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Acute Coronary Syndromes

EFFECT OF ETHYL ICOSAPENTATE THERAPY WITH ASSESSMENT BY OPTICAL COHERENCE TOMOGRAPHY STUDY IN LOW LDL-CHOLESTEROL PATIENTS WITH ACUTE CORONARY SYNDROME

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Background: Atheroma with thin-fibrous cap thickness <65 μm estimated by optical coherence tomography (OCT) is thought to be a precursor lesion of plaque rupture. The purpose of study was to examine whether ethyl icosapentate (EPA-E) may have the effect to increase in the fibrous-cap thickness similar to statin.

Methods: Twnety acute coronary syndrome (ACS) patients with LDL-choresterol <100 mg/dl were enrolled and underwent percutaneous coronary intervention (PCI). They were divided into two groups; the EPA-E treatment group (n=9) or the control group (n=12). Serial OCT analyses were performed at baseline and nine-month follow-up for a non-PCI lipid-rich plaque lesion.

Results: The LDL-cholesterol level in the EPA-E group was not different from that in the control group at baseline and follow-up (89+/-11 to 88+/-14 vs. 85+/-10 to 86+/-14 mg/dl, p=0.46, 0.76). Although the fibrous-cap thickness was significantly increased in both the EPA-E group (171+/-72 to 208+/-61 μm, p<0.05) and the control group (178+/-58 to 188+/-63 μm, p<0.05) during follow-up period, the degree of increase was significantly greater in the EPA-E group than in the control group (131+/-30% vs. 105+/-20%, p<0.05).

Conclusions: These findings suggest that EPA-E treatment is effective in the prevention of fibrous-cap disruption with the ACS patients due to increasing the fibrous-cap thickness and OCT can help to assess the efficacy of treatment for plaque stabilization.