abnormalities but without the manifestation of HF. We hence propose the term 'pre-HFpEF'. (Figure 1) We hypothesize that pre-HFpEF is associated with high morbidity (e.g. hospitalization rate) similar to HFpEF but without the increased mortality, presuming the ventricle is 'fatigued' but remains compensated. Expanding on preventive cardiology, we believe that early identification of this cohort with aggressive comorbidity control may potentially halt its progression to HFpEF which has a dismal prognosis and disappointing therapies. Our study therefore aims to demonstrate that this seemingly subclinical entity is clinically diagnosable and depending on the degree of LVEDP, is associated with adverse clinical outcomes.

Methods 1294 consecutive patients with NYHA II-IV breathlessness referred to the community HF clinic were screened and included if LVEF >45% and LV diastolic dysfunction (LVDD) were present but without clinical and radiological evidence of HF. Echocardiographic assessment of diastology was based on 2016 EACVI guidelines. 175 patients were

Abstract 151 Figure 1 Proposed spectrum of LV diastolic dysfunction from pie-clinical diastolic dysfunction (PDD) to HFpEF

Abstract 151 Table 1 Comparison of baseline characteristics and clinical outcomes between low and high E/e' groups

	E/e' <14 (n=120)	E/e' ≥14 (n=55)	P value
Baseline characteristics			
Mean E/e' (SD)	9.42 (± 2.5)	18.77 (± 6.2)	0.000
Mean NT-proBNP (pmol/L)	178.47	203.37	0.022
Hypertension (%)	90 (75.0)	51 (92.7)	0.006
Diabetes (%)	30 (25.0)	16 (29.1)	0.569
Ischaemic Heart Disease (%)	31 (25.8)	13 (23.6)	0.756
Atrial Fibrillation (%)	31 (25.8)	14 (25.5)	0.958
Chronic Kidney Disease (%)	17 (14.2)	10 (18.2)	0.496
Valvular HD (%)	40 (33.4)	24 (43.6)	0.161
Hyperlipidaemia (%)	47 (39.2)	29 (52.7)	0.094
Pulmonary Hypertension (%)	23 (19.2)	6 (10.9)	0.188
Chronic Obstructive Airway Disease (%)	23 (19.2)	6 (10.9)	0.174
Stroke (%)	8 (6.7)	4 (7.3)	0.859
Obstructive Sleep apnoea (%)	4 (3.4)	5 (9.1)	0.103
Clinical outcomes			
Emergency admissions: cardiac at 12 months	22 (18.3)	19 (34.5)	0.019
Emergency admission: non-cardiac at 12 months	59 (49.2)	31 (56.4)	0.378
Length of Stay (days) for cardiac admissions- median (IQR)	1.7 (± 5.2)	3.9 (± 9.6)	0.037
All-cause mortality at 12 months	10 (8.4)	5 (9.1)	0.868
All-cause mortality 36 months	41 (34.2)	13 (23.6)	0.163

included and divided into two groups: rising LVEDP (E/e' <14) versus raised LVEDP (E/e' ≥14). Clinical demographics and events (deaths, unplanned hospitalization and length of hospital stay) were retrospectively compared at 12 and 36 months.

Results 55 patients had E/e' ≥14 and 120 had E/e' <14 with the former group having significantly higher NT-proBNP and proportion of hypertension. There were no significant differences in the other comorbidities usually associated with HFpEF. (Table 1) This may support the concept that pre-HFpEF is at the early stages of disease but has the potential to progress to HFpEF through additional comorbidity burden. The E/e' ≥14 group had a significantly higher number of cardiovascular-related admissions and twice the average length of hospital stay compared with the E/e' <14 group. At 3 years, the high E/e' cohort had 285 all-cause hospital admissions and 54 all-cause deaths. There was no significant difference in mortality between the two groups at 12 or 36 months, reflecting the notion that pre-HFpEF is at the beginning of the spectrum of both disease and prognosis.

Conclusion A high E/e' ≥14 cut-off with raised NT-proBNP may be used as a screening tool to identify high-risk pre-HFpEF group which is associated with adverse clinical outcomes. Without increased mortality so far, it is crucial to promptly identify this population that may be more amenable to risk factor modification than HFpEF. Close monitoring in a dedicated HFpEF clinic with vigorous management of comorbidities is therefore recommended.

Conflict of Interest None

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DOES OUTPATIENT BASED IV DIURETIC TREATMENT FOR ACUTE HEART FAILURE GIVE PATIENTS HOPE?

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Introduction Acute heart failure (AHF) hospitalisation is typically lengthy, costly and associated with 10% mortality. Outpatient based management (OPM) of AHF appeared effective in observational studies. We conducted a pilot randomised controlled trial (RCT) comparing OPM with standard inpatient care (IPM). Hopelessness independently predicted mortality in patients with risk factors of ischaemic heart disease. We hypothesize that patients randomised to OPM may be more hopeful and have better mental well-being, with better quality of life, patient and carer satisfaction.

