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ASSOCIATION BETWEEN PLASMA LIPID LEVELS DURING ACUTE CORONARY SYNDROME AND LONG-TERM NEOPLASTIC DEATH. THE ABC-4* STUDY ON HEART DISEASE

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The relationship between plasma lipid levels during acute coronary syndrome (ACS) and non-cardiac outcome is little known. We reported an independent association between these levels and the development of neoplasia long after ACS.
Purpose: To ascertain whether plasma lipid levels during ACS are associated to neoplastic mortality in long term.
Methods: This study included 589 patients admitted with ACS to 3 centers and discharged alive. Plasma lipid levels were assessed on the 1st morning after admission. Patients were followed for 17 years or until death.
Results: 571 patients were free from malignancy at enrollment, of them 99 (17.3%) developed the disease during follow up and 75 (13.1%) died due to it. Compared to patients without malignancy, those with malignancy showed lower plasma levels of total cholesterol (TC), low-density lipoprotein (LDL), and triglycerides (TG) ($p=0.01$, $p=0.03$ and $p=0.02$ respectively). The groups showed similar statin use rates. The incidence rate of neoplastic mortality was higher in patients who had baseline TC or LDL values $\leq$ median ($p=0.003$ and $p=0.007$ respectively); they showed 133% and 122% increased incidence rate of neoplastic death respectively. No differences were observed relative to HDL and TG levels. In survival analysis using Cox regression with parsimonious models, patients with baseline TC or LDL values $>$ median, respectively, showed risks of 0.5(95% CI 0.3-0.8; $P=0.005$) and 0.5(95% CI 0.3-0.8; $P=0.004$) for neoplastic death. Similar results were obtained using competitive risk analysis with parsimonious models the risks were 0.5(95% CI 0.3-0.8; $P=0.003$) and 0.5(95% CI 0.3-0.8; $P=0.007$) respectively.
Conclusions: This long-term prospective study of an unselected real-world patient sample showed that neoplasia mortality is independently associated with low baseline plasma TC and LDL levels at admission for ACS.