($n = 2441$). Length of stay (LOS) was longer in the hyperkalemia (HK) group ($p < 0.001$) with median 6.0 (4.0, 10.0) days. No difference for all-cause in hospital mortality between both groups. However, there are 7 independent predictors in the HK group which include history of AHF hospitalization (adjusted OR, 18.23; 95% CI, 2.04–163.10), hyperbilirubinaemia (aOR, 1.01; 95% CI, 1.01–1.02), higher uric acid (aOR, 1.01, 95% CI, 1.00–1.01), haemodialysis (aOR, 10.90; 95% CI, 2.92–40.72), mechanical ventilation (aOR, 6.78, 95% CI, 1.88–24.40), cardio-pulmonary resuscitation (aOR, 70.86, 95% CI, 15.89–316.15) and absence of beta blockers (aOR, 12.93, 95% CI, 3.74–44.67). Interestingly, HK group showed higher all-cause mortality at 30 days (6.5%), 6 months (27.2%) and 12 months (40.5%) with a $p < 0.001$. HF readmissions were also higher ($p < 0.02$) with 50.4% at 1 year follow-up. Kaplan-Meier curves showed the lowest survival probability for the HK group versus NK group (35% vs 43%, $p < 0.001$) and higher HF readmission rates in the HK group (40% vs 45%, $p = 0.007$) at 3 years follow–up.

Conclusion

This is one of the first study of hyperkalemia in heart failure cohort in Malaysia. Based on our analysis, hyperkalemia is common amongst AHF patients in this multi-ethnic Asian population. This affects usage of life-saving GDMT which translates into high long-term mortality. Hence, there is a need for novel oral agents to lower potassium levels for long term usage which will allow for full optimization of GDMT.

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9.

Echocardiographic improvement of left atrial booster pump and reservoir function observed in heart failure with improved ejection fraction and its prognostication

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Introduction

The novel subgroup of Heart Failure with improved ejection fraction(HFimpEF) is focused on improving left ventricle systolic function, but there is sparse data on left atrial(LA) recovery. Recent studies observed reversal remodelling of LA echocardiographic volume indices in HFimpEF. However, there is a lack of data on the echocardiographic description of volumetric LA functions, such as booster pump and reservoir dysfunction, in patients with HFimpEF.

Objectives

[1]To describe the changes in echocardiographic volumetric indexes of LA function, such as changes in LA reservoir function, LA conduit function, LA booster pump and LA sphericity index in a patient with HFimpEF. [2]To examine the correlation of these volumetric indexes with NT-ProBNP, 1-year composite mortality or heart failure (HF) events outcome.

Method

This observational study in Sarawak Heart Center, HF clinic, involves 53 consecutive patients with HFimpEF. Clinical records, echocardiographic data and 1-year composite clinical outcomes were analyzed retrospectively.

Results

The mean age is 52 $\pm$ 14 years; 81% were male, and 73% were non-ischemic in aetiology. All 53 were NYHA class I/II. 75.5% had hypertension, and 45.3% had diabetes. 17% had atrial fibrillation(AF). The median index left ventricle ejection fraction (LVEF), and NT-ProBNP were 54.4(44.1-61.1)% and 109.7(34.5-444.1)pg/ml. The median LA Volume indexed by body surface area(LAVI) of the initial echocardiography was 33.9(26.2-45.6) mL/m^{2,} of which 49.1% were enlarged (LAVI >34 ml/m^2), while the median LAVI for index echocardiography was 24.6(16.1-31.7) mL/m^2 of which 20.8% were enlarged (LAVI >34 ml/m^2). 69.8% shows an overall reduction of LAVI ($p = 0.009$). There are 75% improvement in LA reservoir function ($p < 0.001$). Among the non-AF group, there is a 66.7% improvement in the LA conduit function($p = 0.008$) and a 75.8% improvement in the LA booster pump or contractile function ($p = 0.003$). There is no statistical improvement over the sphericity index of LA ($p = 0.328$). Index echocardiographic LAVI and poor LA reservoir function were correlated with increased proBNP ($r = 0.467$, $p < 0.001$; $r = -0.369$, $p = 0.007$) and the presence of 1-year composite outcome ($r = 0.425$, $p = 0.002$; $r = -0.455$, $p = 0.001$). LA conduit function and LA booster pump have no correlation with the presence of composite outcome.

Conclusion

In our study cohort, HFimpEF is followed by favourable LA reverse remodelling. More study is needed to explore the prognostic significance of this finding among HFimpEF patients.

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10.

Real world experience of SGLT2i in HFrEF patients

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Background

The discovery of advanced heart failure (HF) therapy has led to a decrease in HF hospitalization (HFH) and mortality. One of the latest additions to HF guideline-directed medical therapies (GDMT) is sodium-glucose transporter-2 inhibitors (SGLT2i), which helps to minimize symptoms, reduce HFH, and prevent premature death. Our study provides the real-world outcomes of SGLT2i initiation in heart failure patients.

Objective

To describe the number of reported HFH and mortality within a year after initiation of SGLT2i in real world setting.

Methodology

A single center cohort study based on the HF database in the Queen Elizabeth Hospital II (QEHII). All patients were followed up to 1-year after SGLT2i initiation. Data were extracted from database between September 2020 to June 2022.

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