin and platelet count and higher values of BMI, SYNTAX score, hs-CRP and MPV compared with patients with GFRhigh group. Multivariate linear regression analysis showed that the MPV was independently related with diabetes ($\beta=0.189$, $p<0.001$), eGFR ($\beta=-0.267$, $p<0.001$), hs-CRP level ($\beta=0.158$, $p<0.001$) and platelet count ($\beta=0.116$, $p=0.002$).

Conclusion: MPV is independently associated with GFR as well as hsCRP, platelet count and diabetes. These findings may explain, in part, the increase in athero-thrombotic risk in with slightly impaired renal function.

Multivariate regression analysis of mean platelet volume

Variables	Standardized β regression coefficients	P value
Diabetes mellitus	0.189	<0.001
Platelet count, x10 ⁹ /L	-0.116	0.002
GFR, mL/min per 1.73 m ²	-0.267	<0.001
Hs-CRP, mg/dl	0.158	<0.001

GFR (glomerular filtration rate), MPV (Mean platelet volume), hsCRP (high sensitive C-reactive protein)

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Association between Vitamin D Levels and Presence, Severity of Coronary Artery Disease

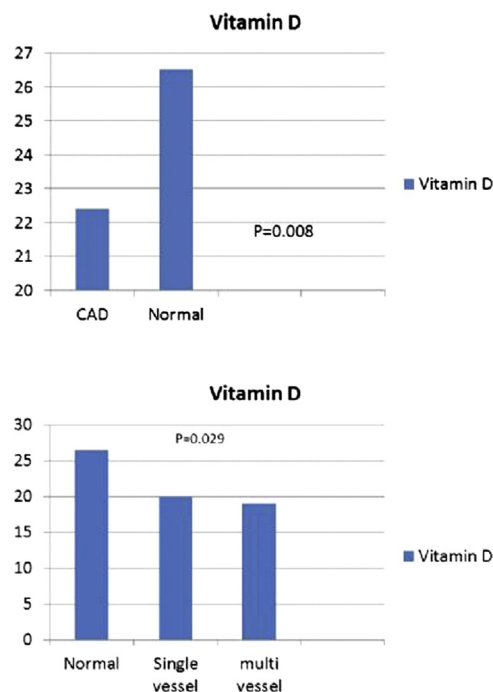
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Aim: There is cumulating evidence that show an association with vitamin D deficiency and cardiovascular disease. In this study we aimed to investigate the relationship between vitamin D levels and the presence and severity of coronary artery disease.

Methods: In all, 79 patients (31 female and 48 male, mean ages 54.7±9.1 years) who had coronary angiography were enrolled. 25 (OH) D₃ levels were measured in all patients in winter season. Carotid intima media thickness was evaluated. Gensini scores were calculated. We compared vitamin D levels with the presence and severity of coronary artery disease and carotid intima media thickness.

Results: According to coronary angiography 46 patients had coronary artery disease and 33 patients had normal coronary arteries. Mean Vitamin D level was 22.4±12.7µg/L. Vitamin D levels were reduced in patients with coronary artery disease compared with in patients with normal coronary arteries (22.4±12.7 vs. 26.5±15.7 P=0.008) (Figure 1). When the patients were separated in to 3 groups the according to the severity of coronary artery disease such as normal coronary arteries, single vessel disease and multivessel disease; vitamin D levels were found to be lowest in multivessels disease group (Figure 2). Vitamin D levels were inversely correlated with Gensini scores ($r=-0.339$ P=0.003) and carotid intima media thickness ($r=-0.312$ P=0.031).

Conclusion: Vitamin D levels are associated with the presence and severity of coronary artery. Vitamin D deficiency may impact coronary artery disease and merits further investigation for the prevention of coronary artery disease.



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Left Ventricular Hypertrophy as a Risk Factor in Maintenance Haemodialysis Patients

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Introduction: Patients on maintenance haemodialysis (HD) have high cardiovascular mortality rate. Our aim was to determine the cardiovascular risk factors in maintenance HD patients.

Material-Methods: One hundred four maintenance HD patients were enrolled. The left ventricular end-diastolic diameter (LVDd), left ventricular end-systolic diameter (LVDs), left atrial diameter (LAd), left ventricular posterior wall thickness (LVPWT), and interventricular septal thickness (IVST) were measured. Patients' clinical and dialysis data were collected. Kaplan-Meier survival analysis was used to evaluate the patients' survival. Multiple regression analysis was performed to evaluate risk factors for left ventricular hypertrophy (LVH).

Results and Debates: The mean age of included patients was 57.04±10.16 years with male to female ratio of 1.88:1. Eighty four patients (80%) were found to have LVH. Multiple stepwise regression analysis showed that ultrafiltration (P=0.004, OR=0.307) and hemoglobin (P=0.001, OR=0.361) were independent risk factors for LVH. Higher left ventricular mass index, IVST, phosphorus, calcium-phosphorus product, parathyroid and ultrafiltration, but similar incidence of LVH (78.2% vs. 81.3%, P=0.098) were found in patients with HD 3 times a week compared to those twice a week. Multiple stepwise regression analysis showed that inadequate dialysis doses estimated as Kt/V was an independent risk factor for LVH (P=0.004, OR=0.541) in patients with HD twice a week, while hemoglobin was a risk factor (P=0.002, OR=0.488) in patients with HD 3 times a week. During the 36.43±15.78-month follow-up, the survival rates were 84% and 68.3% in patients without and with LVH, respectively. Kaplan-Meier survival analysis showed that the survival rates after 12, 24, 36, and 48 months were 93.0%, 88.9%, 73.8%, and 61.2%, respectively, in LVH patients. High incidence of LVH is found in maintenance haemodialysis patients. Several risk factors were found to be correlated with LVH. Prevention of LVH may improve the prognosis of haemodialysis patients.

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The Association of Serum Fetuin-A level with Restenosis in the Patients with Stent Restenosis

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Objective: Stent restenosis still stands out as a major problem despite the developments in the treatment area. A new molecule fetuin-A which is a systemic calcification