PREDICTORS OF POSTOPERATIVE ATRIAL FIBRILLATION AND IMPLICATIONS FOR PROPHYLACTIC INTERVENTION IN OPEN-HEART SURGERY PATIENTS WITHOUT PRIOR AF: A SINGLECENTER, RETROSPECTIVE OBSERVATIONAL STUDY.

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Faculty Disclosure

- I have nothing to disclose

Background:

- Continuing anticoagulation therapy after surgical left atrial appendage (S-LAA) closure remains the established standard of care, primarily due to recommendations supported by the LAAOS III trial. However, clinical practice increasingly questions whether this approach confers additional benefits in terms of stroke prevention for all patient subgroups, including those at higher risk.

Objective:

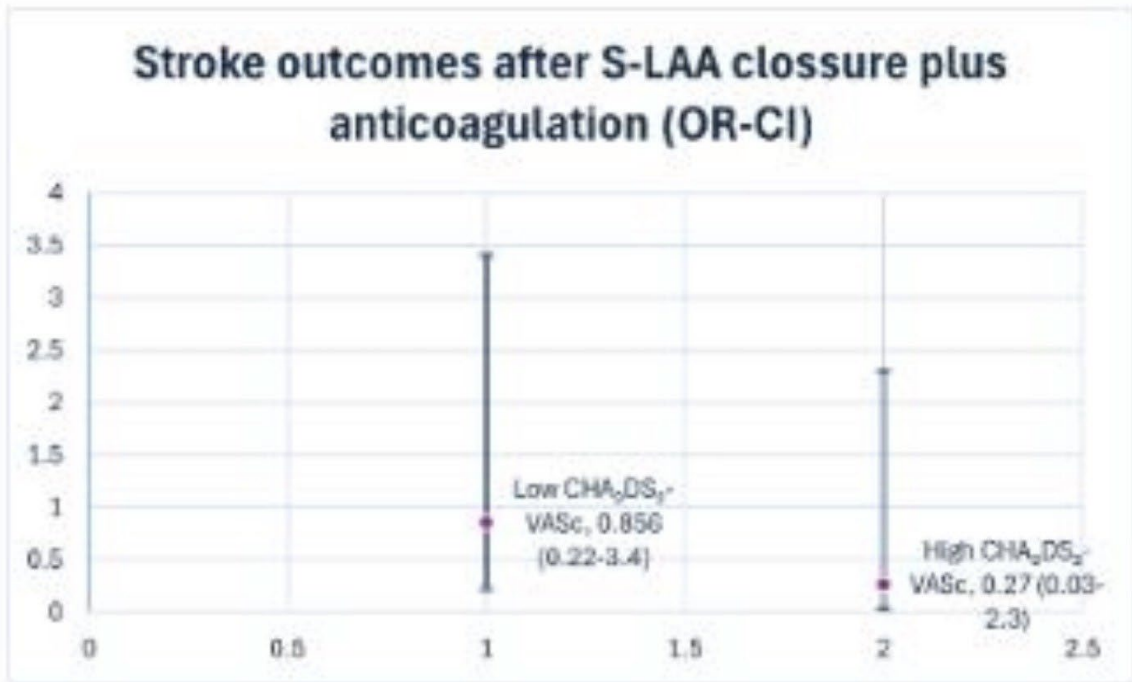
- The primary aim of this study was to evaluate whether administering anticoagulation therapy postoperatively has a meaningful impact on the incidence of stroke in patients who have received S-LAA closure.

Methods:

- A retrospective analysis was conducted on patients who underwent open-heart surgery within the past five years. Group comparisons between those who continued and those who discontinued anticoagulation were analyzed using the Chi-square statistical test, for categorical outcome variables such as stroke incidence

Results:

- Out of 197 patients with atrial fibrillation who were screened, 139 underwent S-LAA closure. Of these, 97 patients continued anticoagulation therapy postoperatively, while 42 did not. The incidence of stroke among these groups did not show a statistically significant difference, with an odds ratio (OR) of 0.856 and a 95% confidence interval (CI) ranging from 0.22 to 3.40 ($p = 0.825$). Furthermore, when focusing on the subgroup of patients with a CHA2DS2-VASc score of 4 or higher, no significant association between anticoagulation continuation and stroke risk was detected (OR 0.27; 95% CI 0.03–2.30; $p = 0.203$).


Stroke outcomes after S-LAA clossure plus anticoagulation (OR-CI)
4
3.5
3
2.5
2
1.5
1
0.5
0
0
0.5
1
1.5
2
2.5
Low CHA2DS2-VASc, 0.856 (0.22-3.4)
High CHA2DS2-VASc, 0.27 (0.03-2.3)

Conclusion:

- This single-center, retrospective study provides evidence that continuing anticoagulation after SLAA closure does not significantly affect the risk of stroke, regardless of whether patients have a high CHA2DS2-VASc score.

PREDICTORS OF POSTOPERATIVE ATRIAL FIBRILLATION AND IMPLICATIONS FOR PROPHYLACTIC INTERVENTION IN OPEN-HEART SURGERY PATIENTS WITHOUT PRIOR AF: A SINGLECENTER, RETROSPECTIVE OBSERVATIONAL STUDY.

