Abstract 23 Table 1 Baseline characteristics

Baseline characteristic	Control (n=56)	MI (n=59)	p value
Age, years $\pm$ SD	53 $\pm$ 10	57 $\pm$ 12	0.07
Male sex	38 (68)	47 (80)	0.15
Q-Risk 3%	8.1 $\pm$ 7.6	14.3 $\pm$ 9.4	<0.0005
IHD	0	11 (18.6)	<0.0005
Prior MI	0	8 (13.6)	0.006
Prior stroke	0	1 (1.7)	1
Hypertension	7 (12.5)	21 (35.6)	0.004
Diabetes mellitus	0	12 (20.3)	0.002
Dyslipidaemia	11 (19.6)	25 (42.4)	0.009
Smoking history	21 (37.5)	36 (61)	0.01
COPD	4 (7.1)	2 (3.4)	0.43
Creatine clearance, ml/min	84 $\pm$ 29	91 $\pm$ 37	0.56
Haemoglobin, g/l	146 $\pm$ 11	142 $\pm$ 15	0.08
Haematocrit, l/l	0.43 $\pm$ 0.03	0.42 $\pm$ 0.04	0.29
Platelet count, 10^9 /l	263 $\pm$ 43	259 $\pm$ 64	0.27

Conclusions Using our novel imaging system, alterations in conjunctival microcirculatory parameters for MI patients compared to healthy controls were found. Axial velocity and wall shear rate were significantly lower in the MI group, similar to what we previously reported in patients with cyanotic congenital heart disease. These alterations in conjunctival microcirculatory parameters are suggestive of endothelial dysfunction and application of this system may enhance future assessment of CVD risk.

24 SGLT-2I THERAPY IN HEART FAILURE : CHALLENGES AND OPPORTUNITIES

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Introduction Heart failure (HF) is a complex disease which is growing to be a significant cause of morbidity and mortality leading to increased cost of chronic care and hospitalization. In the DAPA-HF study, the sodium-glucose co-transporter 2 inhibitor (SGLT-2i) dapagliflozin was shown to reduce the risk of worsening HF and death in patients with HF with reduced ejection fraction (HFrEF). Our goal was to conduct an audit in a tertiary referral centre at University Hospital Galway (UHG) to identify patients with HFrEF who fulfil the eligibility criteria for SGLT-2i therapy, as seen in the DAPA-HF study. We also sought to identify patients with Type 2 Diabetes Mellitus (T2DM) in our HFrEF cohort who are potential candidates for improvement of glycaemic control with SGLT-2i therapy according to the ADA-EASD Guidelines.

Methodology A retrospective audit was conducted on 129 patients with HFrEF attending the specialist-led heart failure clinic at UHG between January and March 2020. Demographic, clinical, biochemical and medication data were collected from medical charts and our local digital database: EVOLVE® and CVWeb®. Patients had to meet the DAPA-HF inclusion criteria to be deemed eligible for dapagliflozin therapy.

Results Table 1 summarises the baseline clinical data and table 2 summarises the list of medical therapy at our centre. Of note, the 129 patients in our study represented a more elderly cohort compared to the DAPA-HF study population.

Only 49/129 (38%) of our HFrEF patients were eligible for SGLT-2i therapy based on the DAPA-HF inclusion criteria. This is primarily due to the higher than expected percentage of patients in our cohort who were asymptomatic (34.9%) and who had low NT-proBNP levels (29.6%). 16/129 (12.4%) had severe CKD with an eGFR <30 ml/min/1.73 m².

There were only 26/129 (20.2%) patients with T2DM of which 6 patients were already on SGLT-2i. The majority had ischemic cardiomyopathy (69%) with concomitant risk factors and (30.8%) had poor glycaemic control.

Conclusion This study shows a lower than expected number of patients in our centre who would have been included in the DAPA-HF trial. This could be because many patients in

Abstract 24 Table 1 Baseline characteristics and co-morbidities

	Local Data (n=129)	DAPA-HF (n=4744)
Mean Age (Years)	71.3 $\pm$ (11.8)	66
Male (%)	69	77
T2DM (%)	20.2	45
NYHA Class (%)		
NYHA I	34.9	None
NYHA II	48.1	68
NYHA III	15.5	32
NYHA IV	1.5	1
Mean Left Ventricular Ejection Fraction (%)	28.5 $\pm$ (7.4)	31
Mean Systolic BP (mmHg)	122.7 $\pm$ (17)	122
Median NT-proBNP (pg/mL)	1317	1437
Mean eGFR (ml/min/1.73 m ²)	57.4 $\pm$ (20.5)	66
Ischemic Aetiology (%)	58.1	56
HF Hospitalization within 1 year (%)	36.4	47
Hypertension (%)	77.5	74
Atrial Fibrillation/Flutter%	48	40

Abstract 24 Table 2 Treatment

	Local Data (n=129)	DAPA-HF (n=4744)
Diuretic (%)	67.4	93
ACEI (%)	36.4	56
ARB (%)	8.5	28
ACEI/ARB/ARNI (%)	90.7	93.5
Beta-Blocker (%)	93.8	96
MRA (%)	27.9	71
ICD (%)	20.2	26
CRT (%)	10.9	7
Diabetes Medication (n=26)		
Metformin	10	
Sulphonylurea	3	
DPP4 Inhibitor	10	
GLP-1 Agonist	0	
Insulin	3	
SGLT-2i	6	

this cohort were already on optimal HF treatment, many being asymptomatic and had low NT-proBNP levels. Some patients were also ineligible for SGLT-2i because of Stage 4 CKD.

