Abstract: **P4769**

**Optimal rivaroxaban dose in asian patients with atrial fibrillation and normal or mildly impaired renal function**

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**Topic(s):**
Oral Anticoagulation

**Citation:**

Background: Although rivaroxaban 15 mg was only given to patients with creatinine clearance (CrCl) <50mL/min in the pivotal clinical trial, this dose has been commonly prescribed in Asian patients with non-valvular atrial fibrillation (AF) regardless of renal function. There is a paucity of information regarding the clinical outcomes of rivaroxaban 15 mg compared to rivaroxaban 20 mg in patients with CrCl =50mL/min. This study aimed to examine the effectiveness and safety of two doses of rivaroxaban in Asian patients with AF and CrCl =50mL/min.

Methods: Using the Korean National Health Insurance Service database, patients with AF and normal or mildly impaired renal function (CrCl =50mL/min) and naïve to rivaroxaban or warfarin were included from January 2014 to December 2016. Three separate 1:1 propensity score-matched cohorts were conducted: rivaroxaban 20 mg (R20) vs. warfarin (n=15,584), rivaroxaban 15 mg (R15) vs. warfarin (n=11,554), and R20 vs. R15 (n=10,392). Hazard ratios (HRs) for ischemic stroke, intracranial hemorrhage (ICH), gastrointestinal (GI) bleeding, major bleeding, all-cause death, and composite clinical outcome were analyzed.

Results: Among the pooled total study population, mean age was 66.9±10.9 years, 62.2% were male, mean CHA2DS2-VASc score was 3.16±1.79, and mean CrCl was 83.6±42.0 mL/min (median 78.4 mL/min, IQR 67.7-91.0 mL/min). A substantial proportion (42.6%) of patients with CrCl =50 mL/min were prescribed off-label R15 for stroke prevention in the Korean AF population. Compared to warfarin, both R20 and R15 showed significantly lower risk for ischemic stroke, major bleeding (mainly through reduction of ICH), and all-cause death (Figure). Overall, both R20 and R15 had better results for the composite clinical outcome compared to warfarin (HR: 0.617, 95% CI: 0.550-0.691 for R20, and HR: 0.759, 95% CI: 0.675-0.853 for R15). Compared to off-label R15, on-label R20 showed a nonsignificant trend toward lower risks of ischemic stroke, hospitalization for GI bleeding, hospitalization for major bleeding, and all-cause death (Figure). Overall, on-label R20 had better results for the composite clinical outcome compared to off-label R15 in patients with CrCl=50 mL/min (HR: 0.852, 95% CI: 0.735-0.988). This benefit was consistently observed in patients aged ≥80 years and those <50 kg. In patients with CrCl 50-60 mL/min, R20 showed a nonsignificant trend toward a higher risk of hospitalization for major bleeding compared to R15 (HR: 1.828, 95% CI 0.994-3.452).

Conclusions: Among Asians with AF and CrCl =50mL/min, both R20 and R15 were associated with reduced risk of ischemic stroke, ICH, major bleeding, and all-cause death without significantly increased risk of GI bleeding compared with warfarin. In patients with CrCl =50mL/min, on-label R20 showed better results for the composite clinical outcome compared to off-label R15.
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