News Release

Optimal Timing for Oral Anticoagulant Discontinuation and Prognosis after Successful Catheter Ablation for Atrial Fibrillation

Key Points

•There are currently no clearly established criteria regarding the optimal timing for discontinuation of oral anticoagulants after catheter ablation for atrial fibrillation.

• Early discontinuation of anticoagulant therapy may increase the risk of thromboembolism, whereas prolonged continuation may increase the risk of major bleeding.

• Using a large-scale dataset of 2,448 patients, our research group conducted repeated landmark analyses from 1 to 537 weeks after ablation and demonstrated that 8.1 months post-procedure may represent the optimal timing for anticoagulant discontinuation after successful ablation.

Summary

A research group led by Tomoya Iwawaki, Research Student; Satoshi Yanagisawa, Lecturer; Yasuya Inden, Associate Professor; and Toyoaki Murohara, Professor, from the Department of Cardiology, Nagoya University Graduate School of Medicine, investigated the optimal timing for discontinuation of oral anticoagulant therapy after catheter ablation for atrial fibrillation and reported important clinical findings.

Catheter ablation is widely performed as an effective treatment that can eliminate or substantially suppress atrial fibrillation. Because atrial fibrillation is a major cause of thromboembolic events such as ischemic stroke, many patients receive anticoagulant therapy. Current clinical guidelines recommend continuing anticoagulation for at least 2 to 3 months after the procedure. However, there is no clear standard regarding when anticoagulant therapy can be safely discontinued thereafter. Discontinuing anticoagulants too early may increase the risk of thromboembolism, whereas prolonged continuation may increase the risk of serious bleeding, particularly intracranial hemorrhage. Therefore, it is crucial to scientifically evaluate the necessity of oral anticoagulants, balancing thromboembolic and bleeding risks.

In this study, the researchers analyzed 2,448 patients who underwent first-time catheter ablation for atrial fibrillation at Nagoya University Hospital between 2006 and 2022. Repeated landmark analyses were conducted at 537 time points, ranging from 1 week to 537 weeks post-procedure. The outcomes

included thromboembolic events, major bleeding, and all-cause mortality. After adjusting for baseline characteristics, the investigators applied a novel evaluation index, “reverse net clinical benefit (reverse NCB),” to quantify the difference between bleeding risk reduction and thromboembolic risk increase.

The result showed that reverse NCB reached its maximum at 8.1 months after ablation. In other words, discontinuing anticoagulant therapy at approximately 8.1 months after the procedure may provide the most favorable balance between thromboembolic and bleeding risks. When patients who discontinued anticoagulants at 8.1 months were compared with those who continued therapy, the discontinuation group had a significantly higher risk of thromboembolism but a significantly lower risk of major bleeding. There was no significant difference in overall mortality between the two groups.

Rather than stopping anticoagulants simply because ablation was “successful,” this study introduces a new clinical perspective: anticoagulant therapy may be discontinued at an optimal time point determined by a careful assessment of risk balance. The findings are expected to contribute to safer and more rational anticoagulant management after atrial fibrillation treatment.

These results were published in *JACC: Clinical Electrophysiology* (American College of Cardiology) on April 13, 2026 (Japan time: April 14, 2026).

Research Background

Catheter ablation for atrial fibrillation has significantly improved in safety and efficacy in recent years due to technological innovations and advances in device development, and now plays a central role in rhythm control therapy. By substantially reducing atrial fibrillation burden, ablation is also expected to lower the risk of thromboembolic events.

However, because a certain risk of recurrence remains even after ablation, whether to continue anticoagulant therapy post-procedure remains an important clinical issue. Early discontinuation may increase the risk of thromboembolism, whereas unnecessary long-term continuation may increase the risk of bleeding. Current guidelines recommend that decisions beyond the initial 2–3 months after ablation be based on the patient’s stroke risk profile. Nevertheless, there is still no clear consensus regarding the most appropriate timing for discontinuation of anticoagulant therapy after successful catheter ablation.

Research Results

In this study, we investigated the optimal timing for discontinuation of oral anticoagulant therapy in 2,448 patients who underwent first-time catheter

ablation for atrial fibrillation at Nagoya University Hospital between 2006 and 2022. After adjusting for baseline characteristics using statistical methods, we applied a novel evaluation metric, “reverse net clinical benefit (reverse NCB),” to quantify the difference between bleeding risk and thromboembolic risk.

The formula was defined as follows:

Reverse NCB = [Difference in bleeding risk (intracranial hemorrhage × 1.5 + non-intracranial bleeding × 0.5)] − Difference in thromboembolic risk

This metric integrates into a single index the reduction in bleeding risk achieved by discontinuing anticoagulants and the corresponding increase in thromboembolic risk. Intracranial hemorrhage, which is more likely to result in severe disability or death, was weighted more heavily (1.5×), whereas non-intracranial bleeding was assigned a lower weight (0.5×) to account for differences in clinical severity.

