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Study Shows Effects of Intensive Statins on Coronary Atherosclerosis

A new study published recently in the New England Journal of Medicine has shown that maximal doses of rosuvastatin and atorvastatin resulted in significant regression of coronary atherosclerosis. Despite the lower level of low–density lipoprotein (LDL) cholesterol and the higher level of high–density lipoprotein (HDL) cholesterol achieved with rosuvastatin, a similar degree of regression of percent atheroma volume (PAV) was observed in the two treatment groups.

- The authors performed serial intravascular ultrasonography in 1039 patients with coronary disease, at baseline and after 104 weeks of treatment with either atorvastatin, 80 mg daily, or rosuvastatin, 40 mg daily, to compare the effect of these two intensive statin regimens on the progression of coronary atherosclerosis, as well as to assess their safety and side–effect profiles.

Results

- After 104 weeks of therapy, the rosuvastatin group had lower levels of LDL cholesterol than the atorvastatin group (62.6 vs. 70.2 mg per deciliter [1.62 vs. 1.82 mmol per liter], P<0.001), and higher levels of high–density lipoprotein (HDL) cholesterol (50.4 vs. 48.6 mg per deciliter [1.30 vs. 1.26 mmol per liter], P=0.01).
- The primary efficacy end point, percent atheroma volume (PAV), decreased by 0.99% (95% confidence interval [CI], –1.19 to –0.63) with atorvastatin and by 1.22% (95% CI, –1.52 to –0.90) with rosuvastatin (P=0.17). The effect on the secondary efficacy end point, normalized total atheroma volume (TAV), was more favorable with rosuvastatin than with atorvastatin: –6.39 mm3 (95% CI, –7.52 to –5.12), as compared with –4.42 mm3 (95% CI, –5.98 to –3.26) (P=0.01).
- Both agents induced regression in the majority of patients: 63.2% with atorvastatin and 68.5% with rosuvastatin for PAV (P=0.07) and 64.7% and 71.3%, respectively, for TAV (P=0.02).
- Both agents had acceptable side–effect profiles, with a low incidence of laboratory abnormalities and cardiovascular events.

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