10.2 years, CHA2DS2-VASc 4.9 ± 1.5) and 2,564 (age 73.9 ± 10.5 years, CHA2DS2-VASc 5.2 ± 1.4) treated/not treated with AA. Survival analysis showed a significant mortality reduction with AA adjusting for CHA2DS2-VASc and anticoagulation status (HR 0.65, 95% CI 0.60-0.72, p < 0.001). Using propensity score matching, there was a lower mortality rate in patients treated with AA (Figure – HR 0.80, 95% CI 0.71 - 0.90, p < 0.001).

**Conclusion:** There was an association between lower mortality rates in HFpEF patients with AF treated with AA. This may be due to an improvement in the atrial myopathy that complicates both AF and HFpEF as AA have been shown to reduce atrial fibrosis, dilation, and AF severity.

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**PO-628-06**

**EFFECT OF ANGIOTENSIN RECEPTOR NEPRILYSIN INHIBITOR AND EMPAGLIFLOZINE ON ISCHEMIC VENTRICULAR TACHYCARDIA SUBSTRATE: A HIGH-DENSITY MAPPING AND MRI STUDY**

Julia Aranyo Aranyo MD; Carolina Galvez-Monton PhD; Albert Teis MD; Daina Martinez-Falguera; Carolina Curiel; Oriol Rodriguez-Leor; Edgar Fadeuilhe; Victor Bazan MD, PhD; Axel Sarrias MD; Roger Villuendas MD; Antonio Bayes MD, PhD and Felipe Bisbal Van Bylen MD, PhD

**Background:** Angiotensin receptor neprilysin inhibitor (ARNI) and empagliflozine reduce cardiovascular death in heart failure, but mechanistic data on this effect are scarce.

**Objective:** To assess the effect of ARNI and empagliflozine on scar remodeling and ventricular tachycardia (VT) inducibility in a swine model of chronic myocardial infarction (MI).

**Methods:** Left anterior descending artery MI was induced in 40 Landrace Large X White pigs. Thirty-one animals (78%) survived the MI induction procedure and were randomized to receive treatment with beta-blocker (BB) only (group 1, n = 7), empagliflozine + BB (group 2, n = 8), ARNI + BB (group 3, n = 8) or empagliflozine + ARNI + BB (group 4, n = 8). Contrast-enhanced (ce)-MRI were performed at 2-day (baseline) and 1-month post-MI and were post-processed with ADAS 3D: ventricular scar subtypes and borderzone (BZ) corridors volume were measured. EP study with endo-epicardial high-density mapping was performed 1-month post-MI.

**Results:** VT was inducible in 21/31 subjects (68%). Treatment with ARNI (groups 3 and 4) showed a significant reduction of VT inducibility (OR 0.15 [0.026-0.91], p = 0.03) compared to non-ARNI groups (100%, 75%, 50% and 50% for groups 1, 2, 3 and 4, respectively), representing a 30% relative risk reduction. Treatment with empagliflozine (group 2) did not reduce VT inducibility (p = 0.704). Baseline ceMRI data showed a mean core and BZ scar mass of 5.4 ± 3.1 and 6.1 ± 3.1 grams, respectively, without significant differences in the percentage of core scar. The mean number of corridors was 2.1 ± 1.2 with a mean mass of 1.3 ± 1.0, without significant differences across groups. Treatment with ARNI and empagliflozine significantly reduced the number (+1.0, -1.1, -1.2 and -1.7 corridors for groups 1, 2, 3 and 4, respectively; p = 0.021) and mass of corridors (+0.3, -1.6, -0.8 and -0.4 grams for groups 1, 2, 3 and 4, respectively; p = 0.012) at the follow-up ceMRI. ARNI and empagliflozine groups tended to reduce overall BZ mass compared to the control group (reduction of the BZ percentage -1.2 ± 4, -4.9 ± 2, -5.6 ± 2, -3.8 ± 4; p = 0.102).

**Conclusion:** Treatment with ARNI reduced VT inducibility by 30% after MI, likely driven by a significant reduction of the number and mass of BZ corridors. Empagliflozine reduced the number and mass of BZ corridors, without impact on VT inducibility.