The analysis demonstrated that beyond 6 months after ablation, the benefit of bleeding risk reduction began to outweigh the increase in thromboembolic risk. The balance was most favorable at 8.1 months post-procedure, when the reverse NCB reached its maximum value. These findings suggest that anticoagulants should not be discontinued immediately simply because the ablation was successful. Rather, maintaining anticoagulation for a certain period and considering discontinuation around 8.1 months after the procedure may represent the most rational strategy from a risk–benefit perspective (Figure 1).

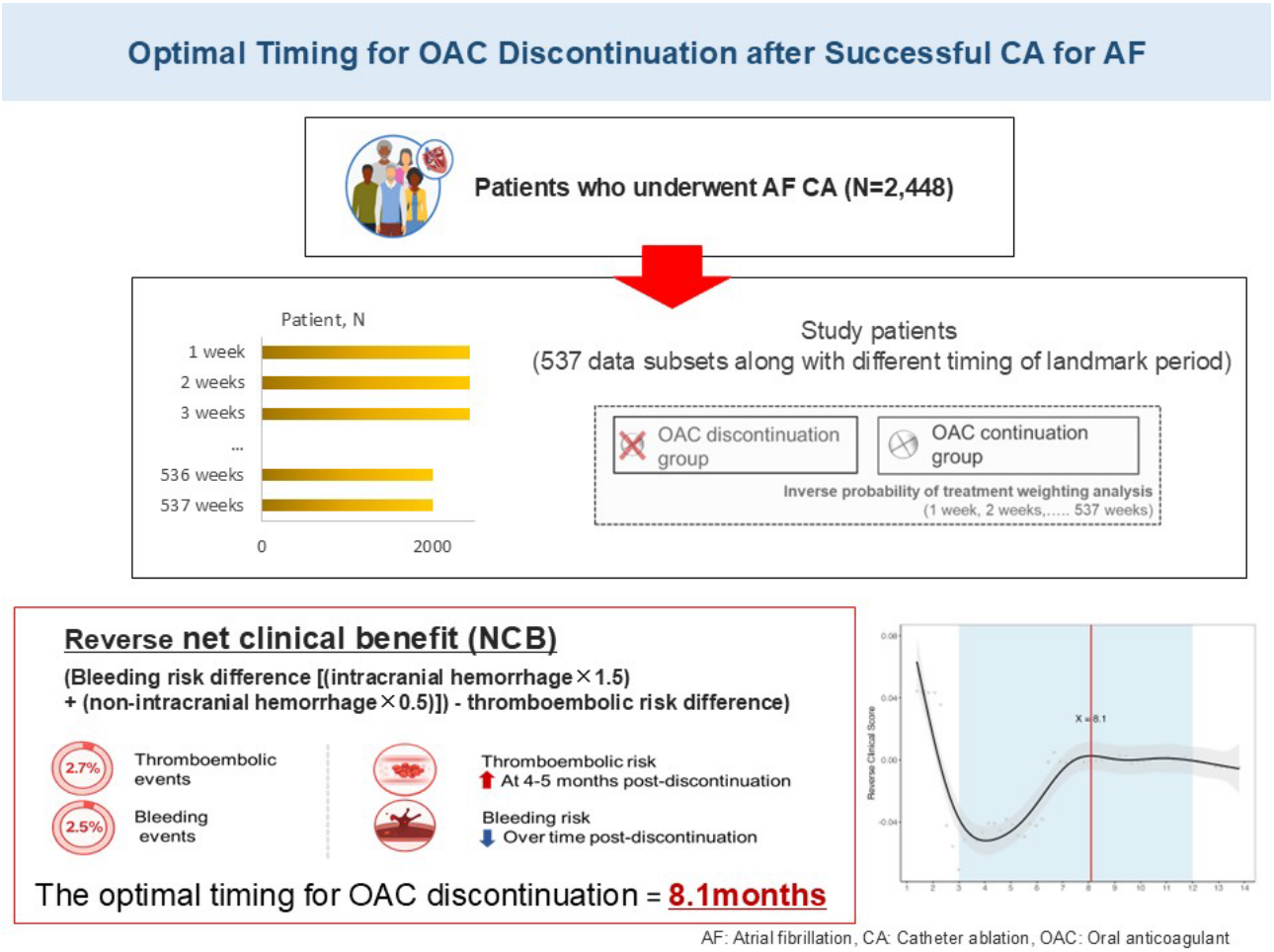

Figure 1:Optimal timing for OAC discontinuation after successful catheter ablation for AF

Research Summary and Future Perspective

The specific time point identified in this study—**8.1 months after catheter ablation**—may serve as a practical clinical reference for minimizing both thromboembolic and bleeding risks in everyday practice. Moving forward, further validation through prospective studies, more comprehensive assessment of recurrence using long-term monitoring, and continued advances in ablation technologies are expected to refine this approach. These efforts may ultimately lead to the development of more precise and individualized anticoagulation strategies after atrial fibrillation ablation.

Publication

Journal: JACC: Clinical electrophysiology

Title: Optimal Timing for Oral Anticoagulant Discontinuation and Prognosis after Successful Catheter Ablation for Atrial Fibrillation

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DOI: 10.1016/j.jacep.2026.02.027

Japanese ver.
https://www.med.nagoya-u.ac.jp/medical_J/research/pdf/Jac_260414.pdf