

Uninterrupted twice-daily direct oral anticoagulants are safer than once-daily ones for atrial fibrillation catheter ablation

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Background: In patients undergoing AF catheter ablation (CA), uninterrupted DOACs reduced bleeding events without increasing ischemic events compared with vitamin K antagonist, and the continuation of anticoagulants is recommended for AF ablation. However, in the past studies, patients received once-daily DOACs in the evening, not in the morning of the procedure day. Moreover, there has been no study comparing uninterrupted 4 DOACs; therefore, the safety and effect of uninterrupted DOACs taken just in the morning of AF ablation is unknown.

Objective: The purpose of this study was to compare bleeding complications and thromboembolism events between 4 DOACs in patients undergoing AF ablation.

Method: This study was the retrospective single-center cohort study of consecutive patients who underwent AF ablation between April 2014 to July 2019. All patients continued DOAC uninterruptedly including just in the morning of the procedure. The primary endpoint included major bleeding events within the first 30 days after CA. The secondary endpoints included the composite events of ischemic stroke, systemic embolism, myocardial infarction, and vascular death.

Result: A total of 713 patients (mean age 64 ± 12 years, 72% male) were included in this analysis; enrolled patients were 88, 238, 218, and 169 respectively in dabigatran, rivaroxaban, apixaban and edoxaban group. At the baseline, the ratio of age ≥ 75 years and CHADS2 score was higher in apixaban group, though all other baseline variables were similar between them.

The primary endpoint was observed 0%, 2.1%, 0.45%, and 4.7% respectively in dabigatran, rivaroxaban, apixaban, and edoxaban group ($P=0.013$) without significant difference about secondary endpoint between them ($P=0.3$).

Comparing twice-daily vs once-daily DOACs, the primary endpoint was observed significantly lower in the twice-daily group than in once-daily group (0.32% and 3.2% respectively, $P=0.0054$), without any significant difference about secondary endpoint (0% and 0.73% respectively, $P=0.26$).

Conclusion: Taking DOACs also in the morning of AF ablation, uninterrupted twice-daily DOACs are safer than once-daily DOACs without increasing ischemic event, although twice-daily DOACs, especially apixaban, were used in higher aged patients.

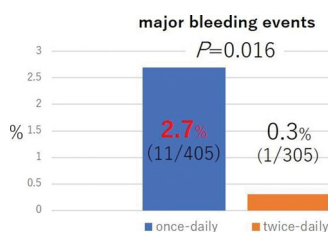


Figure 1