correction of these underlying conditions. Medications and electrolyte disturbances are among the major reversible causes for conduction system disturbances. Still, many of these pts may have underlying conduction system disease, with a potential need to a permanent cardiac pacemaker (PM) implantation at a long-term. The identification of this subgroup of pts remains a challenge.

PURPOSE To characterize a cohort of pts admitted to a cardiology ward with a diagnosis of bradycardia in the context of negative chronotropic medication intake and/or electrolyte disturbances, and to identify prognostic features that may be associated with permanent PM implantation.

METHODS We retrospectively analysed a group of pts admitted to a cardiology department with an initial diagnosis of bradycardia in the context of medication intake and/or electrolyte disturbances, between 1/2012 and 9/2016. Clinical characteristics [age, sex, conduction disorder on first medical contact [sinus node dysfunction (SND), atrioventricular block (AVB), atrial fibrillation/flutter with low ventricular rate (AF/AFL with LVRI)], outpatient medication [beta blockers, digoxin, beta blockers with digoxin, amiodarone, others], electrolytic disturbances [hyperkalemia] and evidence of structural heart disease [coronary disease; native heart valve disease; heart valve prosthesis; dilated cardiomyopathy; hypertensive heart disease] were analysed. The primary endpoint was permanent PM implantation, in hospitalization or after discharge. Percentage of atrial and ventricular pacing was analysed at 1, 8 and 24 weeks of follow-up.

RESULTS A total of 121 pts were included (41.2% male; mean age 79.9±8.3 years). On first medical contact, SND was diagnosed in 8 (6.6%); AF/AFL with LVRI in 34 (28.1%) and AVB in 79 (65.4%) pts. Regarding the reversible causes of bradycardia, drug intake was identified in 113 (93.4%) and hyperkalemia in 8 (6.6%); among medications, beta blockers were the most common (77; 68.1%), followed by digoxin (15; 13.2%), beta blockers in association with digoxin (10; 8.8%), amiodarone (4; 3.5%) and other agents (7; 6.2%; including ivabradine, flecainide, propafenone, dilatizem, verapamil). Drug discontinuation or potassium correction reversed the conduction disturbance in 16 (13.2%) pts; permanent PM was needed in 105 (86.8%); with or without occurrence of hospital admission in 98 (93.3%) and after discharge in 7 (6.7%), after a mean follow-up of 9.7 months. Patients without need of permanent PM were more frequently woman (87.5% vs. 12.5%, p<0.012) and had higher prevalence of AF/AFL (81.3% vs. 18.8%, p<0.005), with no significant differences on age (p=0.085), conduction disturbance on first medical contact (p=0.081), evidence of structural heart disease (p=0.874), outpatient medication or electrolyte disturbances (p=0.686), need for temporary transvenous PM (p=0.775), nor beta blockers dosage on admission (p=0.893) for bisoprolol; p=0.217 for carvedilol; although a lower dosage of digoxin intake on admission predicted the need for permanent PM placement (0.21±0.06 vs. 0.16±0.06mg, p=0.029).

CONCLUSION(S) AVB was the most frequent conduction disturbance identified in this cohort and beta-blockers were the most common reversible cause for bradycardia. Even with the identification and correction of a reversible cause, many pts kept indication for permanent PM, which globally defines these pts as a group of risk who deserve further follow-up for conduction disturbances. The presence of AF/AFL predicted a lower need for permanent PM, as well as the intake of beta-blockers as significantly a predictpive factor. Further studies, with larger cohorts and longer follow-up are needed, in order to define better predictors for early PM implantation.

073_16737-J1 Cost-Effectiveness Analysis of MRI-Conditional Pacemaker Implantation in the Current Era: Observations from a Multi-Center US Experience

R. Gopinathannair, P.L. Mar, G. Chen, G. Gandhi, A. Leiserowitz, A. Tripuraneni, E. Kreps, L. Botting, D. Lakkarieddy, J.E. Granato University of Louisville, Louisville, KY, Vanderbilt University, Nashville, TN, Bethesda North Hospital, Cincinnati, OH, Iowa Heart Center, West Des Moines, IA, Oregon Health Science University, Portland, OR, University of Kansas Medical Center, KS

BACKGROUND MI-conditional pacemakers (MPM) have been developed to reduce the risk of adverse events from MRI scanning. However, MPM are more expensive than non-MRI-conditional pacemakers, and as not all individuals who receive a MPM will eventually have a MRI performed, it is unclear if implanting a MPM is cost-effective.

