Abstract: 2214

Prevalence and severity of coronary disease in patients with familial hypercholesterolemia hospitalized for an acute myocardial infarction: data from the RICO survey

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Aim: Individuals with heterozygous familial hypercholesterolemia (FH) are at high risk of early myocardial infarction (MI). However, coronary artery disease (CAD) burden of FH remains not well described. From a large database of a regional registry of acute MI, we aimed to address prevalence of FH and severity of CAD.

Methods: Consecutive patients hospitalized with MI in a multicentre database from 2001-2017 were considered. An algorithm, adapted from Dutch Lipid Clinic Network criteria, was built upon 4 variables (LDL-cholesterol (LDL-C) and lipid lowering agents, premature and family history of CAD) to identify FH probabilities.

Results: Among the 11624 patients included in the survey, 249 (2.1%) had probable/definite FH (score≥6), and 2405 (20.7%) had possible FH (score 3-5). When compared with patients without FH (score 0-2), FH patients (score≥6) were 20y younger (51 (46-57) vs 71 (61-80) y, p<0.001), with a lower rate of hypertension (47 vs 59%, p<0.001), diabetes (17 vs 25%, p<0.001) and prior stroke (4 vs 8%, p=0.016), but a higher prevalence of smokers (56 vs 23%, p<0.001), personal (20 vs 15%, p=0.02) or familial history of CAD (78 vs 18%, p<0.001). Chronic statin treatment was only used in 48% of FH patients and ezetimibe in 8%. After adjustment for age, sex and diabetes, FH patients were characterized by increased extent of CAD (syntax score 11(4-19) vs 7(1-13), p<0.001) and multivessel disease (55 vs 40%, p<0.001).

Conclusion: In this large real world population of acute MI, a high prevalence of FH was found. FH patients were characterized by their young age associated with the severity of CAD burden and limited use of preventive lipid lowering therapy.