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

Kazuya Naito
Atsushi Iwasa
Daisuke Nakai
Koutaro Miyashita
Keishiro Oyama
Masaya Katagiri
Shinichiro Masada
Yoshio Maeno
Hideaki Kido
Yoshiaki Shintani
Masataka Nakano
Keiichi Kohashi
Shuzou Tanimoto
Tetsuya Kawamata
Naoki Masuda
Takeshi Yamakawa
Nobuhiko Ogata
Takaaki Ishiki

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.