Comparison of an uninterrupted rivaroxaban strategy vs. uninterrupted warfarin strategy in patients undergoing catheter ablation of atrial fibrillation.

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Introduction: Catheter ablation (CA) is a standard therapy in patients with atrial fibrillation (AF). It is important that anticoagulation during the peri-procedural period is administered to patients with AF to avoid cerebral infarctions. However, patients treated with anticoagulation have an increased risk of peri-procedural bleeding complications. Limited data exist about a rivaroxaban strategy in patients with AF undergoing CA in the Asia.

Methods: We analyzed 215 consecutive patients who underwent CA of AF using rivaroxaban or warfarin at Ageo Central Hospital and New Tokyo Hospital. We retrospectively investigated the peri-procedural complications such as major/minor bleeding and thromboembolic episodes. Major bleeding was defined as cardiac tamponade and any bleeding requiring a surgical procedure or blood transfusion. Minor bleeding was defined as bleeding and a hematoma at the puncture site without necessitating a surgical procedure or blood transfusion. The rivaroxaban strategy group (R group: mean age 64.7±11) included 122 patients and warfarin strategy group (W group: mean age 65.4±10.7) 93. In the R group, rivaroxaban 15mg or 10mg in patients with a creatinine clearance of 30-49 ml/min was administered. In the W group, warfarin was adopted to maintain the international normalized ratio at 2.0 - 3.0 or 1.6 - 2.6 for elderly patients of more than 70 years old. Anticoagulation therapy was performed at least 4 weeks before and after the procedural day and continued on the procedural day in all patients.

Result: The CHADS2 and HAS-BLED scores did not significantly differ between the R and W groups (CHADS2 score: 1.3±0.9 vs. 1.1±0.9 P=0.368, HAS-BLED score 0.8±0.7 vs. 1.0±0.8 P=0.057). Rivaroxaban was administered before the procedure within 6 hours in 61 patients and after the procedure in 61. Sixty-seven patients (67.7%) had a therapeutic range of warfarin of more than 65%. The mean activated clotting time during the procedure was significantly lower in the R group than W group.
The injected dose of heparin during the procedure was higher in the R group than W group (13817±3814 vs. 8437±2790 P<0.001). Major bleeding did not significantly differ between the R and W groups (n=2 [1.6%] vs. n=3 [3.2%] P=0.654). Cardiac tamponade occurred in 2(2.2%) patients in the W group. An atrioventricular fistula occurred in 1(0.8%) patient in the R group. A false femoral aneurysm occurred in 1(0.8%) patients in the R group and 1(1.1%) in the W group. Minor bleeding did not significantly differ between the R and W groups (n=14 [11.5%] vs. n=7[7.5%] P=0.365). No thromboembolic events occurred in either group.

**Conclusion:** The efficacy and safety of an uninterrupted rivaroxaban strategy to prevent peri-procedural complications did not significantly differ from that of an uninterrupted warfarin strategy.