differ whether the cause for AHF was infectious or not (p=0.375). We established a cut-off value for PLR of 115 after ROC curve analysis (area under the curve of 0.811; p=0.004). In univariate analysis, higher rehospitalisation rates were found among CHD patients with PLR higher than 115 (95.8% vs 71.4%; p=0.004) and anemia (100% vs 82.6%; p=0.033). In multivariate analysis, PLR higher than 115 was the only predictor of rehospitalisation (p=0.039; HR 0.53; 95% CI 0.29-0.97). Additionally, it correlated with repeated rehospitalisations during follow-up (2.5±0.32 vs 2.19±0.68; p=0.045).
Regarding mortality, although PLR did not show a direct correlation, those with CHD who were readmitted at least once had higher mortality (57.4% vs 12.5%; p=0.017).
Conclusions: In this population, a higher PLR was an independent predictor of future rehospitalizations due to HF in patients with CHD presenting with acute HF. PLR is a marker that points out to an important role of inflammation in HF and might have a prognostic impact in these patients.

P265

Early spot urinary sodium and diuretic efficiency in acute heart failure and concomitant renal dysfunction

I Sanchis Haba[1]; P Llacer[2]; J Sanchis[1]; S Garcia-Blas[1]; S Ventura[3]; R Sanchez[4]; R De La Espriella[1]; V Bodi[1]; A Mollar[1]; JL Gorriz[5]; A Bayes-Genis[6]; J Nunez[1]; *[1]Instituto de Investigacion Sanitaria INCLIVA, Cardiology Department, Valencia, Spain*; *[2]Hospital de Manises, Internal Medicine Department, Valencia, Spain*; *[3]SPECIALIZED CENTRE CASTELLON DE LA PLANA JAUME I, Internal Medicine Department, Castellon de la Plana, Spain*; *[4]Hospital Virgen de los Lirios, Internal Medicine Department, Alcoy, Spain*; *[5]Instituto de Investigacion Sanitaria INCLIVA, Nephrology Department, Valencia, Spain*; *[6]Germans Trias i Pujol Hospital, Cardiology Department, Badalona, Spain*;

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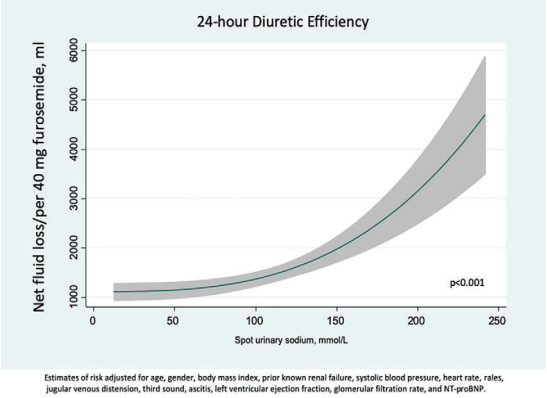
Objective: In acute heart failure (AHF), early assessment of spot urinary sodium (UNa) has emerged as a useful biomarker for risk stratification and monitoring treatment response. Prior studies have shown low the utility of UNa for predicting diuretic efficiency (DE). However, this issue remains to be confirmed in patients with AHF and more severe degree of renal dysfunction. The objective of this study was to investigate whether early spot UNa predict 24-hour DE in patients with AHF and concomitant renal dysfunction (RD) at presentation.
Methods: In this is a post-hoc analysis of the IMPROVE-HF, in which 160 patients with AHF and RD (estimate glomerular filtrate rate (GFR) <60 ml/min/1.73m2) were included. DE was estimated as the net fluid output produced per 40 mg of furosemide equivalents during the first 24 hours. The association between early spot UNa and DE was evaluated by using a Multivarite linear regression analysis. Values of UNa were blinded to clinicians. The contribution of the exposure in the model's predictability was assessed with the coefficient of determination (R2).
Results: The mean age of the study population was 78±8 years and the median (IQR) of DE, UNa, amino terminal fraction of the brain natriuretic peptide, antigen carbohydrate 125, and eGFR were 1066 (700-1667) ml, 90 mmol/L (65-111), 7765 pg/ml (3507-15404), 56 U/ml (23.6-112), and 34±8.5 ml/min/1.73m2, respectively. UNa was not correlated with 24-hour furosemide equivalent doses (Spearman's rho=-0.010, p=0.898) but were positive and moderately correlated with DE (Spearman's rho=0.333, p=0.038). In a multivariable setting, UNa was positively and non-linearly related to greater DE (p=0.001) as is shown in the figure below. UNa explained the 24.9% of the model predictability.



