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Clinical Investigations

Effect of Preexisting Statin Use on Expression of C-Reactive Protein, Adhesion Molecules, Interleukin-6, and Antioxidized Low-Density Lipoprotein Antibody in Patients with Unstable Angina Undergoing Coronary Stenting

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Summary

Background: Statins are believed to reduce coronary heart disease by mechanisms in addition to their well-known cholesterol lowering effect.

Hypothesis: We studied the effect of statins on expression of C-reactive protein (CRP), interleukin-6 (IL-6), adhesion molecules, and antioxidized low-density lipoprotein antibody (anti-oxLDL Ab) in patients with unstable angina (Braunwald class IIb or IIIb) undergoing coronary stenting.

Methods: Consecutive 50 patients with unstable angina were included in the study. We classified the study subjects as patients using statins (Group A, n = 20, men 10, mean age 62 years) and patients not using statins (Group B, n = 30, men 15, mean age 60 years).

Results: Baseline levels of inflammatory markers were similar in the two groups. However, 24 h after coronary stenting, serum levels of CRP (2.00 vs. 4.63 mg/l, $p < 0.05$), intercellular adhesion molecule-1 (ICAM-1) (217 vs. 261 ng/ml, $p < 0.01$), and anti-oxLDL Ab (8.97 vs. 12.96 U/ml, $p < 0.05$) were significantly higher in Group B than in Group A. Furthermore, 72 h after coronary stenting, serum levels of CRP (3.00 vs. 5.50 mg/l, $p < 0.01$) and ICAM-1 (222 vs. 277 ng/ml, $p < 0.05$) were significantly higher in Group B than in Group A.

Conclusions: Preexisting statin therapy plays a role in reducing the serum levels of CRP, ICAM-1, and anti-oxLDL Ab after coronary stenting in patients with unstable angina. These data support an anti-inflammatory or plaque-stabilizing effect of statin therapy.

Key words: unstable angina, statin, inflammation, coronary stenting

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