Effect of statin therapy on long-term mortality among patients with myocardial infarction with non-obstructive coronary arteries (MINOCA)

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Background: Myocardial infarction with non-obstructive coronary arteries (MINOCA) is associated with the lack of visible atherosclerosis in coronary arteries. Current 2020 ESC Guidelines on the management of acute coronary syndromes state that statins may be beneficial to reducing all-cause mortality and major adverse cardiac events (MACE) among MINOCA patients. Although, the existing literature data remains conflicting, recent meta-analysis based on observational studies showed that statin therapy resulted in a reduction of MACE and mortality.

Purpose: We aimed to assess the effect of statin therapy on long-term mortality among MINOCA patients.

Methods: 1011 patients were hospitalized between 2012 and 2017 with the diagnosis of MI based on clinical symptoms, electrocardiographic findings, and the evolution of myocardial necrotic biomarkers according to the universal criteria of MI. On admission, coronary angiography was performed in all patients to assess the existence of obstructive lesions in coronary arteries. 72 patients had lesions narrowing a coronary artery by less than 50% and were classified as MINOCA.

Results: Statins were used by 54 (75.0%) of MINOCA patients. Those treated with statins had a higher prevalence of hypertension (P=0.001), dyslipidemia (P<0.001), lower Killip class on admission (P=0.005) and a higher LVEF (P=0.019) than MINOCA not treated with a statin. At the time of the decision about statin therapy, LDL cholesterol level was higher in the MINOCA population with subsequently prescribed statins (P=0.008). Long-term mortality was significantly higher in MINOCA patients not treated with statins (17.7%/year versus 6.6%/year, P=0.009) compared with those treated with statins.

Conclusions: According to our results, statins should be routinely prescribed in the heterogeneous group of MINOCA patients. However, more research regarding that issue is needed.

The long-term outcomes.