Abstract: P5368

**The prevalence and management of familial hypercholesterolemia in patients with acute coronary syndrome in Poland: results of the TERCET registry.**

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**On behalf:** The Hyperlipidaemia Therapy in the tERtiary Cardiological cEnTer (TERCET) Registry

**Topic(s):**
Lipid-Lowering Agents

**Citation:**

**Funding Acknowledgements:**
None

**Background:** Prevalence of familial hypercholesterolemia (FH) is high among patients with coronary artery disease (CAD). However, data on FH among patients with acute coronary syndrome (ACS) are still scarce.

**Purpose:** Therefore, we aimed to assess the prevalence, lipid-lowering therapy and short- and long-term outcomes in patients with FH among patients with ACS.

**Methods:** We finally included 19,582 consecutive patients from the Hyperlipidaemia Therapy in the tERtiary Cardiological cEnTer (TERCET) Registry for years 2006-2018. Among them, there were 7,319 patients admitted with ACS: 3,085 due to ST-segment elevation acute coronary syndrome (STEMI), 2,256 due to NSTEMI, and 1,978 due to unstable angina (UA). Stable CAD [sCAD] group n=12,462 that was treated as a reference one. Based on the personal and familial history of premature cardiovascular disease and low-density lipoprotein cholesterol (LDL-C) concentration, the Dutch Lipid Clinic Network (DLCN) algorithm was used for FH diagnosis.

**Results:** At the time of hospitalization, the overall occurrence of probable/definite FH and possible FH were 1.2% and 13.5% respectively. In patients with ACS, 1.6% had probable/definite FH and 17.0% possible FH. The highest occurrence of FH was observed in STEMI subgroup, where 20.6% of the patients had =3 points according to the DLCN criteria. There were significant differences in hypolipemic treatment between the FH subpopulations. In patients with definite/probable FH 92.3% and 91.5% were administered statins at discharge, respectively (including 52.9% prescribed intensive statin therapy). Patients with definite and probable FH had higher 30-day mortality than patients without FH (8.2% and 3.8% vs 2.0%, respectively; p=0.0052). However, no significant differences were observed between the FH groups in the 12-, 36- and 60-month follow-up (Figure). Propensity-score matching analysis showed that definite/probable FH patients had significantly higher all-cause mortality at the 36- and 60-month follow-up in comparison to non-FH subjects (11.4% vs 4.8% and 19.2% vs 7.2%, respectively; p=0.021 for both).

**Conclusions:** The prevalence of FH according to the DLCN criteria in the Polish very high-risk population is even 14.7% and is significantly higher in patients with ACS than in patients with sCAD. Among patients included in the Registry, the occurrence of FH rises to 20.6% in the STEMI subgroup, and to 17.2% in the NSTEMI subgroup. Propensity-score matching analysis confirmed that FH itself is a cause of increased all-cause mortality in the long-term follow-up.
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