rates were slightly higher at both time points for RAASi (88.6% to 83.5%) and MRA (9% to 19.3%), but lower for beta-blockers (24.5% to 44.8%). Sodium/glucose cotransporter 2 inhibitors (SGLT2i) were never prescribed in patients with HF alone. However, in patients with concurrent DM, prescription increased from 0.2% to 18.2%. Prescription of loop diuretics for symptom control increased for both HF with DM and HF alone groups, from 39.5 to 64.9%, and 33.4% to 58.4% respectively.

CONCLUSION: To our knowledge, this is the first study on primary care management of heart failure and diabetes in Canada. Our study showed an increase uptake of all HF therapies from 2010 to 2020, despite a lack of left ventricular ejection fraction (LVEF) information. There are ongoing prescription gaps in therapies potentially indicated across the spectrum of LVEF, such as MRA and SGLT2i. While the use of MRA was similar in HF with and without DM, SGLT2i uptake in patients with HF and concurrent DM was higher compared with those with HF alone. Further medical optimization of this complex patient population in primary care is needed.

P108
MYOCARDIAL RECOVERY AND SURVIVAL AFTER WEANING OF LEFT VENTRICULAR ASSIST DEVICE THERAPY IN PATIENTS WITH TOXIC AND NON-TOXIC CARDIOMYOPATHIES, A CANADIAN EXPERIENCE

J Lalancette, D Belzile, A Cinq-Mars, S Dubois-Sénéchal, S Lemay, G Rimac, P Turgeon, J Morin, C Bourgault, M Leblanc, C Dupuis, &, Charbonneau, M Laflamme, M Bernier, M Sénéchal

Québec, Québec

BACKGROUND: Left ventricular assist devices (LVAD) are increasingly used in advanced and refractory heart failure, mainly as a bridge to transplantation or as a destination therapy. LVAD unloading of the left ventricle (LV) can also promote myocardial recovery leading to improvement of the LV systolic function, allowing subsequent LVAD explantation. However, the parameters associated with LVAD weaning and the long-term outcomes of these patients are not well documented. The aim of this study was to assess the clinical and echocardiographic characteristics of weaned patients and to evaluate their event-free survival post-explantation.

METHODS AND RESULTS: We conducted a single-center retrospective study recruiting consecutive patients who underwent a second or third generation LVAD implantation at a Canadian cardiology center between November 2009 and October 2021. A total of 98 patients underwent an LVAD implantation at our institution during this period (Table 1). All patients were on guideline-directed medical therapy. Fourteen patients (14%) had significant LV recovery and were successfully weaned and explanted/decommissioned after a median support time of 309 days (range 55-595 days). Toxic cardiomyopathy, defined as an abuse of amphetamine (n= 2), energy drink (n=2) or mixed consumption (n= 6), was the most likely diagnosis for 10 of the weaned patients (71%). The LVEF was significantly higher (35% vs. 19%, p< 0.001) and the left ventricular end-diastolic diameter (LVEDD) was significantly smaller (51 mm vs. 60 mm, p=0.008) in weaned patients compared to non-weaned patients after 3 months of LVAD support (Figure 1). Myocardial recovery manifested by pump thrombosis in 4 of the 14 weaned patients (29%). After explantation, weaned patients were followed during a median time of 40 months (range 8-109 months). The mean LVEF was 44 +/- 6% at last follow-up and no patient had a LVEF below 35%. All patients were New York Heart Association class I or II. No death, heart transplantation, or mechanical support initiation occurred during follow-up.

CONCLUSION: LVAD therapy can induce significant LV reverse remodeling leading to myocardial recovery in a non-negligible proportion of patients, particularly young patients with toxic and non-ischemic cardiomyopathies. Early reverse remodeling with decreasing LVEDD and improving LVEF at 3 months following LVAD implantation is associated with successful subsequent mechanical support weaning. In a subset of patients pump thrombosis appears to be associated with LV reverse remodeling and weaning of mechanical support. Weaned patients maintain partial or complete LVEF recovery after LVAD explantation and have good long-term event-free survival.

Table 1. Baseline patient characteristics.

