± 0.014, p=0.00) and AT/ET (moderate 0.302 ± 0.040 vs severe 0.376 ± 0.033, p=0.00) were both significantly different.

Differences in AT/ET means were not statistically significant between moderate bicuspid and trileaflet groups (0.316 ±0.026, 0.302±0.040 p=0.052) but were between severe bicuspid and trileaflet groups (0.396±0.026, 0.376±0.033, p=0.011).

AT and AT/ET showed strong correlation with aortic valve area (-0.651, -0.66), peak aortic velocity (-0.625, -0.629), mean pressure gradient (0.732, 0.712) where p<0.01.

ROC analysis showed a cut off of 0.11 in AT distinguishes moderate and severe trileaflet AS (n=100) with an AUC of 0.88 with a sensitivity of 80% and a specificity of 90%. The same cut off in the bicuspid AS population (n=100) gave an AUC of 0.957 with a sensitivity of 90% and specificity of 92%.

ROC analysis of AT/ET in trileaflet AS gave an AUC of 0.93. Using a cut off of 0.35, AT/ET had a sensitivity of 90% and specificity 88% for distinguishing between moderate and severe disease. ROC analysis of AT/ET in bicuspid AS gave an AUC of 0.96. The same cut off as above (0.35) gave specificity and sensitivity of 90%.

Conclusion AT and AT/ET are valid grading parameters for bicuspid and trileaflet AS. Both show better specificity and sensitivity differentiating moderate and severe AS in bicuspid than trileaflet valves. An AT/ET cut-off of 0.35 is clinically valid in both morphologies.

Conflict of Interest N/A

9 NEXT-DAY DISCHARGE AFTER TRANSCATHETER AORTIC VALVE IMPLANTATION

[1]Jonathan Bates-Powell, [2]Sophie Gu, [1]Richard Edwards, [1]Azfar Zaman. *[1]Newcastle Upon Tyne Hospitals; [2]Division of Cardiovascular Medicine, University of Cambridge*

10.1136/heartjnl-2020-BCS.9

Introduction Transcatheter aortic valve implantation (TAVI) is being used increasingly in patients with severe symptomatic aortic stenosis. Few studies focused on hospital length of stay (LOS) and feasibility of next-day discharge. This study aims to evaluate the feasibility and factors associated with next-day discharge post TAVI, which can be used to help selecting suitable patients for a 'fast-track' TAVI admission pathway.

Methods Data from all TAVI procedures conducted at our centre from January 2014 to March 2019 were collected in our local TAVI registry, and analysed retrospectively. Patients discharged within 1 day of TAVI (early discharge group) were compared with consecutive patients discharged after 24 hours (late discharge group). Degree of frailty was assessed by the Canadian Study of Health and Aging (CSHA) frailty scale, and baseline functional status was assessed by Katz index of independence in activities of daily living.

Results Of 502 patients, 274 (54.6%) were male, mean age 83.2±7.3 years, and 87 (17.7%) patients were considered frail by CSHA frailty scale. Median Katz index was 6 (i.e. functionally independent, interquartile range [IQR] 1), and mean logistic Euroscore 17.4±10.7. Percutaneous transfemoral access was performed in 468 (95.5%), and general anaesthesia was used in 64 (14.4%) patients. Early complications before discharge were comparable to national standards: death in 11 (2.3%), MI in 1 (0.2%), PPM in 20 (4.3%), gastrointestinal bleed in 3 (0.6%), and tamponade in 5 (1.1%). Median LOS post procedure was 2 (IQR 3) days, median length of total hospital stay was 3 (IQR 5) days. Early discharge was achieved in 213 (44.7%) patients. Multivariate logistic regression analysis showed that male gender (odds ratio [OR]: 2.81, 95% confidence interval [CI]: 1.68 to 4.7; p<0.001), baseline New York Heart Associated (NYHA) class below III (OR: 2.04, 95% CI 1.19 to 3.51; p=0.01) were associated with early discharge after TAVI. Furthermore, advancing age (OR: 0.96, 95% CI 0.93 – 0.99; p=0.02), and presence of extensive ascending aorta calcification (OR: 0.38, 95% CI 0.16 – 0.88; p=0.025) were associated with less probability of early discharge (i.e. presence of these features were associated with delayed discharge).

Conclusions Next-day discharge after TAVI can be achieved in nearly half of all patients. Male younger patients with minimal symptoms at baseline (NYHA < III), without feature of ascending aorta calcification (porcelain aorta) are a potential suitable group to be considered for a 'fast-track' next-day TAVI discharge.

Conflict of Interest None

10 CLINICAL OUTCOMES AND PROGRAMMING STRATEGIES OF IMPLANTABLE CARDIOVERTER DEFIBRILLATOR (ICD) DEVICES DURING CHILDHOOD IN HYPERTROPHIC CARDIOMYOPATHY: A UK NATIONAL COHORT STUDY

Gabrielle Norrish. *Institute of Cardiovascular Science*

10.1136/heartjnl-2020-BCS.10

Introduction Sudden cardiac death (SCD) is the most common cause of mortality in childhood hypertrophic cardiomyopathy (HCM). ICDs have been shown to be effective at terminating malignant ventricular arrhythmias but at the expense of a high incidence of complications. The optimal device and programming strategies to reduce complications in this patient group is unknown. To describe the programming strategies and clinical outcomes of ICD implantation in childhood HCM.

Methods Anonymised, non-invasive clinical data were collected from a retrospective, longitudinal multi-centre cohort of children (<16 years) with HCM (n=687) and an ICD in-situ from the United Kingdom.

Results 96 patients (61 male (64%), 6 non-sarcomeric (6%)) underwent ICD implantation at a median age 14yr (IQR 11-16, range 3-16) and weight 52.3 Kg (IQR 34.8-63.1). Indication for ICD was primary prevention in 72 (75%) and secondary 24 (25%). 82 (85%) had an endovascular system, 3 (3%) epicardial and 11 (12%) subcutaneous system. For those with an endovascular system, 14 (15%) had a dual-coil shock lead and 48 (50%) an atrial lead. 61 patients (74%) were receiving one or more cardioactive medications at implantation [B blockers n=56, 70%, disopyramide n=14, 15%, amiodarone n=7, 7%, calcium channel blocker n=7, 9%, other n=5, 6%]. Programming practices varied; all had VF therapies activated (median 220bpm, IQR 212-230), 70 (73%) had a VT zone programmed (median rate 187 bpm, SD 20.9) of which 26 (27%) had therapies activated. 50 patients (61%) had antitachycardia pacing (ATP) activated. Over a median follow up of 53.6 months (IQR 27.3,108.4) 4 patients (4.2%) following arrhythmic events. 25 patients had 53 appropriate therapies