New ECG ischaemia	1 (7.1%)	4 (14.3%)	2 (6.4%)	7 (9.6%)
Troponin-T (ng/L)	0 (0 – 0)	0 (0 – 0)	0 (0 – 0)	0 (0 – 0)
Exercise stress test	6 (42.9%)	7 (25%)	0 (0%)	13 (17.8%)
Time to CTCA (hours)	23 (6.8 – 45.3)	20.16 (16.8 – 32.3)	30.1 (0.4 – 92.5)	22 (8.2 – 43.5)
Calcium score	68.45 (1.6 – 103.9)*	0 (0 – 6)	0 (0 – 25)*	0 (0 – 31)*
% CTCA with an abnormal finding	57	35.7	54.8	47.9
Beta-blocker used for rate control	7 Nebivolol (50%) 3 Metoprolol (IV) (21.4%) 2 Metoprolol (PO) (14.3%) 1 Bisoprolol (7.15%) 1 None needed (7.15%)	21 Nebivolol (75%) 4 Metoprolol (PO) (14.3%) 2 Metoprolol (IV) (7.1%) 1 Propranolol (3.6%)	17 Nebivolol (61.6%) 9 Metoprolol (IV) (19.2%) 6 Metoprolol (PO) (8.2%) 3 None needed 1 Bisoprolol (5.5%) 1 Unable to control	45 Nebivolol (61.6%) 14 Metoprolol (IV) (19.2%) 6 Metoprolol (PO) (8.2%) 4 None needed 2 Bisoprolol (2.7%) 1 Propranolol (1.3%) 1 Unable to control (1.3%)
Invasive coronary angiography	5 (35.7%)	5 (17.8%)	7 (22.6%)	17 (23.3%)
Revascularisation performed	3 (21.4%)	3 (10.7%)	2 (6.5%)	8 (10.9%)
Alive at 1 month	14	28	31	73 (100%)
MI at 1 month	0	0	0	0

Weight: Not available = 3 in cohort 1, 4 in cohort 2, 5 in cohort 3
Calcium score: Not available = 4 in cohort 1, 4 in cohort 3

cerebrovascular/cardiovascular disease was significantly associated with CTCA use ($p = 0.00097$) in cohort 1. Age ($p = 0.0017$), hypertension ($p = 0.001$) and history of cerebrovascular/cardiovascular disease ($p = 0.0015$) were associated with CTCA use in cohort 2. Diabetes ($p = 0.037$) and history of cerebrovascular/cardiovascular disease ($p = 0.000246$) were associated with CTCA use in cohort 3. Overall length of stay for the patients undergoing CTCA decreased from a median of 4.2 days in cohort 1 to 2.5 days in cohort 3 (see figure 2),

with no increase in 30 days adverse outcomes. Invasive coronary angiography rate dropped from 45.8% to 39% in cohort 2, and to 34.2% in cohort 3 ($p = 0.0286$). Revascularization was required in 29.6% in cohort 1, 15.9% in cohort 2, and 16.3% in cohort 3 ($p = 0.00448$).

Conclusions This study demonstrated an increase in inpatient CTCA provision. The doubling of proportion of patients investigated by CTCA from 7.8% to 15.4% was associated with a reduction in length of stay from 4.2 days to 1.98 days. The improved efficiency in processing these intermediate rather than high risk patients was maintained during the COVID-19 pandemic, with a continued lower length of stay. A corresponding reduction in the rates of invasive coronary angiography and revascularization was seen, without an increase in 30-day major adverse cardiac events. We envisage our findings to be referenced when encouraging the development of CTCA use within national healthcare systems, particularly in light of the increasing trend towards shortening length of hospital admissions within the context of an international pandemic.

26

CARDIAC DEVICE REMOTE MONITORING – FREQUENCY OF CLINICALLY IMPORTANT EVENT IN RELATION TO INTERVENTION

¹LR Hamel, ²A Mittal, ²A Rehman, ²J O'Neill, ²J Galvin, ²E Keelan, ²R O'Mahony, ²T O'Neill.
¹Royal College of Surgeons in Ireland – Medical University of Bahrain, Bahrain; ²Connolly Hospital Blanchardstown, Dublin, Ireland

10.1136/heartjnl-2021-ICS.26

Introduction Remote Cardiac Device Monitoring (RCDM) has been an advancing technology in the field for many years. Assessing the efficacy, safety and logistics of the RCDM ensures patient safety. This study set out to examine the time from clinically relevant events to an intervention in view of the potential risk of either missed events or delay in discovery of such events. There are no national standardized operating procedures concerning RCDM in Ireland, which puts responsibility on cardiac teams to ensure in-house protocols and stringent strategies are in place to provide best practice and patient safety.

Abstract 26 Figure 1 Total number of transmissions to average time to intervention in days in all three companies

Methods A retrospective observational audit conducted in the cardiac arrhythmia department at Connolly Hospital Blanchardstown from July 2020 until February 2021 involving all current patients using one of the three remote cardiac monitoring systems Latitude, Medtronic or Merlin. Inclusion criteria were patients with an implanted ICD, LR or PM device in the past 10 years who had a clinically relevant transmission in the above time frame. Transmissions were collected retrospectively on the Heart Rhythm Ireland database. Reports were examined for clinically relevant events such as atrial arrhythmias, ventricular arrhythmias, any therapy induced (ATP or shock therapy), lead dysfunction, battery warning, and/or heart failure index above threshold. Time from transmission to intervention was recorded in days. Interventions included reviewing with the team, contacting the patient, scheduling an appointment, or no response noted. Data were analyzed with Microsoft excel.