Characteristics	Weaned (n = 14)	Unweaned (n =84)	p value
Age - years			0.008
mean ± SD	40 ± 11	52 ± 16	
Median (range)	38 (24-59)	59 (22-73)	
Male sex, n (%)	8 (57)	69 (82)	0.035
Etiology of heart failure, n (%)			<0.001
Ischemic	1 (7)	35 (42)	
Toxic	10 (71)	1 (1)	
Amphetamine	2 (14)	0 (0)	
Energy drink	2 (14)	1 (1)	
Mixed consumption	6 (43)	0 (0)	
Toxic + other	2 (14)	5 (6)	
Idiopathic dilated cardiomyopathy	1 (7)	24 (29)	
Mixed (excluding toxic)	0 (0)	10 (12)	
Other	0 (0)	9 (11)	
Worsening heart failure duration in month, mean ± SD	2 ± 1	2 ± 2	0.600
Device type, n (%)			0.066
HeartMate II (axial-flow pump)	12 (86)	64 (76)	
HeartMate 3 (centrifugal-flow pump)	0 (0)	17 (20)	
HeartWare (centrifugal-flow pump)	2 (14)	3 (4)	
LVEF, mean ± SD	11 ± 3	14 ± 6	
INTERMACS profile – no. (%)			0.312
1	0 (0)	13 (15)	
2	3 (21)	12 (14)	
3	11 (79)	50 (60)	
4	0 (0)	9 (11)	
5 to 7	0 (0)	0 (0)	
Mechanical support pre LVAD, n (%)			0.096
Extracorporeal membrane oxygenation	0 (0)	12 (14)	
Intra-aortic balloon pump	2 (14)	3 (4)	
Other	0 (0)	0 (0)	
Pre LVAD inotropes, n (%)	14 (100)	74 (88)	0.173
Number of previous cardiac surgery, n (%)			0.054
0	13 (93)	64 (76)	
1	1 (7)	17 (20)	
2	0 (0)	3 (4)	
Laboratory values, mean ± SD			
Hemoglobin (g/L)	123 ± 21	114 ± 20	0.115
Serum creatinine (µmol/L)	78 ± 18	130 ± 60	<0.001
Serum alanine aminotrasnferase (ALT, IU/L)	70 ± 78	62 ± 90	0.747
Serum total bilirubin (µmol/L)	11 ± 10	16 ± 10	0.401
Serum albumine (g/L)	36 ± 5	36 ± 6	0.700
Comorbidities, n (%)			
Hypertension	1 (7)	33 (39)	0.015
Diabetes mellitus	0 (0)	25 (30)	0.011
History of atrial fibrillation	1 (7)	39 (46)	0.006
History of stroke	0 (0)	10 (12)	0.197
Chronic obstructive pulmonary disease	2 (14)	19 (23)	0.435
Renal replacement therapy	1 (7)	8 (10)	0.622
Implantable cardioverter-defibrillator	3 (21)	55 (65)	0.002
Cardiac resynchronization therapy	2 (14)	33 (39)	0.071
Hemodynamics parameters, mean ± SD			
Right atrial pressure (mmHg)	6 ± 5	10 ± 6	0.023
Mean pulmonary pressure (mmHg)	24 ± 8	36 ± 10	<0.001
Pulmonary capillary wedge pressure (mmHg)	18 ± 9	26 ± 8	0.001
Cardiac index (L/min/m²)	2.0 ± 0.5	1.9 ± 0.4	0.559
Pulmonary vascular resistance (Wood units)	1.9 ± 1.0	3.0 ± 2.0	0.073

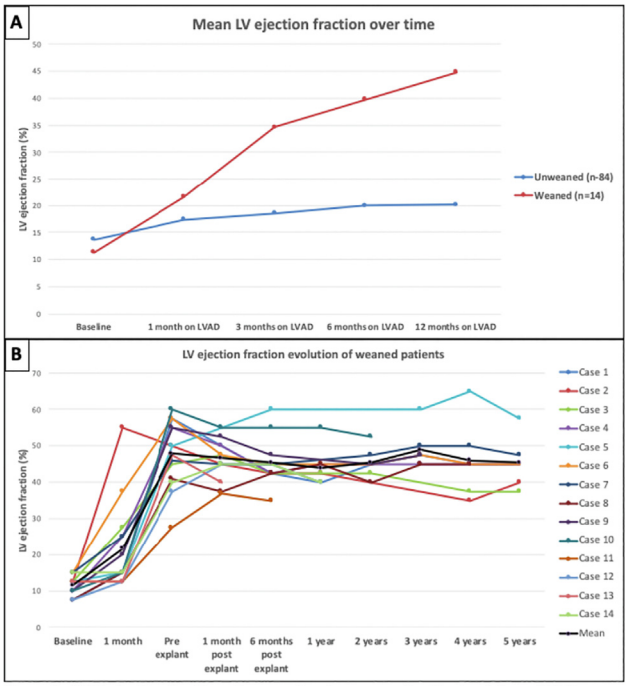

Figure 1. A) LV ejection fraction of weaned and unweaned patients while on LVAD therapy. B) LV ejection fraction evolution of weaned patients.

