Guidelines for Atrial Fibrillation Treatment to Avoid Stroke Should Be Established for Each Region/Ethnicity

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It is well known that there are ethnic differences in the incidence of various diseases. For instance, there are distinct regional and ethnic differences in the incidence of atrial fibrillation (AF) and AF-related strokes, which has been especially compared between Asian and non-Asian populations. Before the era of non-vitamin K antagonist oral anticoagulants (NOACs), stroke prevention with vitamin K antagonists (VKA) was essential in the management of AF. However, Asian patients are more sensitive to VKA than non-Asians for the development of intracranial hemorrhage. As a result, VKA have often been underused or underdosed in Asian patients, with the aim of avoiding hemorrhagic complications. Following the development of NOACs, subgroup analyses of the RE-LY, ROCKET-AF and ARISTOTLE studies compared the clinical outcomes of Asian (or East Asian) and non-Asian AF patients. In patients treated with a VKA, the percentage of Asian (East Asian) patients with PT-INR <2.0 was higher than that of non-Asian patients (Table). On the other hand, patients treated with NOACs had a much lower incidence of intracranial bleeding than those treated with VKA. The incidence of intracranial hemorrhage with each NOAC is summarized in Figure. Because Asian (East Asian) patients treated with VKA have a higher incidence of intracranial hemorrhage, it can be clearly stated that they receive significant benefit from NOACs to avoid intracranial hemorrhage.

In this issue of the Journal, Miyazawa et al investigate the prognosis of AF patients in Japan and UK according to guideline adherence status. They compare the clinical characteristics and outcomes among AF patients from the Fushimi AF registry (Japan; n=4,239) and the Darlington AF registry (UK; n=2,259). Guideline adherence in antithrombotic treatment (ATT) was assessed against the 2013 Japanese Circulation Society Guidelines (Fushimi AF registry) and the 2014 UK National Institute for Health and Care Excellence guidelines (Darlington AF registry). The rates of guideline adherent ATT therapy were 58.6% and 50.8% in the Fushimi and Darlington registries, respectively. There was no significant difference in the 1-year stroke rate between Fushimi and Darlington. In the multivariate logistic regression analysis, non-guideline adherent ATT was significantly associated with an increased risk of stroke. No significant interaction for ATT and ethnicity was found in the incidence of stroke, all-cause death, and the composite outcome. Based on those findings, the authors conclude that approximately half of the AF patients were prescribed optimal ATT in accordance with guideline recommendations, which was significantly associated with a lower risk of stroke.

In their study, the prescription of VKA was significantly higher in the Darlington registry (46.4% vs. 43.1%; P=0.012), whereas prescription of NOACs was significantly higher in the Fushimi registry (12.6% vs. 1.4%; P<0.001). This difference may indicate that Japanese physicians are getting to know the lower incidence of intracranial hemorrhage when using NOACs. Although there are some differences between the Japanese Circulation Society Guidelines and the UK National Institute for Health and Care Excellence guidelines, Miyazawa et al demonstrated no significant differences in clinical outcomes in the guideline-
adherent subgroups of each registry. The results suggest that it may be better for prevention therapy of stroke associated with AF to be different for each region or ethnicity. In addition, ATT according to the guideline recommendations was significantly associated with reduced risk of stroke, indicating that treatment in accordance with each national guideline may be the most important in ATT for AF patients. Time always flows. The guidelines in each region should be revised according to new evidence, leading to greater benefit for AF patients all over the world.

Figure. Incidence of intracranial bleeding in non-Asians and non-East Asians vs. Asians and East Asians. (A) Dabigatran in RE-LY. (B) Rivaroxaban in ROCKET-AF. (C) Apixaban in ARISTOTLE. (D) Edoxaban in ENGAGE-AF. CI, confidence interval; RR, relative risk. (Cited with permission from Yasaka M and Lip GY. 12)
Conflicts of Interest for All Authors

None.

References