



Cardiac Implantable Electronic Devices in Advanced Heart Failure Patients on Palliative Inotropes



Sanika Tolia DO ¹; Sameer Khan ¹; Marianne Soltys ²; Kathleen Kamba ²; Sheraz Hussain MD ¹; Sujeen Adhikari DO ¹; Anjali Joshi MD ²; Christopher Sciamanna DO ²; Nikhil Narang MD ²; Jessica Pillarella MD ²; Sunil Pauwaa MD ²; Gregory Macaluso MD ²; William Cotts MD ²; Ambar Andrade MD ²



¹ University of Illinois at Chicago/Advocate Christ Medical Center, Department of Medicine, Oak Lawn, IL

² Advanced Heart Failure & Transplant Cardiology, Advocate Christ Medical Center, Oak Lawn, IL

Background

- Palliative inotropes are frequently used for end stage heart failure patients unable to undergo advanced therapies
- Palliative inotropes may allow for improved patient outcomes

Objective

- We aim to compare survival and outcomes between patients with and without defibrillators who received palliative inotrope therapy

Methods

- Single center, retrospective analysis
- 220 patients with AHA Stage D heart failure discharged on palliative inotrope therapy after January 1, 2010
- Comparison groups:
 - Pacer/None = permanent pacemaker (PPM), bi-ventricular pacemaker (BiV-P), or no device
 - Defibrillator = implantable cardioverter defibrillator (ICD), BiV-ICD (BiV-D), or LifeVest (Zoll, Chelmsford, MA)

Results

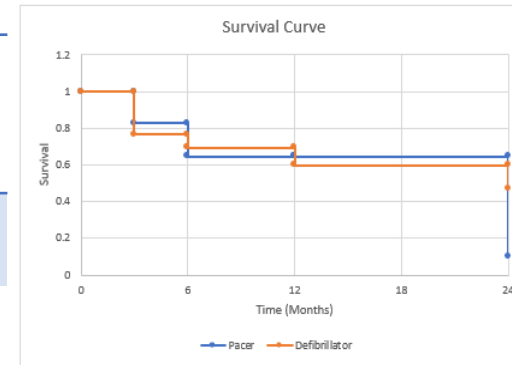
Demographics of Palliative Inotrope Therapy (NICM) n=220

	Pacer/None (n=54)	Defibrillator (n=168)	p-value
Demographics:			
Age	61 (55-73)	66 (59-75)	0.05
Male	30 (55.6%)	107 (63.7%)	0.28
Comorbidities:			
Hypertension	28 (53.9%)	119 (73.0%)	<0.01
Hyperlipidemia	19 (36.5%)	78 (47.9%)	0.15
Diabetes	18 (34.6%)	78 (44.4%)	0.21
Arrhythmia	26 (51.0%)	105 (64.4%)	0.09
Pulmonary HTN	16 (30.8%)	29 (17.9%)	<0.05
CKD	31 (59.6%)	73 (70.2%)	0.06
Inotrope:			
Total Days on Therapy	208 (50-327)	283 (57-406)	0.07
Milrinone	46 (85.2%)	151 (89.9%)	0.34
Dobutamine	15 (27.8%)	33 (19.6%)	0.21

Outcomes of Palliative Inotrope Therapy n=220

	Pacer/None (n=54)	Defibrillator (n=168)	p-value
Outcomes:			
Number of Hospitalizations	2.5 (0-2.5)	2.2 (0.5-3)	0.63
Number of Clinic visits	5.9 (1-9.8)	7.1 (1-11.8)	0.34
3-month Survival	41 (82%)	113 (74.3%)	0.27
1-year Survival	19 (54.3%)	64 (48.1%)	0.52
2-year Survival	8 (25.8%)	31 (26.3%)	0.96
Complications:			
PICC Line Inf	2 (3.7%)	8 (4.8%)	0.74
Arrhythmia	5 (15.2%)	7 (7.9%)	0.23
Status at End of Study:			
Alive	15 (27.8%)	38 (22.6%)	0.37
Expired/Hospice	28 (51.9%)	105 (62.5%)	
Lost to Follow Up	11 (20.4%)	25 (14.9%)	

Results



Conclusion

- Patients undergoing evaluation for defibrillator implantation are required to meet guidelines on indications and expected survival
- As patients with palliative inotropes are living longer, consideration for protection against arrhythmic events is fundamental
- Further studies with larger populations are needed to understand the utility of defibrillators in this population

Disclosures

- No disclosures to report