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**PO-628-07**

**LEFT BUNDLE-BRANCH PACING POST-ATRIOVENTRICULAR JUNCTION ABLATION FOR ATRIAL FIBRILLATION: PROPENSITY-SCORE MATCHING WITH HIS BUNDLE PACING**

Weijian Huang MD, FHRS; Mengxing Cai; Shengjie Wu and Lan Su MD, FHRS

**Background:** Left bundle branch pacing (LBBP) has emerged as a promising pacing modality to preserve physiological left ventricular activation but has limited prospective data evaluating
Objective: This study aimed to examine the long-term feasibility, safety, and efficacy of LBBP in patients with atrial fibrillation (AF) and heart failure (HF) after AVJ ablation and provide a comparison of LBBP versus His bundle pacing (HBP) through a propensity score (PS) matched analysis.

Methods: We prospectively enrolled patients with AF and HF who were referred for AVJ ablation and LBBP between July 2017 to December 2019. The control group patients were selected from HBP implantations performed in the years 2012-2019 using PS matching with a 1:1 ratio.

Results: A total of 99 patients were enrolled in this study. LBBP implant success rate was 100%. Significant improvements in the LVEF were observed in patients with HFrEF and HFpEF ($p < 0.05$). Threshold rise above 2V@0.5ms occurred in only one patient. Of 176/215 (81.9%) who received permanent HBP post-AVJ ablation, 86 patients were matched to the LBBP group by 1:1 PS (PS-HBP, N = 86; PS-LBBP, N = 86). No significant differences in echocardiographic or clinical outcomes were observed between the two groups ($p > 0.05$), while lower thresholds, greater sensed R-wave amplitudes, and fewer complications were observed in the PS-LBBP group ($p < 0.05$).

Conclusion: LBBP is feasible, safe, and effective in patients with AF and HF post-AVJ ablation, which has similar clinical benefits, higher success rate, better pacing parameters, and fewer complications than HBP.

RESPONSE TO CRT IS DIFFERENT IN PATIENTS WITH IVCD COMPARED TO RBBB: A PATIENT LEVEL META-ANALYSIS OF RANDOMIZED CONTROLLED TRIALS

Background: Benefit from cardiac resynchronization therapy (CRT) varies by QRS characteristics; individual randomized trials are underpowered to assess benefit for relatively small subgroups.

Objective: To determine the relationship between QRS characteristics (morphology and duration) and CRT benefit using pooled patient level data from pivotal CRT trials.

Methods: We analyzed patient level data from pivotal CRT trials (MIRACLE, MIRACLE-ICD, MIRACLE-ICD II, REVERSE, RAFT, COMPANION, and MADIT-CRT) using adjusted Bayesian Hierarchical Weibull survival regression models to assess CRT benefit by QRS morphology (LBBB, RBBB and IVCD) and duration (with 150ms partition). The continuous relationship between QRS duration and CRT benefit was also examined within subgroups defined by sex and QRS morphology. Results are presented using hazard ratios and 95% posterior credible intervals. The study endpoint was heart failure hospitalization (HFH) or death.

Results: Of the 6,264 patients included, 25% were women, the mean age was 65 years, and 61% received CRT. CRT reduced the risk of HFH/death (HR 0.73, CI 0.65 - 0.84), due to an effect on patients with QRS $\geq 150ms$ and either LBBB (HR 0.56, CI 0.48 - 0.66) or IVCD (HR 0.59, CI 0.39 - 0.89). No benefit for CRT was observed when QRS was $< 150ms$ (regardless of morphology) or for patients with RBBB and QRS duration $> 150ms$. Sex specific differences in the QRS duration threshold at which CRT benefit appeared for LBBB and IVCD (Figure).

Conclusion: CRT reduces HFH/death among patients with QRS $\geq 150ms$ and LBBB or IVCD; no statistically significant benefit was seen among those with RBBB. Aggregating RBBB and IVCD into a single “Non-LBBB” category when selecting patients for CRT might be inappropriate.