

Indiana-ACC Poster Competition Abstract

Do **NOT** write outside the boxes. Any text or images outside the boxes **will** be deleted.

Do **NOT** alter this form by deleting parts of it (including this text) or adding new boxes.

Please structure your clinical research abstract using the following headings: * Background * Objective * Methods * Results (if relevant) * Conclusion

Please structure your case study abstract using the following headings: * Introduction/objective * Case presentation * Discussion * Conclusion

Title:

Left atrial hypertension and the risk of recurrent heart failure after atrial fibrillation ablation

Abstract: (Your abstract must use Normal style and must fit into the box. You may not alter the size of this)

Background:

Catheter ablation is a safe and effective procedure to reduce symptoms from atrial fibrillation (AF), but one potential complication is early occurrence of heart failure (HF). Elevated intraoperative left atrial pressure is associated with an increased risk of AF recurrence, but it is unknown if this correlates with HF.

Objective:

The objective of this study is to determine if left atrial hypertension not only predicts recurrent AF, but can also drive HF events.

Methods:

We performed a prospective, single center, cohort study measuring left and right atrial pressures during AF ablations in 100 patients. The primary endpoint was a clinical HF event defined by the composite of acute HF office visit, emergency room visit, hospitalization, or HF symptoms by telephone survey.

Results:

21% of patients had a clinical HF event within 30 days. HF patients had a higher post procedural left atrial pressure (mean $[+/-SD]$, $12.7+/-4.6$ vs $10.1+/-4.5$; $P=0.01$) and higher post procedural right atrial pressure ($7.7+/-3.6$ vs $5.7+/-3$; $P=0.04$). Other baseline correlates to HF included presence of moderate to severe mitral valve disease or not taking a class III antiarrhythmic medication ($P=0.01$ and $P=0.02$). A multivariate analysis including post ablation pressures, mitral valve disease and use of class III antiarrhythmics was performed and revealed presence of mitral valve disease and absence of class III antiarrhythmics were independent predictors of HF events. Additionally, the secondary endpoint of AF-free HF event was also associated with higher left atrial pressure ($p = 0.04$).

Conclusions:

Patients with a clinical HF event after AF ablation had significantly higher left and right atrial pressures post procedure, which cannot be explained by early recurrence of AF alone. Future studies may target these patients for intervention to reduce the risk of incident HF.

