Atrial Fibrillation Management Strategies Over Time at A Specialized Center for Atrial Fibrillation

Aleesha Kainat, MD[1]; Jessica Oh, MD[2]; Amr F. Barakat, MD[3], MS; Erica M. Byers, MSN, CRNP[3]; Konstantinos N. Aronis, MD[3], PhD; Aditya Bhonsale, MD[3]; Krishna Kancharla, MBBS[3]; Andrew H. Voigt, MD[3]; Norman C. Wang, MD[3]; Mark Estes, MD,[3] Samir F. Saba, MD[3]; Sandeep K. Jain, MD[3]

[1]Department of Internal Medicine, University of Pittsburgh Medical Center, McKeesport, PA,[2]Dept of General Internal Medicine, University of Pittsburgh Medical Center, Pittsburgh PA, [3]Heart and Vascular Institute, University of Pittsburgh Medical Center, Pittsburgh PA

INTRODUCTION

- Management strategies for atrial fibrillation (AF) is often individualized and depend on various factors such as AF duration, response to therapy, and the type of provider involved.
- We sought to evaluate AF management strategy and its evolution over time for patients referred to a specialized center for AF.

HYPOTHESIS

- We hypothesize that for patients referred to a specialized center for AF, catheter ablation when chosen as an initial strategy leads to less changes over time when compared to medical therapy or DC cardioversion (DCCV).

METHODS

- **Study Design:** A retrospective review was conducted of 932 patients who were referred to a specialized center for AF between 2015-2019.
- **Population:** Baseline characteristics and AF management strategies after AF center visit (classified as AV nodal agents, anti-arrhythmic, DCCV, or AF ablation) were collected.
- **Outcome**: Strategy changes were tracked for 2 years after initial consultation.

AF ablation as initial strategy choice led to less overall strategy changes over a 2 year follow up period after referral to a specialized center for AF

			Total # of Strategy Changes after 2 years					
			0	1	2	3	4	
First Strategy Choice	DCCV	Count	38	30	14	2	0	84
		% within First Strategy Choice	45.2%	35.7%	16.7%	2.4%	0.0%	100.0%
	AV Nodal Blocking Agents	Count	319	71	29	5	1	425
		% within First Strategy Choice	75.1%	16.7%	6.8%	1.2%	0.2%	100.0%
	Rhythm Control	Count	148	74	21	4	0	247
		% within First Strategy Choice	59.9%	30.0%	8.5%	1.6%	0.0%	100.0%
	PVI or CTI ablation	Count	139	32	9	1	0	181
		% within First Strategy Choice	76.8%	17.7%	5.0%	0.6%	0.0%	100.0%

TABLE 1

FIGURE.1

Email: aleeshakainat@live.com
@aleeshakainat

RESULTS

➢ *DEMOGRAPHIC CHARACTERISTICS:*

- For initial management, DCCV was chosen in 9%, AV nodal agents in 45%, anti-arrhythmic in 27%, and AF ablation in 19%.
- Duration of AF was the most important factor in deciding the initial strategy choice:
  - When DCCV was chosen as the initial strategy, most patients had a duration of AF < 1 month (51% of all DCCV patients).
  - When AV nodal agents was chosen as the initial strategy, duration of AF was > 5 years (45% of all patients with AF duration >5 years).
  - AF ablation was considered when duration of AF exceeded 3-6 months.
- There was no association with CHA2DS2VASc/HAS BLED scores, or medical co-morbidities on strategy choice.

➢ *TWO YEAR OUTCOMES:*

- **AF ablation group was most likely to maintain initial strategy (77%)** compared to AV nodal agents (75%), anti-arrhythmic (60%) and DCCV groups (45%) (p<0.001). [TABLE. 1]
- At 2-year follow-up, 31% of patients had at least one strategy change. Within this subset, **AF ablation was the most common final strategy (44%) across all initial strategy groups** (44% of DCCV, 50% of AV nodal agents, and 58% of anti-arrhythmic chose ablation as final strategy).

CONCLUSION

- **After referral to a specialized center for AF, duration of AF appeared to be the most important factor in determining initial strategy choice, and AF ablation as initial strategy choice was associated with less overall strategy changes over a 2 year follow up period.** [FIGURE. 1]