Central illustration

Conclusions: In patients with AHF and RD, spot UNa emerged as an independent predictor of 24-hour DE.

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Prognostic uility of galectin-3 in Vietnamese patients with acute heart failure

TOAN Dang[1]; HUONG Ta[2]; SY Hoang[1]; *[1]Cho Ray Hospital, Ho Chi Minh, Viet Nam*; *[2]University of Medicine and Pharmacy, Ho Chi Minh city, Internal Medicine, Ho Chi Minh, Viet Nam*;

Background: The fibrotic marker galectin-3 was recommended by the American Heart Association guideline for predicting patients with acute heart failure. Still, this clinically important aspect of galectin-3 hasn't been fully studied in Vietnamese population.
Objectives: This study sought to explore the role of galectin-3 in predicting Vietnamese patients with acute heart failure.
Methods: This cohort study included 113 patients with acute heart failure in a single cardiology department in the South of Vietnam. Plasma levels of galectin-3, brain natriuretic peptide (BNP) and troponin I were measured at time of admission. Primary endpoint was 1-year all-cause mortality.
Results: 5 patients (4%) were lost to follow-up and 56 patients (51.8%) died at 1 year. Median plasma galectin-3 level (ng/mL) in patients with acute heart failure was 34.6 (27.3 – 44.1), in whom the dead group was significantly higher than the alive group. For 1-year prognosis, galectin-3 had an area under the curve (AUC) of 0.73 (95% CI, 0.63 – 0.81, p < 0.001), whereas BNP and troponin I had an AUC of 0.69 (95% CI, 0.6 – 0.78; p < 0.001) and 0.63 (95% CI, 0.53 – 0.72; p = 0.02). The optimal cut-off value for galectin-3 was 40.5 ng/mL, yielding a sensitivity of 51.8% and a specificity of 88.5%. After adjustment for age, estimated glomerular filtration rate, BNP, troponin I and albumin, patients with galectin-3 levels > 40.5 ng/mL had an hazard ratio (HR) = 2.8 (95% CI, 1.5 – 5; p = 0.001). The combined model of galectin-3 and BNP had an AUC of 0.796 (95% CI, 0.708 – 0.868; p < 0.001). The Kaplan-Meier analyses showed that rates of death were highest in patients with both elevated markers.
Conclusions: Galectin-3 was a useful marker in predicting long-term mortality in Vietnamese patients with acute heart failure. Combining galectin-3 and BNP could improve risk stratification of this debilitating population.

Acute Heart Failure — Epidemiology, Prognosis, Outcome

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The S2PLIT-UG score, a novel system identifying patients with a high risk of all-cause mortality following acute decompensation of heart failure, correlates with levels of ssT2, hs-cTnI and NT-proBNP

JA Josip Andjelo Borovac[1]; D D'amario[2]; D Glavas[3]; Z Susilovic Grabovac[3]; D Supe Domic[4]; K Novak[4]; A Bradaric[4]; D Milicic[5]; D Duplancic[3]; J Bozic[6]; *[1]University Hospital Center Split, Split, Croatia*; *[2]Catholic University of the Sacred Heart - Fondazione Policlinico Universitario A. Gemelli IRCCS, Institute of Cardiology, Rome, Italy*; *[3]University Hospital Center Split, Clinic for Cardiovascular Diseases, Split, Croatia*; *[4]University Hospital Center Split, Department of Medical Laboratory Diagnostics, Split, Croatia*; *[5]University Hospital Centre Zagreb, Department of Cardiovascular Diseases, Zagreb, Croatia*; *[6]University of Split School of Medicine, Department of Pathophysiology, Split, Croatia*;