Methods We randomised patients with AHF, considered to need IV diuretic treatment for >2 days, to IPM or OPM. We recorded all-cause mortality (index-episode), and the number of full days alive and out-of-hospital (DAOH) within 60 days after randomisation. Quality of life (EQ5D-VAS), mental well-

being [Short Warwick-Edinburgh Mental Wellbeing scale] and hope (Adult State Hope Scale) scores which have been validated as accurate in detecting fluctuations in hope were assessed up to 60 days follow-up. We calculated mean NHS cost savings and 95% central range (CR) from bootstrap analysis.

Results Eleven patients were randomised to IPM and thirteen to OPM. There was no statistically significant difference in all-cause mortality during the index episode (1/11 vs 0/13) and up to 60 days follow-up (2/11 vs 2/13) [log rank $p=0.86$]. (Figure 1). Patients randomised to IPM accrued a median of 47 [IQR 36, 51] vs 59 [41, 60] DAOH in OPM ($p=0.13$). 2 patients randomised to IPM (vs 6 OPM) were readmitted within 60 days [$p=0.31$]. Hope scores increased more with OPM within 30 days after randomisation but by 60 days, dropped to lower levels compared with the group allocated to IPM (not statistically significant). (Table 1). Inpatients' mental well-being score was higher at baseline but more out-patients had increased total well-being scores by the 60-day follow-up visit ($p=0.04$). (Table 2). 100% patients in both arms were satisfied according to the 'NHS Family and Friends Test' but interestingly 100% would choose OPM again whilst only 90% would choose Inpatient care again. Similarly, 100% carers were satisfied in the OPM arm whilst 60% only were satisfied if the patient was randomised to inpatient care. 100% carers would choose OPM again, vs 60% IPM carers. OPM was associated with mean cost savings of £2,658 (95% CR 460 - 4,857) per patient during the index episode.

Conclusions Patients with acute HF randomised to OPM

Abstract 152 Figure 1

accrued more DAOH (albeit not statistically significant in this small pilot RCT). There was no increase in mortality but there was a higher risk of readmissions (not statistically significant). OPM was associated with improved mental well-being. But the initial increase in hope diminished within 60 days, possibly as a result of increased readmissions. The pilot RCT generated important hypotheses that need further testing in a large multicentre RCT.

Conflict of Interest none

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ANTICOAGULANTS AND ANTIPLATELETS IN COVID-19: IMPACT ON SURVIVAL AND THROMBOEMBOLISM DEVELOPMENT

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Introduction Higher rates of venous and arterial thromboembolism have been noted in coronavirus disease-2019 (COVID-19). There has been limited research on the impact of anticoagulant and antiplatelet choice in COVID-19. We performed a single-centre retrospective cohort study of 933 patients with confirmed COVID-19 infection, investigating the impact of anticoagulation and antiplatelet medication choice on survival and thromboembolism development.

Methods This was a single-centre retrospective cohort study of 933 patients with COVID-19 infection presenting between 01/02/2020 and 31/05/2020. Survival time at 90 days post-diagnosis and thromboembolism development were the measured outcomes. Patients were grouped by anticoagulant use on first presentation (direct oral anticoagulant, warfarin, therapeutic low molecular weight heparin, and no anticoagulation) and antiplatelet use on admission (aspirin, clopidogrel, dual antiplatelet therapy, or no antiplatelet therapy). Information on pre-existing cardiovascular disease and thromboembolism risk factors was also collected to adjust for confounding variables. Statistical analysis was performed using SPSS version 27.0.1.0.

Results Of 933 total patients, mean age was 68 years and 54.4% were male. 297 (31.8%) did not survive at 90 days. A Cox proportional hazards model analysis found no statistically significant relationship between anticoagulant or antiplatelet choice and survival ($p<0.05$). 57 (6.3%) developed thromboembolism. Antiplatelet choice was not shown to have a statistically significant relationship with thromboembolism development. Warfarin and direct oral anticoagulant (DOAC) use did not have a statistically significant impact on thromboembolism development ($p<0.05$). Therapeutic low molecular weight heparin (LMWH) use was associated with increased thromboembolism risk (Odds ratio = 14.327, 95% CI 1.904 – 107.811, $p = 0.010$). Additionally, neither ischaemic heart disease, heart failure, or arrhythmia history were found to be associated with decreased survival at 90 days or increased thromboembolism development.

Conclusions Antiplatelet choice was shown to have no impact on survival or thromboembolism development in COVID-19. No patient on dual antiplatelet therapy developed thromboembolism, but this was not found to be statistically significant in multivariate analysis and the sample size was limited ($n=7$). Anticoagulant choice did not impact survival or thromboembolism development, aside from LMWH. Therapeutic LMWH use was associated with increased risk of thromboembolism. Again, it should be noted that the sample size for patients using therapeutic LMWH was small ($n=4$), and there may be confounding variables affecting both LMWH use and thromboembolism development. The findings relating to the impact of dual antiplatelet therapy and therapeutic LMWH use on thromboembolism development in COVID-19 should be repeated with a larger sample size and additional adjustment for confounding variables.

Conflict of Interest The authors have no competing interests to declare