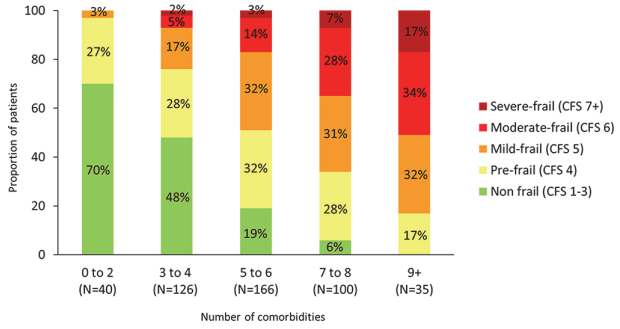
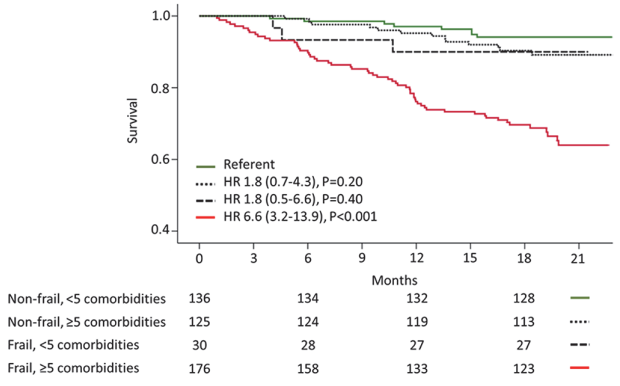


Abstract 111 Figure 1 Number of comorbidities vs frailty severity, p<0.001



Abstract 111 Figure 2 Kaplan Meier Curve showing the relation between the presence of frailty and/or multiple (≥5) comorbidities and all-cause mortality

Results Amongst 467 patients with CHF [67% male, median (IQR) age 76 (69–82) years, NTproBNP 1156 (469–2463) ng/L], 291 patients had HF with reduced ejection fraction (HFrEF, LVEF <40%), and 176 had HF with preserved ejection fraction (HFpEF, LVEF≥40%). Frailty was more common in HFpEF vs HFrEF (51 vs 40%). 64% of patients had ≥5 comorbidities (36% 5–6, 21% 7–9 and 7% >9 comorbidities). Frail patients were more likely to have multiple comorbidities than non-frail patients (85% vs 48% with ≥5 comorbidities, p<0.001). The number of comorbidities increased with worsening frailty severity (Figure 1). Those with HFpEF were more likely to have neuropsychiatric, metabolic and degenerative comorbidities, whereas those with HFrEF were more like to suffer from cancer.During a median follow up of 554 days, 82 (18%) patients died. Increasing number of comorbidities was associated with increasing mortality. Patients who were frail with ≥5 comorbidities had a 6-fold increased risk of mortality compared to those who were neither frail nor had multiple comorbidities (figure 2). In a model adjusted for age, sex, logNTproBNP and NYHA class, amongst comorbidity groups, the presence of renal and neuropsychiatric comorbidities were independent predictors of higher mortality.

Conclusion Frail patients with CHF have a high comorbidity burden. The co-existence of frailty and multiple comorbidities predisposes to higher risk of mortality. Future studies should investigate whether treatment focusing on comorbidities improve outcomes.

Conflict of Interest none

112 MANAGEMENT OF LEFT VENTRICULAR THROMBI ACROSS THE UNITED KINGDOM

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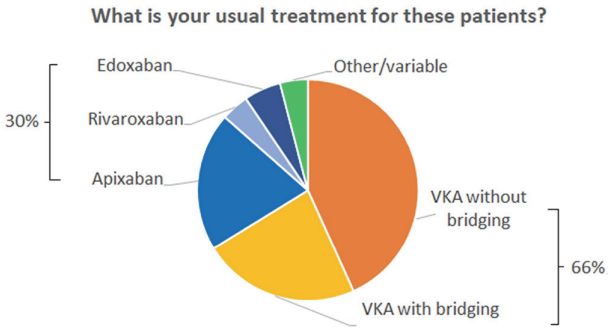
10.1136/heartjnl-2022-BCS.112

