Preventive Cardiology – Risk Factors and Prevention, Lipids, Drug therapy

Efficacy of oral hypolipidemic therapies in a real world population

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Introduction: Hypolipidemic therapies are a cornerstone in the management of patients (pts) after an acute ST segment elevation myocardial infarction (STEMI). The efficacy of such therapies is based on clinical trials where pts are highly selected and closely monitored, perhaps not entirely reflecting a real world scenario.

Purpose: To evaluate efficacy of hypolipidemic therapy in a real world population of young pts with STEMI from an intermediate CV risk country.

Methods: Retrospective, single-center study of consecutive pts, aged below 50 years, who were admitted with STEMI and discharged under hypolipidemic therapy, between 2017 and 2021. Demographics, clinical characteristics, and outcomes were analyzed. Parametric and non-parametric tests were performed as appropriate.

Results: We included 306 pts, 81.7% men, mean age was 43.9 years, 52% had hypertension, 76% dyslipidemia, 20% diabetes, 70% were smokers and 63.8% were overweight. Most pts had one vessel disease, mainly anterior descending coronary artery.

Only 26pts were previously under statin therapy; at discharge, 63% of pts received high intensity statin, 33% moderate intensity and 4% ezetimibe concomitantly. During a mean follow-up (FUP) of 3.8 years, 35% of pts intensified medication, 55% received high intensity statin and 22% combination of high intensity statin and ezetimibe.

Patients under high intensity statin presented a significant reduction of cLDL (119±39 vs 82±33, $p<0.001$) with a mean reduction of 30±41% - 20 percentual points inferior to the expected average reduction of 50%. Furthermore, only 26% of pts presented a 50% reduction of baseline cLDL and only 21.5% met the cLDL<55mg/dl goal. Similarly, when analyzing pts under high intensity statin plus ezetimibe, a significant cLDL reduction was observed (118.7±33.5 vs 69.9±49.8, $p=0.004$), with an average reduction of 33±48%. Only 23.7% of these pts reached cLDL goal and 27% reduced cLDL above 50%.

During FUP 19 pts had a second coronary event, of these 21% were under high intensity statin strategy and 47.4% high intensity statin plus ezetimibe. Statin intolerance was present in only 2 pts and rhabdomyolysis was not reported. .

Conclusion: In this real-world population hypolipidemic therapy proved to be safe and effective in lowering cLDL, however average reduction was inferior to the one previously reported. Early up titration and aggressive LDL control with PCSK9i or inclisiran has to be implemented such as lifestyle measures.