Editorial

Comment on the New Guidelines in USA by the JAS Guidelines Committee

Hidenori Arai¹, Jun Sasaki² and Tamio Teramoto³

¹Department of Human Health Sciences, Kyoto University Graduate School of Medicine, Kyoto, Japan
²International University of Health and Welfare, Graduate School of Pharmaceutical Medicine, Fukuoka, Japan
³Teikyo Academic Research Center, Teikyo University, Tokyo Japan

The American College of Cardiology/American Heart Association (ACC/AHA) announced jointly with the National Institute of Health (NIH) guidelines on the treatment of dyslipidemia to reduce the risk of atherosclerotic cardiovascular disease (ASCVD) in November 2013. The Japan Atherosclerosis Society (JAS) herein expresses its opinion concerning the guidelines based on internal discussions.

Outline of the ACC/AHA Guidelines

The ACC/AHA Guidelines have been based exclusively on a systematic review of specific well-written articles on randomized controlled trials (RCTs) and meta-analyses. The Guidelines comprise answers to three critical questions concerning dyslipidemia. It should be noted, that the guidelines do not reflect the great deal of evidence available, such as many observational studies, RCTs with short-term follow-ups, and sub-analyses.

Three conclusions have been reached in the ACC/AHA Guidelines: 1) Statins significantly reduce the risk of onset of atherosclerotic cardiovascular disease (ASCVD) in primary or secondary prevention. 2) There is no evidence for risk reduction with non-statin drugs. 3) No conclusive evidence is available to allow the establishment of numerical treatment goals for LDL-cholesterol (LDL-C) and non-HDL-C.

With regard to conclusion 1), four patient groups expected to benefit from statin therapy have been identified from among those with an ASCVD risk ≥7.5% over a period of 10 years (calculated using the Pooled Cohort Equations; see Fig. 1), with the efficacy and safety of statin therapy taken into account: (1) patients with ASCVD (secondary prevention), (2) patients with LDL-C ≥190 mg/dL, (3) diabetic patients in primary prevention with LDL-C within the range of 70-189 mg/dL (40-75 years of age), and (4) non-diabetic patients in primary prevention with LDL-C within the range of 70-189 mg/dL (40-75 years of age).

In addition, taking into account conclusion 3), no numerical treatment goals for the control of LDL-C and non-HDL-C have been set, and, as shown in Fig. 1, high-intensity (LDL-C reduction greater than or equal to 50%) or moderate-intensity (30-50% LDL-C reduction) statin therapy has been recommended (for respective statin doses, see Table 1).

The opinion of JAS

One of the distinct features of the current version of the ACC/AHA Guidelines is that no numerical goals for lipid control are available. We agree that there is only insufficient evidence to determine numerical goals for LDL-C, and JAS Guidelines for Prevention of Atherosclerotic Cardiovascular Diseases 2012 (hereinafter referred to as the JAS Guidelines 2012) present a proposal to consider a target of 20-30% LDL-C reduction. In the actual clinical setting, however, any available numerical control goal facilitates the treatment; we believe that it is necessary to include numerical control goals in the guideline, providing that there is good patient adherence to treatment regimens. It should also be noted that the JAS Guidelines 2012 emphasize that target values for lipid control are non-binding numerical goals to attain.

Regarding the treatment, only high- and moderate-intensity statin therapies are recommended; however, doses in accordance with the health insurance treatment should be followed taking into account the actual treatment situation in Japan. Furthermore, no evidence was reportedly obtained for any significant
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The New Pooled Cohort ASCVD Risk Equations used in the current version of the ACC/AHA Guidelines is a tool for predicting the risk of CVD reduction in the risk of onset of ASCVD with non-statin drugs, or for any additive reduction with their combination with statins. However, the Japanese guideline justifies the use of non-statin drugs based on evidence from sub-analyses and other studies. We think this policy as well need not be changed at present.

The New Pooled Cohort ASCVD Risk Equations used in the current version of the ACC/AHA Guidelines is a tool for predicting the risk of CVD

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**Table 1.** Various statins and their doses for high-, moderate-, and low-intensity statin therapies

<table>
<thead>
<tr>
<th>High-Intensity Statin Therapy</th>
<th>Moderate-Intensity Statin Therapy</th>
<th>Low-Intensity Statin Therapy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daily dose lowers LDL-C on average, by approximately ≥50%</td>
<td>Daily dose lowers LDL-C on average, by approximately 30% to &lt;50%</td>
<td>Daily dose lowers LDL-C on average, by &lt;30%</td>
</tr>
<tr>
<td>Atorvastatin (40)-80 mg</td>
<td>Atorvastatin 10 (20) mg</td>
<td>Pravastatin 10-20 mg</td>
</tr>
<tr>
<td>Rosuvastatin 20 (40) mg</td>
<td>Rosuvastatin (5) 10 mg</td>
<td>Simvastatin 10 mg</td>
</tr>
<tr>
<td></td>
<td>Pravastatin 40 (80) mg</td>
<td>Lovastatin 20 mg</td>
</tr>
<tr>
<td></td>
<td>Simvastatin 20-40 mg</td>
<td>Fluvastatin 20-40 mg</td>
</tr>
<tr>
<td></td>
<td>Lovastatin 40 mg</td>
<td>Fluvastatin 40 mg bid</td>
</tr>
<tr>
<td></td>
<td>Fluvastatin XL 80 mg</td>
<td>Pitavastatin 2-4 mg</td>
</tr>
<tr>
<td></td>
<td>Fluvastatin 40 mg bid</td>
<td></td>
</tr>
</tbody>
</table>

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(coronary artery diseases, stroke) over a period of 10 years; it was prepared on the basis of combined data from cohort studies in five local communities in the US. However, applying this tool to the Asian population can lead to an overestimation of the risk. Currently, we use a risk chart based on the NIPPON DATA80, which is thought to be appropriate in predicting the risk among Japanese people. It seems necessary, however, to continuously strive towards the development of an improved method of risk assessment with a higher prediction performance for use in Japanese people.

The current version of the ACC/AHA Guidelines has been outlined with the opinion of the Japan Atherosclerosis Society. We have concluded that it is not necessary to correct or change the diagnostic and therapeutic policies recommended in the JAS Guidelines 2012. We hope that the JAS Guidelines 2012 will continue to serve a good guide for clinical practice in the field.

Conflicts of Interest