Results Of 575 transmissions, 157 were classified as true events. Further categorized as 76 ventricular arrhythmias (mean response 4 days), 52 atrial arrhythmias (mean response 3.7 days), 39 heart failure alerts (mean response 2.1 days), 13 lead issues (mean response 1.1 days), and 4 battery warnings (mean response 0.3 days).

Conclusion RCDM has undoubtedly enhanced the care of patients, however without standardized protocols in place irregularities and mismanagement of cases may occur. This audit highlights significant variations in mean response time with potential to affect patient outcomes. Thus, a recommendation for a national standard for all cardiac units in Ireland stating desired timelines whereby a specific event should be managed and an order of priority for alert transmissions. To conclude, there is still a lot to be established for the realistic application of RCDM in order to fully reap the rewards from modern advancement in technology.

27

INFLUENCE OF ROUTINE CARDIAC RHYTHM ASSESSMENT IN THE LONG-TERM MANAGEMENT OF CHANNELOPATHY PATIENTS

^{1,2}HM Sulaiman, ¹R Hackett, ¹M Hogg, ¹E Banks, ¹A Muir. ¹Belfast Health and Social Care Trust, UK; ²Cormac Fellowship, UK

10.1136/heartjnl-2021-ICS.27

Introduction and Aim There are no definitive European or American guidelines for the routine follow-up of patients with channelopathies. In the Northern Ireland Inherited Cardiovascular conditions (NI ICC) service, we routinely organise repeat cardiac investigations including 24 hour tape monitor in all patients diagnosed with or suspected of a channelopathy, irrespective of their symptoms. This audit reviews our practice to determine if these influence management or outcome in patients with channelopathies.

Methods Data was retrospectively collected on all patients attending a single consultant at the NI ICC service between April-December 2019. We selected new and review patients with:

- a confirmed diagnosis of a channelopathy [Brugada syndrome (BrS) or LQT syndrome (LQTS)]
- undergoing screening for channelopathy (BrS or LQTS) due to family history or suspicious ECG
- Screening of survivors OOHCA (Out of hospital cardiac arrest).

Patient demographics, symptoms, family history, genetic results and follow up investigation results were collected.

Results 112 patients undergoing channelopathy assessment [60% female, 43 ± 17 years]. 84 had a confirmed diagnosis of a channelopathy (LQTS 55 (49%) or BrS 29 (26%)). 18 were new patients undergoing screening due to a family history (LQTS n=8 (7%) or BrS n=10 (9%)) and 6 new patients with suspicious ECG changes (LQTS n=5 (4%) or BrS n=1 (1%)). Four patients underwent assessment following an OOHCA (4%). A total of 55 (50%) patients reported cardiac symptoms at review [palpitations (28), pre-syncope (13) or syncope (14)]. 26 had a cardiac implantable device in situ suitable for interrogation (14 ICD, 1 PPM and 11 ILR) and the rest of the cohort underwent Holter analysis (36 still awaiting appointment, 6 did not attend and one died pre-test). Clinical management was altered by rhythm assessment in 7 of 69 (10%) cases (alteration of medication (3), ICD recommendation (3) and referral for EP study (1) [table 1] but of these, only 5 had reported symptoms. Routine Holter monitoring identified a life threatening rhythm disturbance in only 1 individual. A total of 2 patients died during follow up (1 non-cardiac whilst 1 likely arrhythmic death).

Conclusion In our selected channelopathy patients, we demonstrated that the yield of routine monitoring arrangement is low at 10% despite 50% of patients reporting concerning cardiac symptoms. A large proportion of our cohort continue to await rhythm assessment due to delays in scheduling from the Covid-19 pandemic but 93% have had no change in

Abstract 27 Table 1 Rhythm disturbances identified in follow up of channelopathy patients

	Diagnosis Gene testing result	Monitoring method	Symptoms	Rhythm disturbance	Alteration to treatment
1	OOHCA Query LQTS Gene negative	ICD	yes syncope	NCT/inappropriate shock	BBlocker changed to verapamil
2	OOHCA Query BrS Gene negative	ICD	none	NCT	Medication change
3	LQTS KCNQ1	ILR	yes palpitations & pre-syncope	AF	anticoagulation
4	Screening LQTS No gene testing	ILR	yes palpitations, pre-syncope & syncope	SVT	EPS/ablation
5	LQTS KCNQ1	Holter	none	22% VEs, 7 beats NSVT	ICD offered
6	LQTS KCNQ1	Holter	yes palpitations	PAT	BBlocker commenced
7	BrS SCN5a VUS	Holter	yes palpitations	Atrial PACs, NCT, conduction disease, NSVT	ICD offered and declined

*OOHCA: Out of hospital cardiac arrest, LQTS= LQT syndrome, BrS: Brugada syndrome, BB blocker: beta-blocker, NCT: narrow complex tachycardia, AF: atrial fibrillation, SVT: supra-ventricular tachycardia, NSVT: non-sustained ventricular tachycardia, PAT: paroxysmal atrial tachycardia, PACs: paroxysmal atrial complex, VE: ventricular ectopic, ILR: implantable loop recorder, ICD: Implantable cardiac defibrillator, EPS: EP study.