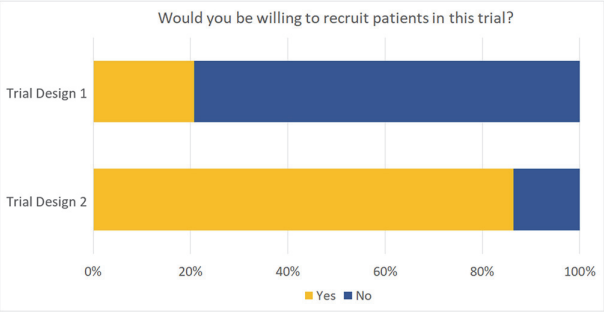
Introduction Left ventricular thrombus (LVT) is a frequent complication of left ventricular systolic dysfunction(1). Incidence following acute myocardial infarction is estimated at 13–20% and up to 15% in with non-ischaemic cardiomyopathy(2, 3). Once diagnosed, guidelines recommend anticoagulation with vitamin K antagonists (VKA) to reduce the risk of stroke and systemic embolic events (Class IIa, Level of evidence C)(4). However, these recommendations are not predicated on randomised control trial (RCT) evidence but represent a consensus view based on observational data published 30 years ago(5). There have been no RCTs comparing anticoagulation therapy versus no anticoagulation. Additionally, off-label use of direct oral anticoagulants (DOACs) for LVT has steadily increased. Several fundamental questions remain unanswered; does anticoagulation reduce embolic events, how long should treatment be continued, which agent should be used and how should the diagnosis be established.

Methods This population-based, cross-sectional study utilised an electronic survey using the online platform Google Forms. Questions were designed to establish how many cardiologists believe that anticoagulation is mandatory despite the lack of evidence, how often cardiac magnetic resonance imaging (CMR) is used and how frequently DOACs are prescribed.The survey was distributed via email to members of the British Society for Heart Failure, as well as to hospital email groups in multiple large centres. Completion of the survey was voluntary with no remuneration for participating. The study was exempt from formal research and ethics committee approval as no individually identifiable data was collected.

Results In total 74 responses were received over a six-week period. 81% of respondents reported having routine access to CMR on site. When asked what proportion of LVT found on echo would be verified on CMR, 51% stated <50%, 20% 50–75% and 29% >75%. Regarding frequency of cases seen annually, 41% reported seeing <20 cases and 8% >60 cases. For treatment, 66% preferred VKA whilst 30% used a



Abstract 112 Figure 1 Preferred treatment for LVT



Abstract 112 Figure 2 Trial Design 1: Patients are randomised to one of three treatments - A: no anticoagulation, B: treatment with warfarin or C: treatment with apixaban. Trial Design 2: Patients are randomised to one of two treatments - A: treatment with warfarin, B: treatment with apixaban

Abstract 112 Table 1 Free text responses

In response to "Would you recruit to this trial? – Trial Design 1" – "If no – why not?"	
R7	Uncomfortable with no anticoagulant
R18	Is it ethical to give no treatment? Happy to randomise to Warfarin v Apixaban
R19	Standard practice, albeit not evidence based, is to anticoagulate with VKA or DOAC. Have seen plenty of patients presenting with stroke in the context of LV thrombus. Would not want to be involved in patients being potentially randomised to no anticoagulation.
R24	Case for anticoagulation is too strong to have option A
R26	Do not consider "no anticoagulation" to be ethical due to anecdotal and observational evidence of very high stroke risk
R30	Wary of the no anticoagulation arm - would feel uncomfortable without any anticoagulation
R39	I couldn't justify randomising patients to no anticoagulation.
R41	Biologically implausible that leaving a thrombus off anticoagulation is safe
R42	Due to the risk of embolic events particularly in the context of LV thrombus with acute MI
R49	In presence of LV thrombus it would be unethical, irresponsible, and frankly dangerous not to start anticoagulation. This design is indefensible and I'm genuinely surprised it's offered as option, as this cannot possible obtain Ethics approval.
R61	Do not feel no anticoagulation is an option that should be considered

