動脈プラークの進行を停止する

ASTEROIDトライアルの結果、積極的なロスバスタチン療法により冠動脈内の動脈硬化性プラークの縮小を促すことが示された

ASTEROID trial shows that aggressive rosuvastatin therapy can induce regression of atherosclerotic plaque in the coronary arteries

積極的なロスバスタチン療法により冠動脈内の動脈硬化性プラークの縮小を促すことができるとのLate-Breaking Clinical Trialの結果がAmerican College of Cardiology学会で発表された。ASTEROIDトライアルでは507人の患者を1日40mgのロスバスタチンで24ヵ月間治療した。これらの患者のうち379人からはベースライン時およびスタディ終了時の評価可能な血管造影写真が得られた。スタディに参加するためにはいずれかの冠動脈に、20%を超えた血管造影上血管内径狭窄が1ヵ所以上あることを条件とした。過去の解析からは、50%未満の血管造影上血管内径狭窄を有する1本の冠動脈の血管内超音波の結果、アテロームの容積が減少したことが示されている。今回の新たな結果から、治療により内径狭窄率が低下し定量的血管造影で計測した最小径が改善することも示された。

Full Text

In a first-of-its-kind finding, aggressive rosuvastatin therapy has been shown to cause regression of atherosclerotic plaque in the coronary arteries, according to a late-breaking clinical trial presented at the annual meeting of the American College of Cardiology.

"Previous studies have shown that statin therapy can slow the development of plaque in the coronary arteries," said Christie Ballantyne, MD, director of the Center for Cardiovascular Disease Prevention at the Methodist DeBakey Heart & Vascular Center and lead author of the study. "However, no statin monotherapy study has stopped the growth of plaque--- or actually reduced the amount of plaque in the arteries in areas with narrowing or stenosis, as this study shows."

A Study to Evaluate the Effect of Rosuvastatin on Intravascular Ultrasound-Derived Coronary Atheroma Burden (ASTEROID) was designed to determine effects of treatment with rosuvastatin on progression of coronary atherosclerosis in patients who had a clinically indicated cardiac catheterization that showed angiographic evidence of coronary artery disease. Coronary atherosclerosis was assessed by intravascular ultrasound (IVUS, the primary endpoint) and quantitative coronary angiography (QCA, a secondary endpoint).

A previous report had shown ultrasound assessment of single coronary arteries with less than 50 percent angiographic luminal narrowing showed regression of atheroma volume. The new findings showed that treatment also produced regression by decreasing percent diameter stenosis and improving minimum lumen diameter as measured by angiography.

ASTEROID was a prospective, multi-center, international open-label trial that enrolled men and women 18 years or older with a clinical indication for coronary catheterization and angiographic evidence of coronary disease who met specific angiographic and ultrasound criteria. Inclusion required demonstration of at least one obstruction causing more than 20 percent angiographic luminal diameter narrowing in any coronary vessel.

The left main coronary artery had to have at most 50 percent reduction in lumen diameter by visual estimation, and the target vessel for ultrasound interrogation could not have undergone angioplasty or bypass surgery nor have more than 50 percent luminal narrowing throughout a target segment with a minimum length of 40 mm. Segments for angiographic analysis could not have undergone angioplasty or bypass surgery.

ASTEROID treated 507 coronary disease patients with rosuvastatin 40 mg/day for 24 months. Of these patients, 379 had evaluable angiograms at baseline and at study end. Blinded angiography analysis of percent diameter stenosis and minimum lumen diameter was performed for up to 10 segments of the coronary arteries and their major branches with greater than 25 percent diameter stenosis at baseline. For each patient, the means of all matched lesions at baseline and study end were calculated. There were 292 patients with 613 matched segments that met the criterion of greater than 25 percent stenosis.

Rosuvastatin reduced low-density lipoprotein cholesterol by 53.3 percent to 61.1±20.3 mg/dL; high-density lipoprotein cholesterol increased by 13.8 percent to 48.3±12.4 mg/dL.

Mean±standard deviation percent diameter stenosis decreased from 37.3±8.4 percent (median [minimum-maximum] 35.7 percent [26-73 percent]) to 36.0±10.1 percent (median 34.5 percent [8-74 percent]). minimum lumen diameter increased from 1.65±0.36 mm (median 1.62 [0.56-2.65] mm) to 1.68±0.38 mm (median 1.67 [0.76-2.77] mm; p<0.001).
In summary, ASTEROID data show that patients with heart disease who take the maximum dose of rosuvastatin (40 mg per day) for 24 months and achieve an average low-density lipoprotein cholesterol level below 70 mg/dL and a significant increase in high-density lipoprotein cholesterol had a mean reduction in coronary plaque volume.

ACC2008 特集