Effect of Different Antilipidemic Agents and Diets on Mortality

A Systematic Review

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Background: Guidelines for the prevention and treatment of hyperlipidemia are often based on trials using combined clinical end points. Mortality data are the most reliable data to assess efficacy of interventions. We aimed to assess efficacy and safety of different lipid-lowering interventions based on mortality data.

Methods: We conducted a systematic search of randomized controlled trials published up to June 2003, comparing any lipid-lowering intervention with placebo or usual diet with respect to mortality. Outcome measures were mortality from all, cardiac, and noncardiovascular causes.

Results: A total of 97 studies met eligibility criteria, with 137 140 individuals in intervention and 138 976 individuals in control groups. Compared with control groups, risk ratios for overall mortality were 0.87 for statins (95% confidence interval [CI], 0.81-0.94), 1.00 for fibrates (95% CI, 0.91-1.11), 0.84 for resins (95% CI, 0.66-1.08), 0.96 for niacin (95% CI, 0.86-1.08), 0.77 for n-3 fatty acids (95% CI, 0.63-0.94), and 0.97 for diet (95% CI, 0.91-1.04). Compared with control groups, risk ratios for cardiac mortality indicated benefit from statins (0.78; 95% CI, 0.72-0.84), resins (0.70; 95% CI, 0.50-0.99) and n-3 fatty acids (0.68; 95% CI, 0.52-0.90). Risk ratios for noncardiovascular mortality of any intervention indicated no association when compared with control groups, with the exception of fibrates (risk ratio, 1.13; 95% CI, 1.01-1.27).

Conclusions: Statins and n-3 fatty acids are the most favorable lipid-lowering interventions with reduced risks of overall and cardiac mortality. Any potential reduction in cardiac mortality from fibrates is offset by an increased risk of death from noncardiovascular causes.

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