Dabigatran bridging therapy during hospitalization for atrial fibrillation ablation is safety

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Introduction: Direct oral anticoagulants (DOAC) is essential for patient with atrial fibrillation (Af) ablation, however there is a risk of hemorrhagic complications. Only Dabigatran has antagonist among DOAC. The aim of this study was to investigate the safety of Dabigatran bridging therapy during hospitalization for Af ablation.

Methods: We evaluated consecutive 530 patients who were underwent catheter ablation for Af between May 2017 and October 2018 in our institute. And we exclude 108 patients who were prescribed Dabigatran or Warfarin on an outpatient basis and 75 patients who could not replace prescribed Edoxaban, Rivaroxaban or Apixaban with Dabigatran because of age or creatinine clearance (CCR). We enrolled 347 patients in this study. We divided them into 2 groups (Dabigatran bridging group and non-bridging group). Dabigatran bridging group, we replaced Edoxaban, Rivaroxaban or Apixaban with Dabigatran for two days from the operation day (N=236). And non-bridging group, we continue Edoxaban, Rivaroxaban or Apixaban (N=111). The end point was hemorrhagic complication and thromboembolic event including cerebral infarction.

Result: There was no significant difference in Baseline Characteristics. The mean age was 67.8 years in Dabigatran bridging group versus 65.6 years in non-bridging group (P=0.058), CHADS2 score was 1.47 versus 1.39 (P=0.500), HAS-BLED score was 1.63 versus 1.47 (P=0.245), operation time was 1.86h versus 1.81h (P=0.464), atrial diameter was 41.9mm versus 41.3mm (P=0.471), respectively. In bridging group, 121 patients was prescribed Dabigatran220mg (51.3%) and 115 patients was prescribed Dabigatran300mg (48.7%). Hemorrhagic complication rate was 2.88% (2 cardiac tamponade, 5 arterial pseudo-aneurysm, 3 femoral artery hematoma) and 1.69% in Dabigatran bridging group versus 5.40% in non-bridging group (P = 0.054), respectively. There was no thromboembolic event in both group.

Conclusion: We demonstrated Dabigatran bridging therapy without increasing thromboembolic complication. Our findings suggest that Dabigatran bridging therapy has the advantage when unexpected adverse bleedings occurred, because of existence rapidly effective antagonist.