In 2013, the American College of Cardiology (ACC) and American Heart Association (AHA) published a revised guideline for the treatment of blood cholesterol for primary and secondary prevention, in which statin use is recommended irrespective of LDL cholesterol (LDL-C) levels. In this new guideline, high-, moderate-, or low-intensity statin therapy is indicated according to the stratified risk. The new guideline appears to be direct and unique, albeit substantially differs from the previous ones. Statin is the only recommended drug, and the use of non-statin drugs is basically not considered.

The new ACC/AHA guideline might be, in some respects, over-simplified as it does not take into account several clinical trials; however, its message may not be unconventional. Since the effect of lowering LDL-C on the prevention of cardiovascular disease was first demonstrated in the LRC-CPPT trial, numerous studies have shown that LDL-C reduction can decrease cardiovascular events, and there seems to be no apparent threshold for reduction within the cholesterol range studied.

In Japan, the 2012 version of Japan Atherosclerosis Society (JAS) guideline for the prevention of atherosclerotic cardiovascular disease (ASCVD) was formulated on the basis of epidemiological and therapeutic evidence. Considering that statin treatment is still underperformed in subjects at high ASCVD risk even when they have sufficient drug tolerability in the real world, the new ACC/AHA and JAS guidelines are said to have the same mission, i.e., the prevention.

The results of Naito et al.’s study suggest that the target LDL-C level for the purpose of secondary prevention may be <100 mg/dL in the Japanese population if the strategy is “achievement of the LDL-C goal.” On the other hand, there remain several questions to be answered. If the goal LDL-C is set at a lower threshold (e.g., ≤70 mg/dL), is this more beneficial in some populations? Does concomitant LDL-C lowering by non-statin drugs has the same effect as statin-alone treatment during the follow-up measurement of LDL-C? Is the same strategy applicable to
different age groups from a population?

In Naito et al.’s study, it was not clear why more than one thirds of the patient could not achieve a follow-up LDL-C of <100 mg/dL. It has been recognized that a significant proportion of coronary artery disease patients fail to achieve pre-specified targets—it may be the time to ask why. Were the subjects who could not achieve a follow-up LDL-C of <100 mg/dL more statin-resistant? The percentage (57.2%) of statin administration in subjects with a follow-up LDL-C of ≥100 mg/dL was significantly lower than that in subjects with a follow-up LDL-C of <100 mg/dL; was the non-achieved group more statin-intolerant? To clarify these points, data about which statin was used at which dosage in each group may also be important.

As discussed above, the pooled cohort equations used in the new ACC/AHA guideline cannot be applicable for the Japanese population, and the dose of statin recommended by the ACC/AHA guideline may not be set for Japanese subjects; therefore, JAS recommends to use 2012 JAS guideline for Japanese population (http://www.j-athero.org/outline/guideline_comment.html).

The recent work carried out by Naito and colleagues is of value both in discussing the optimal LDL-C level that should be targeted in the Asian population and in encouraging physicians to pay more attention to performing more thorough lipid lowering. We need to further verify whether the optimal target LDL-C level is <100 mg/dL for the prevention of ASCVD in the Japanese population.

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