Background: The S2PLIT-UG score has been recently published as a risk stratification tool for 1-year all-cause mortality among patients discharged after an acute decompensated heart failure (ADHF) event. This score stratifies ADHF patients into low, intermediate and high-risk categories. It is calculated by combining 6 variables collected at admission including estimated glomerular filtration rate, uric acid, left ventricular ejection fraction, sodium, systolic blood pressure and the history of heart failure-related hospitalizations. The study aimed to determine if patients identified as high-risk by the S2PLIT-UG score have higher circulating levels of biomarkers associated with poor prognosis such as soluble suppressor of tumorigenicity 2 (ssT2), high-sensitivity cardiac troponin I (hs-cTnI) and N-terminal pro b-type natriuretic peptide (NT-proBNP). A secondary aim was to examine correlations of the S2PLIT-UG score with the aforementioned biomarkers.
Methods: A new validation cohort consisting of 96 patients hospitalized for ADHF and without acute coronary syndrome as an underlying culprit were consecutively included in the study during 2018-2019. All patients underwent standard transthoracic echocardiography, laboratory analyses of peripheral blood, and had their S2PLIT-UG score calculated with a high-risk score being defined as having ≥4 points.
Results: One-quarter of patients (25%, N=24) in analyzed cohort were identified as a high-risk while 75% of patients (N=72) were non-high risk according to the S2PLIT-UG stratification system. Out of those designated as non-high risk, vast majority were low risk (70.8%, N=51) and 29.2% (N=21) were intermediate risk. High risk group did not significantly differ from non-high risk group of patients in terms of baseline characteristics including age (p=0.161), body mass index (p=0.437), sex distribution (p=0.637), smoking (p=0.626), dyslipidemia (p=0.898), diabetes mellitus (p=0.286) and presence of atrial fibrillation (p=0.288). Patients identified as high risk had significantly higher circulating levels of ssT2 (65.2±50.2 vs. 34.8±26.4 ng/mL, p<0.001), hs-cTnI (142.2±239.0 vs. 42.9±94.0 ng/L, p=0.006), and NT-proBNP

(13199±15325 vs. 5189±7295 pg/mL, p=0.001), compared to patients designated as non-high risk (Figure 1). As a continuous variable, the S2PLIT-UG score was in positive and significant correlation with circulating levels of ssT2 (Pearson's r=0.420, p<0.001), hs-cTnI (r=0.281, p=0.007), and NT-proBNP (r=0.344, p=0.001).
Conclusions: A present study demonstrated that patients identified as high-risk according to S2PLIT-UG score had significantly higher circulating levels of biomarkers associated with poor prognosis, compared to non-high risk patients while S2PLIT-UG score correlated positively and significantly with circulating levels of ssT2, hs-cTnI and NT-proBNP. These findings suggest a possible complementary value of the S2PLIT-UG score in the risk stratification of ADHF patients.

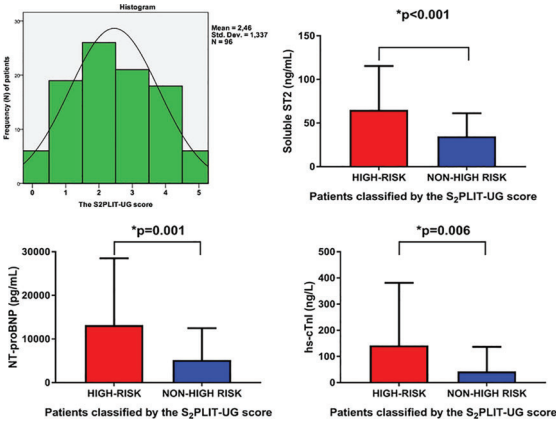

Figure 1

P268
Clinical presentation and baseline characteristics of acute heart failure patients: a single-centre experience over a 5-year period.