Background:

- Atrial fibrillation (AF) often occurs after open-heart surgery. While several factors may predict its
- onset such as age, sex, genetics, heart structure, and CHA2DS2-VASc score, there are no established
- guidelines for prophylactic surgical left atrial appendage (S-LAA) closure or ablation in patients without prior
- AF.

Objective:

- To evaluate the predictors for the onset of AF in patients (pts) undergoing open-heart surgery.
- Identifying such predictors could help guide the use of prophylactic S-LAA closure and surgical ablation in this
- population.

Methods:

- The retrospective analysis included patients who underwent open-heart surgery from July 2020 to
- June 2025 without a prior diagnosis of AF. The Chi-square test was used for statistical analysis.

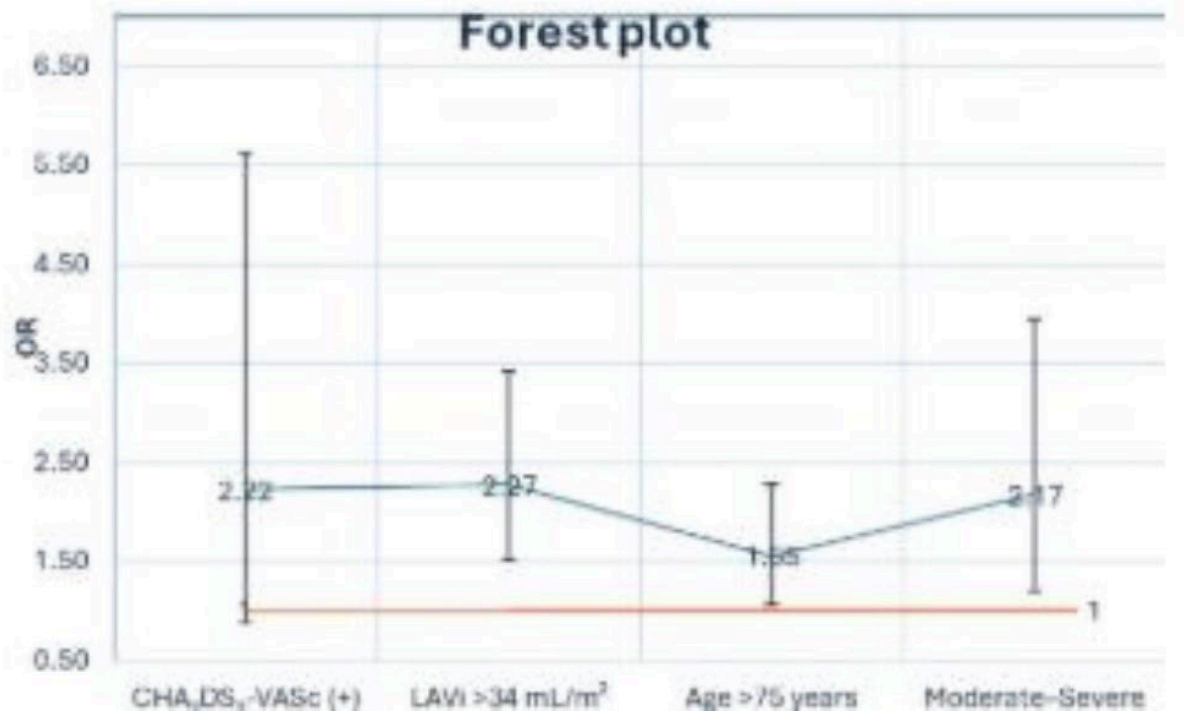
Results:

- A total of 1,099 pts were evaluated and 73.2% were male. A sex-adjusted positive CHA2DS2-VASc score was observed in 1,033 pts, while 67 pts did not have a positive score. Although a positive CHA2DS2- VASc score was associated with an increased risk of developing postoperative AF, this association did not reach statistical significance (odds ratio [OR] 2.22; 95% confidence interval [CI] 0.88–5.61; p = 0.06) (Figure).

Conversely, an enlarged left atrial volume index (LAVi more than 34 mL/m) demonstrated a significant association with postoperative AF (OR 2.27; 95% CI 1.51–3.42; p < 0.001). Additional factors independently linked to increased risk included advanced age (≥ 75 years; OR 1.55; 95% CI 1.06–2.27; p = 0.024) and moderate-to-severe mitral regurgitation (MR) (OR 2.17; 95% CI 1.19–3.94; p = 0.009) (Figure).

Conclusion:

- Enlarged LAVi, moderate-to-severe MR, and age ≥ 75 years are associated with a higher risk of developing postoperative AF. Among these, an increased LAVi was identified as the most robust predictor and may serve as a valuable marker for guiding decisions regarding prophylactic surgical ablation and S-LAA closure in pts undergoing open-heart surgery.


Forest plot
6.50
5.50
4.50
3.50
2.50
1.50
0.50
OR
2.22
2.27
1.55
3.17
1
1
CHA2DS2-VASc (+)
LAVi >34 mL/m2
Age >75 years
Moderate-Severe