

ABSTRACT

Background: There is no study focusing on changes of coronary atherosclerosis during dual hypolipidemic therapy with statin and ezetimibe.

Methods: 107 patients with stable angina were enrolled and the final analysis was performed in 89 patients. Randomization was 1:1 to the group A (atorvastatin 80mg and ezetimibe 10mg) and to the standard group S. Treatment period was 12 months.

Results: Changes of percent atheroma volume (PAV) were -0,4% in group A and + 1,4% in group S, $p=0,014$. Combine atherosclerosis regression (increase of lumen volume together with decrease of PAV) was found more frequent in group A (40,5%) than the group S (14,9%), $p=0,007$. The target LDLc level $< 2\text{mmol/l}$, presence of at least four of five atherosclerotic risk factors, and decrease of VCAM level were independent predictors for plaque regression. There were no significant differences in plaque composition between the two groups over the duration of the study. However during analysis the two groups together, fibrous and fibro-fatty tissues decreased and dense calcification and necrotic core increased during follow-up.

Conclusion: The dual hypolipidemic therapy starts atherosclerosis regression. Despite significant decrease of lipid levels the continuous plaque shift from fibro and fibro-fatty to necrotic with calcification was still present in both groups.