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**Background:** Sustained ventricular arrhythmias (VT) are common in patients receiving continuous flow left ventricular assist devices (LVAD). The impact of early (≤30 days post-LVAD) vs. late VT (>30 days post-LVAD) on clinical outcomes remains unclear.

**Objective:** We evaluated outcomes associated with early and late VT following LVAD implantation using metaanalytic techniques.

**Methods:** Studies assessing the impact of VT (defined as sustained VT >30 sec or requiring ICD therapy) on survival and right ventricular (RV) failure after LVAD implantation were included. Mantel-Haenzel random effects model was used to compute overall effects. Study heterogeneity was evaluated using the I² index.

**Results:** 12 observational studies including 2389 LVAD patients (age 56 years) assessed the impact of early VT, late VT, and any VT. 36 % were implanted for destination therapy, 53 % had ischemic cardiomyopathy and 71% had an ICD. Mean follow-up was 19.4 months of LVAD support. Early VT [OR 1.88, 95% CI 1.36-2.58, p = 0.0001, Figure 1A] and any VT [OR 2.09, 95% CI 0.97-4.51, p = 0.06, Figure 1B] were associated with worsening survival, whereas late VT [OR 0.79, 95% CI 0.44 - 1.41, p = 0.43] was not. Presence of late VT [OR 1.99, 95% CI 1.05 - 3.77, p = 0.03, Figure 2] or any VT [OR 1.99, 95% CI 1.05 - 3.77, p = 0.03] were associated with RV failure.

**Conclusion:** In LVAD patients, VT was associated with increased mortality and RV failure. Early VT appears to have a strong association with mortality whereas late VT was associated with development of RV Failure.

**MAGNETIC FIELD INTERACTIONS BETWEEN CONTEMPORARY ELECTRONIC CONSUMER PRODUCTS AND CARDIAC IMPLANTABLE ELECTRONIC DEVICES**

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**Background:** Evolving electronic technologies such as cell phones, smartwatches, and earphones may contain magnets to facilitate inductive fast charging and other functions. The interaction between such products and the magnet mode features of cardiac implantable electronic devices (CIED) is unclear.

**Objective:** Characterize the maximum static magnetic fields of common inductive fast charging products (IFC-P) and assess their interaction with CIEDs from Medtronic and Boston Scientific.

**Methods:** A Gauss (G) meter measured the maximum static magnetic field for each IFC-P. To test for magnetic interaction (rate change or auditory beep), an IFC-P was positioned over a CIED that was immersed in a standardized torso simulator filled with physiologic saline together with its leads; interactions were recorded at the surface (0 cm) and at distances of 0.5, 1.0, and 1.5 cm or greater until no magnet interaction was observed.

**Results:** The iPhone 12 Pro produced nearly 3x the static magnetic field measured at the surface of the iPhone XR, and almost 2x that of the Galaxy S6; the highest maximum static magnetic field was 1320 G from the Apple Watch Series 6. Magnetic interactions are shown in the table; all IFC-P devices produced a magnet interaction at the surface but only the Apple Watch Series 6 produced an interaction at 1.5 cm and this response was intermittent and brief. The Apple Watch Series 6 and 2nd generation AirPods required very precise placement over the CIED to produce a magnet response despite their higher measured maximum magnetic fields.

**Conclusion:** While the iPhone 12, Apple Watch Series 6, and 2nd generation AirPods may cause magnet interactions with CIEDs, interactions are unlikely if these products conservatively are not within 15 cm (6 inches) of an implanted pacemaker or defibrillator. This is in accordance with industry standards and recommendations as the magnetic field strength reduces dramatically with increasing distance.

**SHORTER LEARNING CURVE OF LEFT BUNDLE PACING COMPARED TO HIS BUNDLE PACING**

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**Background:** Conduction system pacing (CSP) with His bundle pacing (HBP) or left bundle branch pacing (LBP) is an elegant method to provide single ventricular lead cardiac resynchronisation. The implant procedure utilises specialised
sheaths and techniques to achieve the desired electrical resynchronisation. Inevitably there is a learning curve in mastering the nuances of sheath manipulation and electrogram/QRS interpretation during the implant.