P109
PHARMACIST-LED TITRATION CLINIC FOR HFREF MEDICATION : RESULTS FROM ITS FIRST 2 YEARS OF EXISTENCE

I Menkovic, E Schampaert, M Champagne, A Hadjis, R Hatem, T Nguyen, F Poulin, S Williams, S Carreau, R Kouz

Montréal, Québec

BACKGROUND: Based on multiple randomized controlled trials, guidelines-directed medical therapies (GDMT) to target or maximally tolerated doses is recommended for patients with heart failure with reduced ejection fraction (HFrEF), reducing morbidity and mortality. However, recent large registries have shown failure of initiation and up-titration of GDMT in clinical settings, not providing optimal medical therapy (OMT). . Pharmacists could play a role in increasing the proportion of patients on OMT. Scarce literature suggests titration of HFrEF medications by pharmacists is safe and effective, using pre-approved protocols by medical staff. Recent provincial governmental regulation, providing pharmacists with the possibility of prescribing and adjusting medications, was the impetus to the creation of a pharmacist-led HFrEF titration clinic at the Sacre-Coeur Hospital in Montréal. This study aims to describe the results of the first 2 years of existence of this clinic.

METHODS AND RESULTS: This is a retrospective study, of prospectively collected data, including all patients who completed follow-up to the clinic between 2018 and 2020. Following referral by treating cardiologist for HFrEF medication titration, patients were assessed by a pharmacist who reviewed and amended HFrEF medication list, while also evaluating its clinical and paraclinical tolerance. At referral, 96/97 (99%) patients were receiving a BB, 93/97 (96%) were receiving either an ACEi, an ARB, or an ARNI, and 40/72 (61%) were receiving a MRA. One of 97 patients (1%) was considered on OMT upon referral. The mean duration of follow-up was 113+/-75 days for a mean of 6+/-3 visits. At completion, 79/97 (81%) of patients were on OMT, according to contemporary guidelines. 92/97 (95%) were receiving BB, 95/97 (98%) of patients were receiving either ACEi, ARB, or ARNI when indicated, and 54/72 (75%) were receiving MRA (when indicated) at target or maximally tolerated doses. Two adverse events of acute kidney injury were recorded, but there was no statistically significant difference in estimated glomerular filtration rate (eGFR) at referral vs at completion of follow-up (73+/-19 mL/min/1,73m2 vs 72+/-17 mL/min/1,73m2, p=0,2806).

CONCLUSION: This is the first reported experience of a Canadian, completely autonomous, pharmacist-led titration clinic in the literature. Results from its first 2 years of existence suggest it is a safe and effective way to optimize the proportion of HFrEF patients on OMT.

P110
PREDICTING 1-YEAR MORTALITY IN AMBULATORY HEART FAILURE PATIENTS: EMPIRIC MODELS OUTPERFORM PHYSICIAN INTUITIVE ESTIMATES

A Alba, T Buchan, S Saha, S Fan, S Poon, S Mak, A Al-Hesayen, M Toma, S Zieroth, K Anderson, C Demers, L Porepa, S Chih, N Giannetti, H Ross, G Guyatt

Etobicoke, Ontario

BACKGROUND: Accurate prognosis assessment is key in heart failure (HF) care. This multicenter Canadian prospective cohort study compared the accuracy of physician predictions versus model predictions to estimate 1-year mortality in ambulatory patients with HF.

METHODS AND RESULTS: We included consented consecutive ambulatory HF patients (LVEF < 40%) followed at 11 HF clinics in 5 provinces in Canada (2018-2020). Clinical data allowed calculation of model predicted mortality using three models: the Seattle HF Model (SHFM), the MAGGIC score and the HF Meta-score. HF cardiologists and family doctors, blinded to model predictions and using their clinical judgment, estimated patient 1-year mortality. We followed patients for ≥1 year, recorded the composite end point of mortality, urgent heart transplant or ventricular assist device (VAD) implant, and compared the accuracy of model and physician predictions evaluating discrimination (c-statistic), calibration (observed versus predicted event rate), and risk reclassification analysis (absolute net reclassification improvement [NRI]). Using multivariable logistic regression, we evaluated concordance, defined as a < 10% difference in risk estimates, between model and physician predictions. We included 1,563 ambulatory HF patients, aged 65 (IQR 55-74) years, 24% female, and LVEF 28% (23%-31%). The population 1-year event rate was 10% (8%-12%). While the