
ATRIAL ARRHYTHMIAS: AFIB, AFLUTTER, ATRIAL TACHYCARDIA

Does Early Recurrence Predict Late Recurrence in Pulsed Field Ablation for Atrial Fibrillation?

Xiangyi Xu^{1,*}, Xiaowei Yan¹, Sarah Contreras², Isabelle Barlaan², Eunjeong Kim²,
Meghan Martinez¹, Nick Romero¹, Girish Narayan², Shaun Cho², Gloria Medina²,
Michelle Gould², Sung Chun²

¹ Sutter Health, Research Institute, United States

² Palo Alto Medical Foundation, Palo Alto Arrhythmia Center, United States

* Presenting Author

OBJECTIVE

To assess if atrial fibrillation (AF) early recurrence (ER) is predictive of late recurrence (LR) in patients (pts) undergoing Pulsed Field Ablation (PFA).

METHODS

Retrospective analysis was done on pts who had PFA with minimum of 6 months follow-up. ER was defined as ≥ 30 seconds of atrial arrhythmia seen in ECG, wearable gadget, event monitor, implantable monitor or devices within 90 days. Pts were categorized based on first occurrence time into 3 ranges: 1-30 days, 31-60 days, and 61-90 days post PFA. LR was defined as atrial arrhythmia occurred more than 90 days post PFA.

Logistic regression was used to assess association between first ER timing and LR, adjusting for baseline characteristics, such as CHADS2-VASC score, BMI, sleep apnea, ethnicity, and pts with previous ablation. Analysis was repeated for persistent AF and paroxysmal AF.

RESULTS

377 pts were included in analysis, 217 (57.6%) paroxysmal and 160 (42.4%) persistent. 99 pts (26%) had LR, 36 (17%) paroxysmal and 63 (39%) persistent. After adjusting for baseline characteristics, pts with first ER within 1-30 days were 2.4 times more likely to have LR (OR=2.44, 95%CI 1.20-4.94), and first ER within 61-90 days were also more likely to have LR (OR=19.63 (95%CI 2.68-40.37).

Strong association between ER and LR was observed for paroxysmal AF; first ER within 1-30 days was 8.9 times more likely to have LR (95%CI 2.79-29.38). First ER within 31-60 days was strongly associated with LR also (OR=7.87, 95%CI 1.49-40.28). We did not find statistically significant association between ER with LR for persistent AF.

CONCLUSION

This study demonstrates that ER, especially 1-30 days post PFA is predictive of LR in paroxysmal AF. The validity of 90 days blanking period may be applicable for persistent AF, but not for paroxysmal AF pts having PFA.