Serum Lipid Profile and Risk of Prostate Cancer Recurrence: Results from the SEARCH Database.

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Abstract

BACKGROUND: Evidence for an association between total cholesterol, low- and high-density lipoproteins (LDL and HDL, respectively), triglycerides, and prostate cancer is conflicting. Given that prostate cancer and dyslipidemia affect large proportions of Western society, understanding these associations has public health importance.

METHODS: We conducted a retrospective cohort analysis of 843 radical prostatectomy (RP) patients who never used statins before surgery within the Shared Equal Access Regional Cancer Hospital (SEARCH) database. Multivariable Cox proportional hazards analysis was used to investigate the association between cholesterol, LDL, HDL, and triglycerides and biochemical recurrence risk. In secondary analysis, we explored these associations in patients with dyslipidemia, defined using National Cholesterol Education Program guidelines.

RESULTS: Elevated serum triglycerides were associated with increased risk of prostate cancer recurrence [HR per 10 mg/dl, 1.03; 95% confidence interval (CI), 1.01-1.05] but associations between total cholesterol, LDL and HDL, and recurrence risk were null. However, among men with dyslipidemia, each 10 mg/dl increase in cholesterol and HDL was associated with 9% increased recurrence risk (HR, 1.09; 95% CI, 1.01-1.17) and 39% reduced recurrence risk (HR, 0.61; 95% CI, 0.41-0.91), respectively.

CONCLUSIONS: Elevated serum triglycerides were associated with increased risk of prostate cancer recurrence. Cholesterol, LDL, or HDL were not associated with recurrence risk among all men. However, among men with dyslipidemia, elevated cholesterol and HDL levels were associated with increased and decreased risk of recurrence, respectively.

IMPACT: These findings, coupled with evidence that statin use is associated with reduced recurrence risk, suggest that lipid levels should be explored as a modifiable risk factor for prostate cancer recurrence. Cancer Epidemiol Biomarkers Prev; 23(11); 2349-56. ©2014 AACR.

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