NOAC, Status of Quo

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Stroke prevention is a major therapeutic strategy in patients with atrial fibrillation. Recent important advancement in this field is a development of non-VKA (vitamin K antagonist) oral anticoagulant (NOAC). Currently two-kind four NOACs are commercially available: direct thrombin inhibitor (dabigatran) and factor Xa inhibitors (apixaban, edoxaban, and rivaroxaban). They are equal or superior to VKA in efficacy and safety. Current issues in NOAC are (1) selection of appropriate patients, (2) selection of NOAC, (3) periprocedural prescription, and (4) antidote.

First, current guidelines recommend anticoagulation for patients with CHA_2DS_2-VASc score of 1 or higher and NOACs rather than VKA as an anticoagulant in most situations. Importance of new risk factors such as chronic kidney disease, age 50-65 years, silent ischemic stroke, and ethnicity should be elucidated for optimal patient selection. Second, each NOAC has its own characteristics, thus selection of the most appropriate drug should be customized. VKA resistance, bleeding risk, renal function, and GI symptoms are well-known factors for drug selection. Third, large-scale clinical trials have not be performed for special condition such as perioperative situations in NOAC usage as BRIDGE trial for VKA. Renal function also should be considered in NOACs to reduce periprocedural bleeding risk. Fourth, antidotes for NOACs such as idarucizumab for dabigatran, andexanet alfa for factor Xa inhibitors, and ciraparantag for NOACs as well as other anticoagulats have been approved or in evaluation. These will provide more safety tool for stroke prevention strategy in the future. We need more data to resolve above issues for these new drugs.