OBJECTIVE To determine whether or not implantation of an MPM is a cost-effective strategy after accounting for post-implantation MRI usage data from a multicenter MPM cohort.

METHODS We evaluated 908 patients who received an MPM from 2011-2015 across 4 centers in the Catholic Health Initiatives network to determine MRI scan utilization during follow-up. We performed a full-text search for cost-effectiveness studies involving MRI’s through 3/2016 from the Medline database. Our search strategy terms included: MRI, quality adjusted life years (QALY), and cost-effectiveness. Inclusion criteria were empirical studies published in any language that reported the results of economic evaluations in terms of QALY. An incremental composite QALY for overall benefit of performing a MRI was calculated by averaging the QALY from all the included studies obtained from the literature search. Cost-effectiveness was defined as an incremental cost-effectiveness ratio (ICER) of less than $100,000 / 1 QALY.

RESULTS Of 908 patients with an MPM, 48 (5.3%) underwent an MRI during a 20-month median follow-up period. The average cost difference between implanting a MPM vs. a NMPM over this time frame was $1500. Out of a total of 127 potential studies identified on Medline, only 14 were included in review. The incremental composite QALY for overall benefit of performing a MRI was 0.086 QALY. The calculated ICER for our multi-center experience was $348,432 / QALY over a 20 month follow-up period.

CONCLUSION Given our limited follow-up data of 20 months and only 5.3% of patients having received a MRI thus far, implanting an MPM does not appear to be cost-effective as the ICER is > $100,000 / QALY ($348,432 / QALY). However, implanting an MPM will become cost-effective once MRI usage within the MPM population exceeds > 17.4% over the lifetime of the device.

073_16739-J1 Performance of a Leadless Transcatheter Pacemaker System Compared to a Conventional Transvenous Pacemaker System: Perioperative Complications and Shortterm Follow-Up

R. Zhinden, T. Rizzo, C. Franzini, R. Dillier, A. Müller, N. Holm Department of Cardiology, Stadtpalast Triemli, Zürich, Switzerland

INTRODUCTION The Medtronic MICRA transcatheter pacing system (MICRA TPS) is a recently introduced leadless single-chamber pacing system. We compared the safety and performance of the MICRA TPS with conventional transvenous single chamber pacemakers (conventional VVI) implanted at our centre.

METHODS This retrospective, observational single center study included 30 consecutive patients receiving a MICRA TPS and 33 historical control patients receiving a conventional VVI system at our centre.

RESULTS Average procedure time was 41.2±14 minutes for the MICRA TPS group and 34.3±19.5 minutes for the conventional VVI group (p<0.012). Fluoroscopy time was significantly shorter in the MICRA TPS group compared to the conventional VVI group (10.3±6.8min vs 4.8±2.5min; p<0.001). There were significantly more perinterventional complications in the MICRA TPS group compared to the conventional VVI group (20% vs 3%; p=0.03). Mean follow up time was 95±26 days. There were 3 adverse events in the MICRA TPS group compared to 1 in the conventional VVI group (p=NS).

CONCLUSION The new MICRA TPS is an alternative to conventional VVI pacing with comparable short term performance. There is a learning curve with more periprocedural complications in the first cases. Radiation times are significantly higher with the MICRA TPS system.

073_16794-J1 Cardiac Implantable Electrical Device related Procedures and Associated Complications in Continuous flow LVAD Recipients: A Multicenter Experience

R. Gopinathannair, R. Dhawan, J. Trivedi, H. Roukouz, A. Bhan, M. Khadem, G. Bhat, J. Cowger, M.S. Slaughter, A. Ravichandran University of Louisville, Louisville, KY, University of Minnesota Minneapolis, MN, Advocate Christ Medical Center, Chicago, IL, University of Florida, Division of Cardiovascular Medicine, Gainesville, FL, St. Vincent Hospital, Indianapolis, IN, USA

BACKGROUND Patients with continuous flow Left Ventricular Assist Devices (LVAD) and concomitant Cardiac Implantable Electrical Devices (CIED) are prone for device and lead-related complications requiring intervention.