Conclusion: 3D LGE-CMR can identify SCAI with 100% sensitivity, which may contribute to risk stratification and patient selection for invasive EAM.

ABSTRACT EN-580:
Women in EP: It’s Time to Talk About the Money!
Closing the Gender Pay Gap in EP
Saturday, April 30, 2022
12:30 PM - 2:00 PM

EN-580-01
RISK PREDICTION TOOL FOR CARDIAC PERFORATION DURING TRANSVENOUS LEAD EXTRACTION: A CANADIAN LEAD EXTRACTION RISK (CLEAR) STUDY SCORE
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Background: Cardiac perforation is a potentially life-threatening complication of transvenous lead extraction. Despite procedural advances in technology and techniques, the incidence is significant at 1 to 3%. A risk prediction tool is warranted to identify patients with an elevated risk of perforation prior to lead extraction to improve surgical planning and safety.

Objective: Our objective was to develop and validate a risk prediction score for cardiac or vascular perforation among cardiac implantable electronic device patients undergoing lead extraction.

Methods: The multicentre Canadian Lead ExtrAction Risk (CLEAR) study was used to develop the score. The study examined patients who underwent transvenous lead extraction to ascertain the incidence and risk factors for perforation (1996-2016). Potential predictors of perforation were incorporated into a multivariable least absolute shrinkage and selection operator (LASSO) logistic regression to determine the risk model. The model was internally validated with bootstrapping and model discrimination was calculated.

Results: Of 2,325 patients who underwent a lead extraction (age 61.9 years, 29.0% women), 63 (2.7%) patients had a perforation within 30 days. Female sex and no prior cardiac surgery were the most significant factors associated with perforation, followed by the number of leads extracted (>2), left ventricular ejection fraction (>40%), and logarithm of lead age (years). Model discrimination was strong [area under the curve (AUC) = 0.79 (95% CI 0.73-0.84)] and the score accurately predicted the risk of perforation (Figure 1).

Conclusion: Individual patient risk for perforation from lead extractions can be accurately predicted from the CLEAR score.

EN-580-02
ATRIAL PACING INDUCED OVERSENSING IN SUBCUTANEOUS IMPLANTABLE CARDIOVERTER DEFIBRILLATOR
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Background: A 23 year old male with hypertrophic cardiomyopathy, was implanted with a Subcutaneous Implantable Cardioverter Defibrillator (S-ICD) (Cameron Health SQ-RX 1010). Four years later the patient developed symptomatic bifascicular block and a dual chamber pacemaker (PPM) (Biotronik Epyra-6) was implanted.

Objective: To highlight the potential challenge of interactions between an S-ICD and atrial pacing.

Methods: N/A

Results: The PPM was programmed DDD with a lower rate of 60 bpm and an upper rate of 150 bpm. The S-ICD conditional and shock zones were set to 250 bpm, in the Secondary vector. Primary and Alternate vectors were not viable options due to oversensing of the patient’s intrinsic rhythm and smart pass filtering unavailable on this device model.

Two months post PPM insertion, an untreated episode was detected by the S-ICD displaying intermittent triple counting of the P, R and T-wave (figure 1). Consequently simultaneous interrogation of the PPM and S-ICD was performed. Upon conducting the atrial threshold test in AAI mode, the S-ICD P-wave oversensing was replicated (figure 2). The paced P-wave amplitude was similar to that of the intrinsic R-wave (figure 1 circled in red) resulting in sensing of both components. S-ICD sensing utilises auto gain control whereby the average amplitude of the last two sensed signals is taken and the decay to sensing floor begins at 75% of this calculated amplitude. As the interval between sensed beats decreases, the shorter the refractory period and more aggressive the decay to ensure appropriate sensing of small amplitude signals, typically seen during ventricular fibrillation. A fortuitous ventricular ectopic (figure 1 highlighted in green) resets the sensing profile as the