Abstracts

9 NEXT-DAY DISCHARGE AFTER TRANSCATHETER AORTIC VALVE IMPLANTATION
1Jonathan Bates-Powell, 2Sophie Gu, 1Richard Edwards, 1Azfar Zaman. 1Newcastle Upon Tyne Hospitals; 2Division of Cardiovascular Medicine, University of Cambridge
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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
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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), 70 (73%) had a VT zone programmed (median rate 187 bpm, SD 20.9) of which 62 (64%) had a VF zone programmed (median rate 220 bpm, SD 20.9). The same cut off as above (0.35) gave sensitivity of 90% and specificity of 92%.

Conclusion AT and AT/ET are valid grading parameters for severe disease. ROC analysis of AT/ET in bicuspid 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 sensitivity and specificity of 90%.

Conflict of Interest None
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(106) Mamas Mamas, 3 Rodrigo Bagur, 1 Adrian Bannning, 1 Dimitrios Terentes-Printzios, 1 Giovanni Luigi De Maria, 1 Rajesh Kharbanda, 1 Mamas Mamas, 2 Rodrigo Bagur, 3 Adrian Bannning. 1Heart Centre, Oxford University Hospitals NHS Trust; 2The Heart Centre, Royal Stoke Hospital, University Hospital of North Midlands Trust; 3Department of Epidemiology and Biostatistics, Schulich School of Medicine & Dentistry, Canada

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Introduction Coronary artery disease (CAD) is frequently encountered in patients undergoing transcatheter aortic valve replacement (TAVR). Contemporary recommendations advocate revascularisation of patients with severe aortic stenosis (AS) and concomitant significant coronary artery disease (CAD) by either a surgical or percutaneous approach. We undertook a systematic review and meta-analysis to evaluate the early and mid-term outcomes of patients who underwent surgical aortic valve replacement (SAVR) and coronary artery bypass grafting (CABG) against patients who had TAVR and percutaneous coronary intervention (PCI).

Methods A search of Medline and Embase was performed to identify studies comparing transcatheter and surgical approaches. Our search was independently screened by two investigators. Random effects meta-analyses with the Mantel-Haenszel method were performed to estimate the odds of adverse outcomes. Analyses were performed with RevMan (Review Manager version 5.3.5, Nordic Cochrane Centre, Denmark).

Results 1770 participants from six studies (5 observational, 1 randomised) were included in the meta-analysis (631 TAVR and PCI, 1139 SAVR and CABG). The mean age of participants was 79.2 years and 58.9% were male. TAVR was performed via both transapical/transaortic and transfemoral routes, using both self-expandable and balloon expandable valve systems. PCI was conducted either concomitant to TAVR were not identified on TTE. Of the remaining 47 patients, 27 (57.4%) had longer vegetations measured on TOE than on TTE with the mean difference being 7.8mm. 2/47 (4.3%) patients had the same vegetation length on TOE as on TTE. 18/47 (38.3%) patients had longer vegetations measured on TTE than on TOE with the mean difference being 4.3mm. The mean difference in vegetation length overall was 5.9mm. Of the 59 patients with left sided endocarditis, 16 cases (27.1%) would change their surgical indication based on using TOE vegetation length rather than TTE vegetation length. 11/ 59 (18.6%) cases would change from no indication for surgery to a class IIa indication and 5/59 (8.5%) cases would change from no indication for surgery to a class IIb indication.

Conclusion TTE often underestimates vegetation length compared to TOE. The change in vegetation length recorded between the two modalities would have changed the indication for surgery to prevent embolism in 27% patients. Measurements of vegetation length to determine surgical intervention for the prevention of embolization should be taken from TOE imaging rather than TTE.

Conflict of Interest None

11 IMPACT OF TRANSTHORACIC VERSUS TRANSOEOSOPHAGEAL ECHOCARDIOGRAPHY MEASUREMENT OF VEGETATION LENGTH IN INFECTIVE ENDOCARDITIS ON INDICATIONS FOR SURGERY

David Hoare, Sanjeev Bhattacharyya, Guy Lloyd, William J Young, Simon Woldman. St Bartholomew’s Hospital, London

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Introduction Infective Endocarditis (IE) has high mortality. Longer vegetation length is associated with increased stroke risk and mortality. Guideline indications for surgery to prevent embolism are based on vegetation length. However they do not specify which modality should be used for the measurement. Transoesophageal echocardiography (TOE) imaging is only a Class I indication for prosthetic heart valves or where trans-thoracic (TTE) is inconclusive. Therefore, not all patients with IE will undergo TOE. We investigated whether there are differences in TTE and TOE measurement of vegetation length and the potential impact on indications for surgery.

Methods This was a retrospective study of 68 patients with definite endocarditis that had undergone both TOE and TTE imaging. Vegetation length was measured on two dimensional images. Indications for surgery to prevent embolism using the ESC 2015 guidelines were compared for vegetation length on TOE and TTE.

Results The median time between TTE and TOE was 2 days. 21/68 (30.8%) patients with vegetation identified on TOE were not identified on TTE. Of the remaining 47 patients, 27 (57.4%) had longer vegetations measured on TOE than on TTE with the mean difference being 7.8mm. 2/47 (4.3%) patients had the same vegetation length on TOE as on TTE. 18/47 (38.3%) patients had longer vegetations measured on TTE than on TOE with the mean difference being 4.3mm. The mean difference in vegetation length overall was 5.9mm. Of the 59 patients with left sided endocarditis, 16 cases (27.1%) would change their surgical indication based on using TOE vegetation length rather than TTE vegetation length. 11/ 59 (18.6%) cases would change from no indication for surgery to a class IIa indication and 5/59 (8.5%) cases would change from no indication for surgery to a class IIb indication.

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Conflict of Interest None

12 TRANSCATHETER VERSUS SURGICAL APPROACH FOR SEVERE AORTIC STENOSIS WITH CONCOMITANT CORONARY ARTERY DISEASE: A SYSTEMATIC REVIEW AND META-ANALYSIS OF EARLY AND MID-TERM OUTCOMES

Rafael Kotonias, 1 Jonathan Bray, 1 Roberto Scansini, 1 Skanda Rajasundaram, 1 Dimitrios Terentes-Printzios, 1 Giovanni Luigi De Maria, 1 Rajesh Kharbanda, 1 Mamas Mamas, 2 Rodrigo Bagur, 3 Adrian Bannning. 1Heart Centre, Oxford University Hospitals NHS Trust; 2The Heart Centre, Royal Stoke Hospital, University Hospital of North Midlands Trust; 3Department of Epidemiology and Biostatistics, Schulich School of Medicine & Dentistry, Canada

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