

Both standard and aggressive treatment provide similar benefit in reducing atherosclerosis

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Treating both low-density lipoprotein (LDL), or "bad," cholesterol with statins and blood pressure with calcium channel antagonists reduces harmful coronary plaque, according to a new study presented today as a late-breaking clinical trial at the Society for Cardiovascular Angiography and Interventions (SCAI) 2015 Scientific Sessions in San Diego. The study found aggressive medication therapy does not provide additional benefit compared to standard cholesterol and blood pressure-lowering therapy.

Recent studies have separately shown [aggressive treatment](#) of LDL cholesterol with statins and [blood pressure](#) control with calcium channel antagonists can control the progression of, or reduce, coronary atherosclerosis. The MILLION study is the first multicenter study to evaluate both strategies simultaneously.

"Aggressively treating cholesterol and blood pressure levels have separately been shown to benefit patients with heart disease, so our study was designed to evaluate whether combined [therapy](#) with aggressive or standard targets for reducing LDL cholesterol and blood pressure would provide additional benefit," said Masa-aki Kawashiri, MD, associate professor of medicine in the Division of Cardiovascular Medicine at Kanazawa University in Kanazawa, Japan, and a study investigator.

Researchers evaluated treatment in a total of 68 patients, including 33

patients who received standard therapy (focused on achieving LDL levels of 100 mg/dL and blood pressure below 140/90 mmHg) and 35 patients treated with aggressive therapy (focused on reducing LDL to 70 mg/dL and blood pressure to 120/70 mmHg). Prior to the study, all of the patients were treated successfully with [percutaneous coronary intervention](#) (PCI), and LDL levels greater than 100 mg/dL and had at least one additional coronary artery blockage in addition to the blockage treated by PCI.

Each patient underwent intravascular ultrasonography (IVUS) to measure vessel and plaque volume. After 18-24 months of treatment with blood pressure and cholesterol-lowering medications, follow-up IVUS was conducted. Patients in both groups reached their target blood pressure and LDL levels at the time of follow-up.

The study found both groups had similar rates of reduction in coronary plaque volume. The standard treatment group saw coronary plaque reduced by 9.37 percent while the aggressive group saw an 8.74 percent decrease, on average. However, patients treated with aggressive medication therapy saw more significant decreases in blood pressure (7.5/9.5 mmHg decrease) and LDL cholesterol (6.1 mg/dL decrease) compared with [patients](#) receiving standard treatment.

"Patients benefit from similar levels of coronary plaque volume reduction with the standard therapy as with more aggressive treatment," said Dr. Kawashiri. "Aggressive LDL [cholesterol](#) and blood pressure medication treatment does not provide additional benefit in reducing atherosclerosis. Combined therapy aimed at standard LDL and blood pressure targets provides similar benefit as more aggressive treatment."

Provided by Society for Cardiovascular Angiography and Interventions

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