REF Raja Ezman Faridz Bin Raja Shariff[1]; MK Borhan[2]; MR Yusoff[2]; SK Chidambaran[2]; ss Kasim[1]; *[1]Universiti Teknologi MARA, CARDIOLOGY, Selangor, Malaysia*; *[2]Hospital Sungai Buloh, General Medicine, Sungai Buloh, Malaysia*;

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Background: Acute Heart failure (AHF) contributes to a large proportion of hospital admissions and mortality. Unfortunately, the remains scarcity of local data to better understand the burden of disease.
Purpose: To investigate the clinical presentation and baseline characteristics of AHF patients presenting to a single-centre over a five-year period.
Methods: A retrospective, observational study was conducted on 1307 AHF patients admitted to Hospital Sungai Buloh between 1st January 2012 to 31st December 2016.
Results: The mean age was 63.6 years (S.D.=16.0). 607 (46.4%) were male. 853 (65.3%), 157 (12.60%), 271 (20.7%), and 26 patients (2.0%) were Malays, Chinese, Indians and of other ethnicities respectively. Commonest attributed aetiology is due to underlying ischaemia 808 (61.8%). Common co-morbidities include hypertension (n=927 (70.9%)), coronary artery disease (n=755 (57.8%)), diabetes (n=813 (62.2%)) and chronic kidney disease (n=695 (53.2%)). Despite 300 patient (23.0%) only declaring dyslipidaemia, mean total cholesterol and low-density lipoprotein were 6.4 mmol/L (S.D=1.4) and 4.3 mmol/L (S.D.=1.7) respectively. 199 patients (15.2%) had AF on admission. 533 patients (40.8%) had baseline left ventricular ejection fraction of 40% or lower. Common clinical symptoms on admission include dyspnoea, orthopnoea and paroxysmal nocturnal dyspnoea (1084 (82.9%), 861 (65.9%) and 758 (58.0%) respectively). Common clinical signs include lung crepitations, peripheral oedema and raised jugular venous pressure (1004 (76.8%), 833 (63.7%) and 536 (41.0%) respectively). 334 (25.6%) and 316 (24.2%) patients were of New York Heart Association class III and IV respectively prior to presentation. The mean systolic blood pressure (SBP) and heart rate on admission were 144.6 mmHg (S.D.=31.9) and 89.7 beats per minute (S.D.=21.9) respectively. 33 patients (2.5%) presented with SBP ≤100 mmHg. 128 (9.8%) and 223 (17.1%) patients were admitted at some point to the Intensive Care and Coronary Care Unit respectively.
Conclusion: Or study illustrates a younger population afflicted with AHF, with heavy ischaemic burden amongst the population. This highlights the need for greater appreciation in prioritizing primary prevention against artherosclerosis from developing in our local setting.

P269
Retrospective review of 12 months readmission and mortality in acute heart failure patients: a single-centre experience over a 5-year period.

R Raja Ezman Faridz Raja Shariff[1]; MK Borhan[2]; MR Yusoff[2]; S Chidambaran[2]; SK Kasim[1]; *[1]Universiti Teknologi MARA, CARDIOLOGY, Selangor, Malaysia*; *[2]Hospital Sungai Buloh, General Medicine, Sungai Buloh, Malaysia*;

Funding Acknowledgements: There are NO financial or non-financial interests to declare

