

# Duration of Postoperative Atrial Fibrillation as a Marker of Thromboembolic Risk After Cardiac Surgery

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## BACKGROUND & AIM

### Clinical problem

POAF is common after cardiac surgery, but the clinical meaning of short-lasting versus prolonged episodes remains insufficiently defined.

### Aim

To assess whether POAF duration ( $\leq 48$  h vs  $> 48$  h) predicts cerebrovascular stroke in early and late postoperative periods.

## STUDY DESIGN

Retrospective, observational, single-center cohort

Cardiac surgery patients with POAF  
January 2020 – December 2023

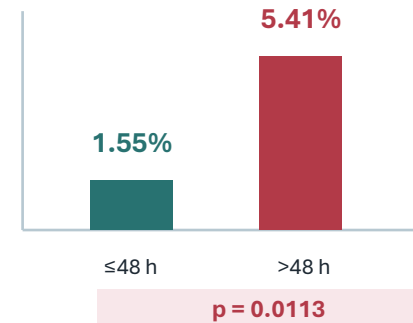
Stratified by duration

POAF  $\leq 48$  h

POAF  $> 48$  h

## MAIN FINDING

In-hospital cerebrovascular stroke



## KEY RESULTS

Stroke incidence by time period

Period	Values / finding	p
In-hospital	1.55% vs 5.41%	0.0113
Early $\leq 6$ weeks	1 total event; no predictive value	0.531
Late $> 6$ weeks	1.06% vs 1.84%	0.6665

For group comparisons: values are presented as POAF  $\leq 48$  h vs POAF  $> 48$  h.

## CHA<sub>2</sub>DS<sub>2</sub>-VASc RISK STRATIFICATION

Late stroke prediction in POAF  $> 48$  h

**OR 4.53** 95% CI 1.44–14.28

$p = 0.010$

CHA<sub>2</sub>DS<sub>2</sub>-VASc showed prognostic value for late CVI only in prolonged POAF.

## INTERPRETATION

- 1 Duration matters early**  
POAF  $> 48$  h marks higher in-hospital thromboembolic risk.
- 2 Late stroke risk is low overall**  
Late events remained uncommon and comparable between groups.

## TAKE-HOME MESSAGE

**POAF duration should be considered when individualizing thromboembolic prevention after cardiac surgery.**

**Especially: episodes  $> 48$  h + CHA<sub>2</sub>DS<sub>2</sub>-VASc may identify patients needing closer follow-up.**

**Primary outcome: cerebrovascular stroke during in-hospital, early ( $\leq 6$  weeks), and late ( $> 6$  weeks) periods.**

**Clinical implication: the 48-hour threshold may support individualized risk assessment rather than uniform prevention strategies.**

Keywords: postoperative atrial fibrillation · thromboembolism · stroke · anticoagulation · cardiac surgery

Abbreviations: POAF, postoperative atrial fibrillation; CVI, cerebrovascular insult/stroke; OR, odds ratio; CI, confidence interval.