One-third of the diabetic patients in this HFrEF cohort were not at target HbA1C range and according to the ADA-EASD Guidelines, all these patients should have SGLT-2i added to intensify glycaemic control. Lately, the Canadian Heart Society have updated their guidelines with a strong recommendation to introduce SGLT-2i in diabetics with ischemic cardiomyopathy despite adequate glycaemic control for cardiovascular benefits.

SGLT-2i represents an important, but underutilized therapeutic option by cardiologists, likely due to the lack of familiarity on its use. This study reveals that SGLT-2i prescription could potentially increase in HFrEF patients with or without T2DM as guidelines will soon be updated based on robust evidence from large-scale clinical trials and when prescribers become aware of the indication for primary prevention of heart failure hospitalization and death.

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THE USEFULNESS OF THE EXISTING GUIDELINES FOR PERFORMANCE OF ENDOMYOCARDIAL BIOPSY IN PATIENTS WITH SUSPECTED MYOCARDITIS AND RELATED OUTCOMES IN A CONTEMPORARY ERA

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Introduction Diagnostic endomyocardial biopsy (EMB) in patients with myocarditis helps to direct therapy and guide prognosis. The original 2007 joint scientific statement provided guideline indications based on unique clinical scenarios, detailing who should undergo this invasive investigation but have not been studied in a contemporary cohort of suspected myocarditis patients.

Purpose To investigate the correlation between the clinical guideline indications for EMB and the presence of a diagnostic biopsy result and associated outcomes in patients with suspected myocarditis in a national quaternary referral center.

Methods All cases of suspected myocarditis referred to the National Advanced Heart Failure and Transplant Center between 2009–2019 were identified through pathological records. A thorough retrospective chart review was then performed on all patients. Outcomes including need for inotrope or mechanical circulatory support (MCS), heart transplantation and in-hospital mortality were recorded.

Results In total, 25 (68% male, mean age of 45 ± 15 years) EMBs were performed for suspected myocarditis between 2009–2019, 64% (n=16) of which demonstrated diagnostic results. Clinical characteristics of those with histologically confirmed myocarditis are represented in figure 1. Regarding pathologic subtypes, 81% (n=13) identified an acute lymphocytic myocarditis, 13% (n=2) giant cell myocarditis and one patient (6.3%) eosinophilic myocarditis. The majority of those with a histologically confirmed myocarditis had a Class I or IIa guideline indication for EMB (n=12, 75%). All patients requiring inotropes and/or MCS (n=9) and/or heart transplant (n=3) were in this group. The remaining 4 patients (25%), of whom three were diagnosed with acute lymphocytic

Abstract 25 Figure 1 Clinical characteristics of those with histologically confirmed myocarditis

Abbreviations: CRP: C-reactive protein; ECG: electrocardiogram; EF: ejection fraction; ESR: erythrocyte sedimentation rate; NYHA: New York Heart Association; SBP: systolic blood pressure

myocarditis and one an immune checkpoint inhibitor (ICI) myocarditis, either met Class IIb criteria (n=2) or would not have been accounted for in this guideline. Four patients (25%) died during the index admission, one of whom was in the latter group (histologically confirmed myocarditis without a 2007 guideline indication).

Conclusions In this National referral sample, 75% of patients with suspected myocarditis had a Class I or IIa indication for EMB, reinforcing the usefulness of these guidelines even in a contemporary era. Further, existing guideline indications appeared to identify a sicker group of patients more frequently requiring inotropes, MCS and/or heart transplant. However, in the contemporary era, 25% of patients had either none or a less well established indication for EMB despite a subsequent confirmed histological diagnosis, including a case of immune checkpoint inhibitor myocarditis, which has emerged since the publication of the 2007 guidelines. This highlights the need for clinical suspicion and correlation outside of accepted clinical scenarios.

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TEMPORAL CHANGE IN THE USE OF SODIUM GLUCOSE CO-TRANSPORTER 2 INHIBITORS

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Introduction Diabetes mellitus (DM) is a major risk factor for cardiovascular disease (CVD). The EMPA-Reg study showed sodium glucose co-transporter 2 (SGLT2) inhibitors reduce the risk of death by 38% compared to placebo in diabetic patients with established CVD. These drugs have emerged as a major treatment option to reduce cardiovascular mortality as well as hospitalisation due to heart failure. The recent European Society of Cardiology (ESC) guidelines for DM has highlighted as a class I recommendation, the use of SGLT2 inhibitors as first line therapy in diabetics with established CVD or at high risk of CVD. This audit aims to determine whether the prescribing practices of SGLT2 inhibitors was influenced by the emergence of cardiovascular prevention data amongst patients with type 2 DM.