Background: Acute Heart Failure (AHF) is an important cause of hospitalisation and re-admissions (6%-10% of all acute medical admissions). However, there remains granularity in data even within Malaysian institutions.
Purpose: To investigate all-cause, heart failure (HF) and major adverse cardiac event (MACE) readmissions and mortality rates of AHF patients presenting to a single-centre over a five-year period. 4 time points were assessed – 1-month, 3-months, 6-months and 12-months.
Methods: A retrospective, observational study was conducted on 1307 AHF patients admitted to our Hospital between 1st January 2012 to 31st December 2016.
Results: The mean age was 63.6 years (S.D.=16.0). Commonest attributed aetiology of heart failure is due to underlying ischaemia (n=808 (61.8%)). Common co-morbidities include hypertension (n=927 (70.9%)), coronary artery disease (n=755 (57.8%)), diabetes (n=813 (62.2%)) and chronic kidney disease (n=695 (53.2%)). All-cause readmission rates per month at 1-month, 3-months, 6-months and 12-months were 14.9%, 20.1%, 7.3% and 13.0% respectively. HF readmission rates per month at 1-month, 3-months, 6-months and 12-months were 5.2%, 10.2%, 3.9% and 5.9% respectively. MACE readmission rates per month at 1-month, 3-months, 6-months and 12-months were 5.4%, 5.8%, 2.0% and 6.3% respectively. Commonest non-HF, non-MACE causes of readmissions include sepsis, arrhythmias and cardio-renal related complications. All-cause mortality rates per month at 1-month, 3-months, 6-months and 12-months were 15.7%, 3.8%, 6.2% and 3.0% respectively. HF mortality rates per month at 1-month, 3-months, 6-months and 12-months were 7.3%, 0.2%, 1.2% and 0.7% respectively. MACE mortality rates per month at 1-month, 3-months, 6-months and 12-months were 4.1%, 1.3%, 1.3% and 0.7% respectively. Commonest non-HF, non-MACE causes of mortality include sepsis, arrhythmias and chronic kidney disease related complications.
Conclusion: Our study illustrates peak readmission rates to be within the first 3 months, and peak mortality rates within the first month of initial admission. This may be due to the heavy ischaemic burden seen within the population. Highlighting a need for greater prevention against artherosclerosis from developing in our local population.

P270
Prescribing patterns of acute management and guideline-directed medical therapy in admitted acute heart failure (AHF) patients presenting to a single-centre over a five-year period.

R Raja Ezman Faridz Raja Shariff[1]; MK Borhan[2]; MR Yusoff[2]; S Chidambaran[2]; ss Kasim[1]; *[1]Universiti Teknologi MARA, CARDIOLOGY, Selangor, Malaysia*; *[2]Hospital Sungai Buloh, General Medicine, Sungai Buloh, Malaysia*;

Funding Acknowledgements: There are NO financial or non-financial interests to declare

Background: The ASIAN-HF registry highlighted significant gaps in medication prescription amongst heart failure patients. However, regional heterogeneity exists and local data is still sparse.
Purpose: To investigate prescribing patterns of acute management and guideline-directed medical therapy in admitted acute heart failure (AHF) patients presenting to a single-centre over a five-year period.
Methods: A retrospective, observational study was conducted on 1307 AHF patients admitted to our Hospital between 1st January 2012 to 31st December 2016.
Results: The mean age was 63.6 years (S.D.=16.0). Commonest attributed aetiology of heart failure is due to underlying ischaemia (n=808 (61.8%)). Common co-morbidities include hypertension (n=927 (70.9%)), coronary artery disease (n=755 (57.8%)), diabetes (n=813 (62.2%)) and chronic kidney disease (CKD) (n=695 (53.2%)). 1255 patients (96.0%) received loop diuretics on admission, majority via intravenous bolus (n=1123 (85.9)). 106 (8.1%), 110 (8.4%) and 41 (3.1%) patients received intravenous infusions of noradrenaline, dobutamine and dopamine respectively for haemodynamic support. 338 patients (25.9%) required non-invasive ventilation. 64 patient (4.9%) required intubation and ventilatory support. There were marked increase in patient being prescribed on frusemide, aspirin, clopidogrel and statins (49.8%, 13.6%, 88.8% and 17.7% increase respectively). This may be largely due to a high ischaemic burden related to AHF admissions. There was also an increase in the prescription of beta-blockers and minerocorticoid antagonists (16.9% and 47.7% increase respectively). However, renin-angiotension-aldosterone system (RAAS) inhibitors prescription reduced by 4.4%. Furthermore, there were no