**Objective:** We present the learning curve associated with establishing a conduction system pacing program with both HBP and LBP.

**Methods:** The first 30 cases of HBP and the first 30 cases of LBP included in this study. At our institution HBP was commenced in 2017 and LBP implantation in 2021. All CSP implanters are experienced Electrophysiologists who regularly implant complex devices. All implants included in both cohorts were performed using the Medtronic 3830 lead and either the C315 or C304 sheath.

**Results:** Patient characteristics were similar in both HBP and LBP groups including male sex (73% vs 57%, p=0.16), LV ejection fraction (46% vs 54%, p=0.08) or pre-procedural QRS duration (119ms vs 128ms, p=0.02). The mean procedural duration was shorter for LBP than for HBP (87 vs 107mins, p=0.04) and the drop in procedural duration was more marked in LBP, after the first 10 cases, and remained low at 70mins for the subsequent 20 cases (Figure 1). Fluoroscopic screening time was significantly shorter for LBP compared to HBP (8min 21sec vs 15min 46sec, p<0.01), with both CSP modalities there was a reduction in screening time with increased experience (Figure 2). R-waves were higher with LBP (12.8 vs 3.2mV, p<0.01) and pacing thresholds were lower with LBP (0.7 @0.5ms vs 1.4 @1.0ms, p<0.01).

**Conclusion:** The CSP learning curve, evidenced by procedural duration, was shorter for LBP than for HBP. The LBP learning curve appears to plateau after the first 10 cases after which the procedural duration is consistent and short at 70mins. Electrical parameters and fluoroscopy time were also more favourable for LBP than for HBP.

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**PO-621-07**

OUTCOMES OF CLORHEXIDINE SCRUBBING WITHOUT CAPSULECTOMY VS. COMPLETE CAPSULECTOMY AFTER LEAD EXTRACTION FOR THE TREATMENT OF CARDIAC IMPLANTABLE DEVICE INFECTION

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**Background:** Complete capsulectomy has been proposed to reduce the risk of reinfection in patients with cardiac implantable electronic device (CIED) infection after transvenous lead extraction (TLE). However, it is time consuming and requires extensive tissue debridement with a potentially higher risk of hematoma formation.

**Objective:** To compare the outcomes of chlorhexidine gluconate (CHG) and saline pocket irrigation without capsulectomy vs. capsulectomy after TLE in CIED-related infection.

**Methods:** Consecutive patients who underwent TLE for CIED-related infection were included. In the no-capsulectomy group, after complete device removal thorough scrubbing of the generator pocket with 20 cc of 2% CHG followed by irrigation with 1000 cc of saline was undertaken. The pocket was dried, and the wound was closed with separate intradermal absorbable suture. In patients undergoing capsulectomy, extensive tissue debridement aiming for complete removal of the capsule was undertaken. Patients were evaluated 6 weeks after the procedure and every 6 months thereafter. The primary safety outcome was hematoma formation; primary efficacy outcome was reinfection. Secondary outcomes included any adverse reaction to chlorhexidine, need for reintervention, and infection related mortality.

**Results:** A total of 94 patients were included between July 2013 and September 2020 (mean age 67.4±13.1 years; 32 female), out of which 39 patients underwent CHG pocket irrigation and 55 underwent capsulectomy after CIED extraction. Mean follow-up was 673 days. Six patients presented hematomas in the capsulectomy group vs. 0 in the CHG group (9.2% vs 0%, p=0.04). One patient in the CHG group and 3 patients in the capsulectomy group (2.6% vs 5.4%, p=0.49) died of worsening sepsis despite device extraction. There were no cases of reinfection, even though 50 patients (53.2%) had a new device.

**Conclusion:** In patients with CIED infection, the use of CHG without capsulectomy resulted in a lower risk of hematoma formation than standard pocket management with capsulectomy, without increasing the risk of reinfection or any adverse effects associated with chlorhexidine use.