IMPROVE-IT Trial: A Comparison of Ezetimibe/Simvastatin versus Simvastatin Monotherapy on Cardiovascular Outcomes After Acute Coronary Syndromes

Purpose: Because we know that reducing LDL-C with statins for secondary cardiovascular prevention improves outcomes, this trial sought to determine if adding a second non-statin drug would result in additional improvements in outcomes following acute coronary syndrome (ACS).

Trial Design: multicenter, randomized, double-blinded trial. Patients were at high risk and stable after an acute coronary syndrome event. N=18,444. They were randomized to simvastatin alone vs. simvastatin + ezetimibe (a non-cholesterol drug that blocks the absorption of dietary cholesterol in the intestine). F/U = median 57 months.

Primary Endpoints: cardiovascular death, nonfatal myocardial infarction, re-hospitalization for unstable angina, coronary revascularization, stroke.

Trial Results	ezetimibe + simvastatin	simvastatin	P value
LDL –C	median = 54 mg/dl	median = 69/dl	
Primary Endpoint	32.7%	34.7%	0.016

Conclusions: following ACS, high-risk patients demonstrated a reduction in the primary endpoints.

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