Abstract: P5331

Aspirin use for prevention of cardiovascular events in patients with high lipoprotein(a): a population-based study

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Background:
High lipoprotein(a) [Lp(a)] levels have been shown to increase Myocardial Infarction (MI) and all-cause mortality. However, studies evaluating the optimal preventive measures for that subset of cardiac patients are scarce. This study aims to study the outcomes of aspirin use versus no aspirin for the prevention of all-cause mortality and myocardial infarction in patients with high Lp(a) levels.

Purpose:
We sought to determine the effect of Aspirin in reducing the rate of MI and all-cause mortality among patients with high lipoprotein(a) [Lp(a) >/=50mg/dL]

Methods:
Patients who attended the preventive cardiology clinic from 2005 to 2016 and included in the Preventive Cardiology Database were included in the current single-center, retrospective, observational cohort study that was conducted according to the guidelines of the STROBE (Strengthening the Reporting of Observational Studies in Epidemiology Statement) checklist. The primary outcome was the incidence of myocardial infarction and the secondary outcome was all-cause mortality. Patients were excluded in cases of I) Lp(a)a <50mg/dL, II) history of malignancy, or III) being on anticoagulation/ dual antiplatelet therapy. The median duration of follow-up was 92 months from time of Lp(a) measurement to the last follow-up. Continuous variables were expressed as means +/- standard deviation or median (IQR), and categorical variables were expressed as percentages (%). All statistical tests were two-sided. A propensity score-matched analysis was performed with 1:1 nearest match for Age, Gender, Race, Smoking status, BMI, Diabetes, Peripheral artery disease, Carotid artery disease, coronary artery disease, chronic kidney disease, Heart failure, Hypertension, Dyslipidemia, Stroke, family history of coronary artery disease, Lp (a), LDL, HDL, Triglycerides, glucose and total cholesterol.

Results:
1,805 patients fulfilled the inclusion and exclusion criteria out of 7,410 patients initially identified with recorded Lp(a) levels in the Preventive Cardiology Database. Of these, 376 patients were taking aspirin, and 1429 patients were not receiving aspirin. After propensity score matching for different baseline characteristics and comorbidities as mentioned above, 316 patients were matched in each group. Patients who were on Aspirin had a significantly lower rate of MI events compared to patients who were not on aspirin (6.96 % vs 12.02%, P=0.03) and a lower rate, however statistically non-significant, of all-cause mortality (2.84% vs 4.11%, P=0.385).

Conclusion:
The use of aspirin in patients with elevated Lp(a) levels significantly lowers the rate of myocardial infarction events. Larger randomized clinical trials are warranted to evaluate the use of aspirin for primary and secondary prevention of major adverse cardiovascular events in patients with high Lp(a) levels.