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Effect of omega 3 fatty acids on cardiac necrosis biomarkers creatine kinase-MB and troponin-I in chronic kidney disease patients undergoing percutaneous coronary intervention

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Objectives: To assess the effect of omega 3 fatty acids on cardiac necrosis biomarkers CK-MB and Troponin-I in Chronic Kidney Disease (CKD) patients undergoing elective Percutaneous Coronary Intervention (PCI).

Background: Coronary artery diseases are the leading cause of mortality in CKD patients. In recent studies, it is shown that elevation in cardiac necrosis biomarkers, creatine kinase-MB (CK-MB) and troponin-I, have direct relation with increased cardiovascular risks following PCI in CKD patients.

Methods: In this study, 50 CKD patients undergoing elective PCI were randomly assigned into two groups. First group received a loading dose (3 gr) of omega 3, 12 hours prior to intervention plus the standard PCI regimen (aspirin 80 mg and clopidogrel 600 mg loading then 75 mg/day). Second group received only the standard PCI regimen. The CK-MB and troponin-I levels were measured at baseline and 24 h after PCI.

Results: A significant decreasing trend in CK-MB level ($p=0.0021$) and troponin-I level ($p=0.004$) was seen in omega 3 group versus control group after PCI.

Conclusion: A 3 gr loading dose of omega 3 before PCI significantly reduces CK-MB and troponin-I after PCI in CKD patients.

Biography

Maryam Forouzmehr is student at the Shiraz University of Medical Sciences, School of Pharmacy. She is working on her thesis and will graduate this year with PharmD degree.

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