enrolled and implanted with S-ICDs and followed for up to 18 months in the UNTOUCHED trial (n=1111). IAS rates by implant technique and by sense vector were evaluated and Multivariable modeling was used allowing for interaction terms with incision technique.

**Results:** Pts implanted using 2IT were more likely to be male (p=.0131) and have lower BMI (p=.0016). Overall IAS rates for pts implanted using 2IT were 4.7% vs 2.6% using 3IT. Pts implanted using 2IT were three times as likely to receive IAS due to non-cardiac oversensing (myopotentials, noise, etc; 1.8% vs 0.6%) and more than twice as likely to receive IAS due to t-wave over-sensing (2.0% vs 0.9%). In pts implanted using the 2IT, IAS rate was similar when the sense vector included the distal electrode as compared to patients programmed with the primary vector (distal electrode excluded): 19 pts (2.4%) experiencing 29 episodes vs. 20 pts (2.6%) experiencing 27 episodes respectively (p=1.0). Multivariable modeling results (table) showed the only significant interaction term with 2IT was BMI, leading to less risk of IAS. In contrast, 2IT remained a significant, independent predictor of increased IAS and BMI was also an independent predictor of increased IAS.

**Conclusion:** In the UNTOUCHED trial, the two-incision technique was found to be an independent predictor of inappropriate shocks. This increase does not appear to be a consequence of an unsecured tip electrode. More analysis is needed to further understand the interaction between the 2IT and BMI on inappropriate shocks.

**Methods:** A 7Fr conductance catheter (CD Leycom, the Netherlands) was inserted into the RV to record PV loops during speed optimization study in a 78 year old woman with non-ischemic cardiomyopathy post CRT, pacemaker dependent atrial fibrillation, and Heartmate 3 LVAD. Concurrently, pulmonary arterial catheter (PAC) measured intracardiac pressure. Pacing strategies were assessed at low (4800 rpm) and high speed (5400 rpm). RV function was assessed by slope and contour of end-systolic PV relationship (ESPVR) and end-diastolic PV relationship (EDPVR).

**Results:** At low speed there was no significant change in RV systolic or diastolic function among pacing strategies. At high speed, peak pressure generation declined and ESPVR slope was shallower with LV-only pacing. There was no significant difference in RV function between BiV and RV-only pacing. PAC measured pressure and cardiac output were unchanged with pacing at both speeds.

**Conclusion:** RV PV analysis identified hemodynamic changes associated with different pacing strategies not evident with traditional assessment of filling pressures. LV-only pacing negatively impacted RV function while RV-only and BiV pacing had similar RV hemodynamics. Further investigation is needed to evaluate this pattern in additional LVAD patients.

**PO-633-04**

**WHAT’S ALL THAT NOISE? A CASE OF DEVICE TO DEVICE INTERFERENCE DURING SECOND MICRA AV IMPLANT NECESSITATING AD HOC OLDER DEVICE EXTRACTION**

Francis Thanh Phan MD; Ryle Przybylowicz BS, MD; Uday Gajjandra Sandhu BS, MD; Christopher M. Verdict MD; Ignatius Gerardo E. Zarraga MD, FHRS; Khidir Dalouk MD; Merritt H. Raitt MD, FHRS and Peter M. Jessel MD, FHRS

**Background:** Implantation of leadless pacemaker devices is becoming more prevalent in patients with relative contraindications to traditional systems. To date, little has been described about the complications that arise when patients require implant of subsequent additional leadless devices.

**Objective:** To describe device-device interference as a significant limitation to multiple leadless pacemaker implantations.

**Methods:** N/A

**Results:** A 62 year old veteran with ESRD on HD via right IJ tunneled catheter, Type 2 DM, mixed cardiomyopathy (LVEF 40-45%) from severe aortic stenosis presented with symptomatic complete heart block with a ventricular escape in the setting of hyperkalemia from a missed dialysis session. He continued to require temporary pacing despite correction of his electrolyte derangements with HD. Due to poor transvenous options, he underwent successful implantation of a leadless pacemaker (Micra AV). He had good sensing (20 mV) and pacing parameters on post op day 1 (0.83v at 0.24ms, 830 ohms). Unfortunately, the patient represented with symptomatic complete heart block 43
days later with elevated device thresholds (4.5V at 0.4ms) concerning for micro-dislodgement. Given ongoing relative contraindications to a transvenous system and long-term infection risk with planned renal transplant, he underwent implant of a second Micra AV device. Multiple deployments on the septum away from the initial device had poor thresholds. Ultimately, the second device was placed very close but slightly more basal to the initial device with excellent parameters. Soon after, there was consistent noise from device-device interaction with numerous V oversensing events on the new device suggesting a mechanical interaction (initial device in non-pacing mode). To avoid this interaction, the initial device was successfully extracted by snaring the retrieval knob (25mm Gooseneck snare, Mach-1 multipurpose catheter to angle snare septal, medium curve Agilis sheath). The patient tolerated the complex case well with excellent new device function over 9 months of follow-up.

Conclusion: Device-device interference may be a significant limitation to multiple leadless pacemaker device implantations and an important consideration in peri-procedural planning for initial device as well as subsequent implants.

### PO-633-06

SAFETY AND EFFICACY OF TRANSVENOUS LEAD EXTRACTION IN PATIENTS WITH VERY LONG LEAD DWELL TIME

Satish K. Misra MD; KAMALA SWAYAMPAKALA PhD; Tricia Coons RCES; Magdalena Lesiczka RCES; Claire Cerbie BSN; John W. Holshouser; Jeko Madjarov and Rohit Mehta MD, FHRS

Background: Tranvenous lead extraction (TLE) is an important component of lead management in patients with cardiac devices. Lead dwell time has been associated with increased procedural complexity and is often associated with a perception of increased risk. There is, however, limited data on the safety and outcomes of TLE in patients with leads of very long dwell times.

Objective: Describe safety and outcomes of TLE in patients with leads with a very long (> = 20 years) dwell time.

Methods: Patients undergoing TLE between 2013 - 2021 with at least one targeted lead with 20 years or more dwell time were identified from a single center prospective registry. Patient characteristics, outcomes, and 30-day major adverse events were collected. Clinical success of TLE was defined as the removal of all targeted leads and all lead material from the vascular space with less than 4 cm lead fragment residual that does not negatively impact either the patient or procedural goals. Lead-level analysis was summarized as number (percentage) for categorical variables and as mean ± standard deviation for continuous variables. Major adverse events related to TLE