Once patients with non-valvular atrial fibrillation (NVAF) develop cardioembolic stroke, the neurological symptoms are often severe and outcome is poor. Prevention of cardioembolic stroke is, therefore, important in those with NVAF, and warfarin for those with a CHADS2 score $\geq 2$ is recommended and for those with a CHADS2 score of 1 it may be considered, according to the 2008 guideline of the Japanese Circulation Society for the management of AF. However, underuse of warfarin has become a big issue worldwide. Although the efficacy of warfarin for the prevention of stroke in NVAF patients is well established, many patients with NVAF who would benefit from warfarin treatment do not receive it. A systemic review indicated increasing age, increasing bleeding risk, previous bleeds, falls risk, comorbidities and ability to comply with warfarin therapy as factors influencing attitudes of physicians regarding warfarin therapy. In Japan, detailed analysis of the non-use of warfarin has not been performed.

**Table. Incidence of Stroke or Non-CNS Systemic Embolism in Patients With Paroxysmal vs. Persistent/Permanent AF Treated With Oral Anticoagulant or Aspirin+Clopidogrel**

<table>
<thead>
<tr>
<th></th>
<th>Paroxysmal AF (n=1,202)</th>
<th>Sustained AF (n=5,495)</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall</td>
<td>29 (2.0)</td>
<td>155 (2.2)</td>
<td>0.496</td>
</tr>
<tr>
<td>By treatment allocation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clopidogrel + aspirin</td>
<td>18 (2.4)</td>
<td>104 (3.0)</td>
<td>0.346</td>
</tr>
<tr>
<td>Oral anticoagulant</td>
<td>11 (1.5)</td>
<td>51 (1.5)</td>
<td>0.936</td>
</tr>
</tbody>
</table>

Data in parentheses are rate/100 person-years.

AF, atrial fibrillation.

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antiplatelets may prevent. A subanalysis of the Stroke Prevention in Atrial Fibrillation Study indicated that antiplatelets prevented non-cardioembolic stroke, but not cardioembolic stroke, in patients with AF.\textsuperscript{10} It was reported in 2006 that aspirin was not effective in preventing ischemic cerebrovascular events in Japanese patients with NVAF at low risk for stroke or systemic embolism.\textsuperscript{11} When we consider antiplatelet therapy in patients with NVAF, we had better take into account that anticoagulation is superior to antiplatelet therapy, and that antiplatelet drugs may prevent non-cardioembolic stroke in NVAF patients, but cannot prevent cardioembolic stroke, a major disabling stroke with poor outcome.

According to observational studies, in which major ischemic or hemorrhagic events occurred often at INR levels below 1.6 or above 2.6, respectively, in elderly NVAF patients with a past history of cardioembolic stroke,\textsuperscript{12,13} Japanese guidelines recommend INR levels between 1.6 and 2.6 for elderly patients aged 70 years or more with NVAF and between 2.0 and 3.0 for patients younger than 70 years.\textsuperscript{1} However, the current study demonstrated that lower INR levels than the target level were likely to be displayed by patients younger than 60 years. Because once a young patient with NVAF develops cardioembolic stroke, the patient and his or her family will have a big burden for many years, good adherence to the target INR between 2.0 and 3.0 in patients younger than 70 years is required.

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