



Results of METEOR Trial: rosuvastatin in low-risk patients

Rosuvastatin slowed progression of atherosclerosis at 2 years in people with early signs of carotid artery disease and at low-risk of coronary heart disease (CHD), in the METEOR study, presented at the 56th ACC Scientific sessions and simultaneously published in JAMA.¹

METEOR (Measuring Effects on intima media Thickness: an Evaluation Of Rosuvastatin) was a 24-month, randomised, double-blind, placebo-controlled, international study comparing the effect of treatment with rosuvastatin 40 mg in asymptomatic patients with moderately increased LDL cholesterol levels (mean 155 mg/dL) and at low risk of CHD. Low risk was defined as the presence of only one risk factor (age) or a Framingham ten year risk score <10%. All patients had evidence of sub-clinical atherosclerotic disease as determined by mild to moderate carotid intima-media thickening (CIMT, >1.2 and <3.5 mm at all sites), a marker of atherosclerotic burden.² B-mode ultrasound imaging was used to assess and measure the change in maximum CIMT of 12 vessel sites in the carotid artery.

Of 984 patients enrolled, 702 patients were assigned to rosuvastatin and 282 were assigned placebo. Treatment with rosuvastatin resulted in a 49% reduction in LDL cholesterol (from 155 mg/dl to 78 mg/dL), an 8.0% increase in HDL cholesterol and a 34% reduction in triglycerides ($p < 0.0001$). At 2 years, rosuvastatin treatment was associated with a significant reduction in the rate of CIMT progression, overall (0.0014 mm/yr decrease vs. progression of 0.0131 mm/yr on placebo, $p < 0.0001$), as well as for the individual carotid sites. Treatment was well tolerated during the 2 years of the study. Myalgia was the most commonly reported event, in 12.7% and 12.1% of the rosuvastatin and placebo groups.

The results of METEOR were consistent with a recently published independent post hoc analysis combining data from four prospective trials³, including ASTEROID⁴ (see [HDL Biology](#)), which showed that by substantially decreasing LDL cholesterol and increasing HDL cholesterol by more than 7.5%, a beneficial effect on atherosclerosis can be achieved in high-risk patients with established atherosclerosis. According to John R. Crouse III, Wake Forest University School of Medicine, North Carolina, and lead investigator, the METEOR study provides evidence that the effect of rosuvastatin on dyslipidemia translates into a beneficial effect on the progression of atherosclerosis in middle-aged adults with Framingham risk scores lower than 10% and evidence of subclinical atherosclerosis. These findings raise the question whether low-risk individuals with evidence of asymptomatic disease should undergo routine arterial imaging and receive statin therapy.⁵

References

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