Plaque-Stabilizing Statin Therapy Prior to Percutaneous Transluminal Angioplasty and Stenting

To the Editor:

In a recent issue of the Journal, Soeda et al were able to show that rosuvastatin therapy reduced the lipid core and the size of lipid-rich-coronary plaques, adding to the known effect of statin therapy in stabilizing atherosclerotic plaques and reducing plaque vulnerability. When linking their findings regarding coronary plaques to those of a recent clinical trial on intracranial arterial stenosis, there seems to be a practical application with clinical relevance.

In the SAMMPRIS clinical trial (stenting vs. aggressive medical therapy for intracranial arterial stenosis), Chimowitz et al found that the risk of stroke or death was substantially greater for patients who received percutaneous transluminal angioplasty and stenting (PTAS) as well as aggressive medical therapy than for patients who received aggressive medical therapy alone. Patients were randomized into a group that underwent PTAS within 3 business days after randomization, together with aggressive medical therapy, and another group that received aggressive medical therapy without consecutive PTAS. Although statin therapy was not the focus of their study, rosuvastatin was provided as part of the aggressive medical therapy to both groups. In the group that received PTAS, the plaque-stabilizing effect of rosuvastatin was unlikely to have had a great effect prior to PTAS, because PTAS took place early after randomization (within 3 business days). 25 of the 33 strokes in the PTAS+aggressive medical therapy group occurred within 1 day of PTAS. From the second day after PTAS, the rate of stroke or death following PTAS was not higher than in the group with aggressive medical therapy alone. This finding suggests that the PTAS procedure itself was associated with cerebral embolism or hemorrhage, probably because of unstable atherosclerotic plaques. The combination of the recently published results of Soeda et al about the reduction in volume of atherosclerotic plaques and the previously known plaque-stabilizing effect of statin therapy with the findings of Chimowitz et al has practical consequences for future clinical trials involving PTAS. It would appear vital to provide plaque-stabilizing statin-therapy for a sufficiently long period prior to PTAS.

References


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