

Abstract

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Lipid levels in patients hospitalized with coronary artery disease: An analysis of 136,905 hospitalizations in Get With The Guidelines

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BACKGROUND: Lipid levels among contemporary patients hospitalized with coronary artery disease (CAD) have not been well studied. This study aimed to analyze admission lipid levels in a broad contemporary population of patients hospitalized with CAD.

METHODS: The Get With The Guidelines database was analyzed for CAD hospitalizations from 2000 to 2006 with documented lipid levels in the first 24 hours of admission. Patients were divided into low-density lipoprotein cholesterol (LDL), high-density lipoprotein cholesterol (HDL), and triglyceride categories. Factors associated with LDL and HDL levels were assessed along with temporal trends.

RESULTS: 231,986 hospitalizations from 541 hospitals, admission lipid levels were documented in 136,905 (59.0%). Mean lipid levels were LDL 104.9 ± 39.8 , HDL 39.7 ± 13.2 , and triglyceride 161 ± 128 mg/dL. Low-density lipoprotein cholesterol <70 mg/dL was observed in 17.6% and ideal levels (LDL <70 with HDL ≥ 60 mg/dL) in only 1.4%. High-density lipoprotein cholesterol was <40 mg/dL in 54.6% of patients. Before admission, only 28,944 (21.1%) patients were receiving lipid-lowering medications. Predictors for higher LDL included female gender, no diabetes, history of hyperlipidemia, no prior lipid-lowering medications, and presenting with acute coronary syndrome. Both LDL and HDL levels declined over time ($P < .0001$).

CONCLUSIONS: In a large cohort of patients hospitalized with CAD, almost half have admission LDL levels <100 mg/dL. More than half the patients have admission HDL levels <40 mg/dL, whereas $<10\%$ have HDL ≥ 60 mg/dL. These findings may provide further support for recent guideline revisions with even lower LDL goals and for developing effective treatments to raise HDL.

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