DOAC (Figure 1). The majority (72%) used repeat imaging to decide on anticoagulation duration, whilst 20% reported advising indefinite treatment. When two RCT designs were presented, 77% reported they would not recruit to a trial involving a 'no anticoagulation' arm (Figure 2). 89% reported they would recruit to a trial comparing VKA with Apixaban.

Conclusions LVT is a commonly encountered problem but current practice in the UK and within international guidelines are entirely non evidence based. Our study has demonstrated that many Cardiologists have strong views regarding the need for anticoagulation in this cohort; a robust trial including a no anticoagulation arm may never be possible. We have also identified nearly a third of patients with LVT are now treated with a direct oral anticoagulant (DOAC). The question of whether DOACs are an equally safe and efficacious treatment as compared to VKA remains to be answered. A multi-centre UK based RCT funding application is underway.

Conflict of Interest Nil

113 CHARACTERISING DISEASE AND PRESCRIBING PATTERNS IN PATIENTS WITH HEART FAILURE AND MULTIMORBIDITY: A SINGLE-CENTRE DESCRIPTIVE COHORT STUDY

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10.1136/heartjnl-2022-BCS.113

Introduction Heart failure (HF) co-exists with multi-morbidity like renal impairment, diabetes, chronic respiratory diseases, frailty and anaemia. The management of HF patients with multimorbidity is complex, involving numerous therapeutics, which have potential for drug-drug and drug-disease interactions. The aims of the study were:1. To characterise prescribing patterns in HF patients with multimorbidity2. To identify inappropriate polypharmacy and therefore targets for deprescribing.

Methods This was a retrospective cohort study involving patients under care of HF multimorbidity, multidisciplinary team at Aintree University Hospital from January 2020-February 2021. Data was extracted from 234 adult HF patients with multimorbidity. We also recorded age, sex, number of medications and presence/absence of inappropriate dual antiplatelet therapy (DAPT) and proton-pump inhibitor (PPI) use were recorded. Inappropriate medication use was determined according to NICE prescribing guidance. Age-adjusted Charlson Comorbidity Index (CCI), Rockwood Clinical Frailty score (CFS<6=mild/no frailty, ≥6+moderate/severe frailty) and anticholinergic burden (ACB) score were calculated. CFS of 7–9 was used to determine patients considered to be approaching end of life (12–24 months).

Results Mean age was 71.5±13.9 and 44% patients female. CCI was 6.9±3.3, Rockwood Frailty Score 5.5±3.2, polypharmacy burden high at 10.2±3.9 and ACB 1.45±0.9. ACB was higher in patients with CFS≥6 vs. those with CFS<6 (1.5 ±1.1 vs. 1.1±0.9;p=0.02). Proportion of HF patients on treatment for depression was 19.7%, chronic pain 35%, and chronic constipation 19.7%. Regular oral iron was prescribed in 15% of those appropriate for intravenous iron replacement. 17.9% of the cohort were estimated to be approaching end of life. Regarding potential inappropriate prescribing; 9% were on either DAPT/anticoagulant plus anti-platelet therapy beyond 12 months of acute coronary event. 20.1% patients were inappropriately prescribed regular PPI without clear indication.

Conclusion Frail HF patients have a higher ACB and this observational study identifies clear targets for de-prescribing intervention in HF patients, like inappropriate PPI and DAPT/anticoagulant plus anti-platelet therapy, affecting 1:5 and 1:10 patients in the clinic respectively. Clear de-prescribing guidelines for these medications should be developed to support shared decision making between patients and clinicians to reduce the drug burden in this complex cohort.

Conflict of Interest None