increases (Fig. 1) compared to acute. This is primarily driven by non-selective HBP measurements which have a similar SDC. Chronaxie decreases significantly in follow-up for nonselective HBP (p = 0.05), there is a trend for increase in RV chronaxie in these pts. Selective HBP SDC and chronaxie demonstrate minimal change over time (Fig. 2). Chronic rheobase increases significantly for nonselective HBP (p = 0.025), insignificantly for corresponding RV capture but not for selective HBP. Dynamic measurements in 9 pts with acute and chronic SDC confirm same observations.

**Conclusion:**
1. Chronaxie for HBP decreases in follow up. 2. Use of lower pulse widths could decrease battery current drain but is negated by increase in nonselective PT. 3. Selective HB chronaxie and PT change minimally and are low. 4. Achieving selective HBP may allow to program a lower pulse width and to save battery.

**PO-619-06**

**PRIME SCORE PREDICTS NEED FOR PERMANENT PACEMAKER AFTER TRANSCATHETER AORTIC VALVE REPLACEMENT**

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**Background:** High grade atrioventricular block is a common complication of transcatheter aortic valve replacement (TAVR). Current models for predicting risk of permanent pacemaker (PPM) after TAVR are not designed to be applied clinically to assist with pre-procedural planning and risk-benefit discussions with patients.

**Objective:** To aid procedural planning and patient discussion, we sought to produce a simple predictive scoring system that can be applied pre-TAVR to stratify risk of PPM after TAVR.

**Methods:** We analyzed consecutive patients undergoing TAVR at the University of Colorado from 2013-19. Pre-procedural clinical data were recorded. Patients were split into a training cohort to develop a predictive model and a testing cohort for model validation. Stepwise and binary logistic regression were performed on the training cohort to produce a simple scoring system for predicting PPM implantation. Scores were then applied to the validation cohort and receiver operating characteristic (ROC) analysis was performed to assess predictive accuracy.

**Results:** Of 699 patients who underwent TAVR, 606 were analyzed for this study; 483 (80%) were included in the training cohort and 123 (20%) in the validation cohort. Pre-existing PPM before undergoing TAVR was the principal reason for exclusion. Pacemaker was implanted in 78/483 patients from the training cohort. The need for PPM post TAVR was associated with five pre-procedure variables: PR interval > 200 ms, Right bundle branch block (RBBB), valve In valve procedure, prior Myocardial infarction, and self-Expandable valve. The PRIME scoring system (Figure) was developed in the training cohort using these five clinical features, and was highly accurate for predicting PPM implantation both in the model training cohort (area under the curve [AUC] 0.804) and in the model validation cohort (AUC 0.830). The PRIME score offered substantial improvement over the use of RBBB alone (AUC for RBBB alone = 0.671) for the prediction of PPM after TAVR.

**Conclusion:** The PRIME score is a simple and accurate pre-procedural tool for predicting the need for PPM implantation after TAVR.

**PO-619-07**

**CHEST WALL ADIPOSE TISSUE EXCISIONAL BIOPSY DURING PACEMAKER OR DEFIBRILLATOR IMPLANTATION: FIRST REPORT OF A NEW TECHNIQUE TO DIAGNOSE AND SUBTYPE AMYLOIDOSIS**

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**Background:** Availability of disease-modifying therapies has made early diagnosis of amyloidosis crucial. Clinical criteria and...
non-invasive imaging can facilitate the diagnosis, but tissue biopsy remains the gold standard for both obtaining a definitive diagnosis of amyloidosis and classifying the amyloid subtype. Since patients undergoing CIED implantation are often older and have electrical or structural heart disease, we postulated that tissue biopsy of the subcutaneous pocket during device implantation may allow for facile detection of otherwise undiagnosed amyloidosis.

Objective: To evaluate the feasibility of adipose tissue sampling from the chest wall pocket during CIED implantation.

Methods: Patients with clinical/imaging characteristics suggestive of amyloidosis, but without a diagnosis, underwent excisional biopsy of chest wall subcutaneous adipose tissue from the newly created CIED pocket at the time of device implant (Figure). Samples were analyzed with Congo red staining and mass spectrometry for subtyping.

Results: The study cohort included 18 patients receiving pacemakers (n = 9) or ICDs (n = 9) with mean age 71 years, 83% (n = 15) male, 44% (n = 8) with AF, and average LV wall thickness of 1.3 cm. Each biopsy took under 2 minutes to acquire. Of the entire cohort, 17% (n = 3) of the patients had adipose samples that were Congo red positive, consistent with amyloidosis. The average LV wall thickness of the 3 patients with biopsy-proven amyloidosis was 1.5 cm. All 3 patients were ultimately diagnosed with transthyretin (ATTR) amyloidosis (2 wild-type, 1 hereditary) and treated with the novel transthyretin-binding medication, tafamadis.

Conclusion: Adipose tissue excisional biopsy of the newly created chest wall pocket can be easily, safely, and quickly performed (within 2 minutes) at the time of CIED implantation. Timely histopathological confirmation of amyloidosis in these at-risk patients permitted early initiation of disease-modifying agents. These data warrant a large prospective trial in patients with risk factors for amyloidosis undergoing CIED implantation.

Background: Infection risk mitigation for cardiovascular implantable electronic device (CIED) implantation includes guideline recommended use of pre-op IV antibacterial prophylaxis (IV ABX). Antibacterial biologic porcine extracellular matrix CIED envelopes hydrated with antibiotics combined with IV ABX may reduce CIED infection rates.

Objective: Report real-world data on CIED infection risk reduction practices in a multicenter trial dataset.

Methods: A post-hoc analysis of 1102 patients in the CARE & SECURE studies assessed observational data on IV ABX, antibacterial biologic envelope usage and infection outcomes.

Results: Compliance with guideline IVABX was 96.6% (range 11 - 100%), similar to WRAP IT (94.2%) but varied by site - 100%: 23 sites, >90%: 32 sites, >80%: 36 sites. Sites with higher compliance (≥80% IV ABX use) had lower CIED infection rates than sites with <80% compliance (0.9% vs 2.9%) (Figure 1A). These differences were more pronounced when antibacterial biologic envelopes were used with IV ABX (≥80% vs <80% (0.8% vs 5.6%) (Figure 1B)). In sites with IV ABX compliance ≥80%, the use of an antibacterial vs saline-only hydration envelope was associated with a trend toward a lower infection rate (0.8% vs 1.1%) (Figure 1C). These findings suggest that the use of antibacterial envelopes without IV ABX is not sufficient to reduce CIED infections.

Conclusion: A concerning number of patients undergoing CIED implantation did not receive guideline recommended IV ABX and had a higher infection rate. These real-world observations align with the current guideline recommendations for IV ABX use during CIED implantation and support the use of antibacterial biologic envelopes as an adjunct (not substitute) infection prevention strategy. The role of infection risk factor characteristics and the role of antibacterial biologic envelope usage in potentially mitigating CIED infections warrant further investigation.

Figure 1

POSTER PO-620:
Featured Posters: CIED at Pod 7
Friday, April 29, 2022
12:30 PM - 2:30 PM

PO-620-01
PERFORMANCE OF CARDIAC IMPLANTABLE ELECTRONIC DEVICES IN DETECTING PREMATURE VENTRICULAR CONTRACTION BURDEN
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Background: Frequent premature ventricular contractions (PVCs) can cause or exacerbate cardiomyopathy. At-risk