

resulted in 22 interventions on 15 patients which included medication changes, cardioversions and electrophysiology studies on varying conditions (graph 1). 24–48 hour Holter Monitoring detection rate is between 5%–34%, and therefore inferior to AliveCor in this study.

**Conclusion** The role of AliveCor, provided by charity (CHSF), in congenital patients is bright but remains unclear. AliveCor is able to detect arrhythmias in this patient cohort, although only a small sample was assessed. A larger multicentre study would provide more clarification. This is likely to be more routine practice, with the young ACHD technological competent patients.

**Conflict of Interest** No

### 30 PERI-PROCEDURAL TAMPONADE DURING TRANSCATHETER AORTIC VALVE INSERTION (TAVI): STANDARD VS BALLOON-TIPPED TEMPORARY PACING WIRES: A 3-CYCLE AUDIT

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**Introduction** Transcatheter aortic valve insertion (TAVI) is an established minimally invasive procedure for patients with symptomatic, severe aortic stenosis deemed to be at high surgical risk. As TAVI continues to advance toward intermediate and low surgical risk patients, minimising peri-procedural complications will be paramount in sustaining the clinical benefit of the procedure. One such peri-procedural complication is cardiac tamponade. Cardiac tamponade can result from ventricular perforation by a temporary pacing wire (TPW), which is itself necessary to insert when complete heart block arises during aortic valve insertion. We sought to compare the risk of peri-procedural tamponade associated with the two most frequently deployed TPWs at the Oxford Heart Centre.

**Methods** We liaised with local stakeholders to gauge the importance of this question to patients with severe aortic stenosis attending the Oxford Heart Centre. We conducted three cycles of data collection in the John Radcliffe hospital starting in August 2019 and finishing in July 2021. To ascertain the risk of tamponade in procedures involving either the standard TPW or balloon-tipped TPW, we cross-referenced procedural recordings, from which the type of TPW could be identified, with Oxford TAVI (OxTAVI) registry data on tamponade incidence. In accordance with a pre-specified analysis plan, all data was analysed using STATA version 15 software.

**Results** Peri-procedural tamponade occurred in 15/395 (3.8%) procedures involving a standard TPW vs 2/40 (4.7%) procedures involving a balloon-tipped wire (Figure 1). In comparison to use of the standard wire, the relative risk (RR) of peri-procedural tamponade using a balloon-tipped wire was 1.54 with an associated 95% Confidence Interval of 0.30 to 5.30. Consistent with this, a two-sided Fisher's Exact test result was non-significant (P-value = 0.6367).

**Conclusion** No significant difference was observed in the risk of peri-procedural tamponade using a balloon-tipped wire in comparison to the standard pacing wire during trans-femoral TAVI procedures conducted at the John Radcliffe hospital between August 2019 and July 2021. The results were presented to the lead for clinical governance at the Oxford Heart

Centre and local practice has now been changed to allow for both balloon-tipped and standard temporary pacing wires are being procedurally deployed in the Oxford University Hospitals Trust during TAVI. An additional cycle of data collection and collaboration with other high-volume TAVI centres will improve generalisability and increase statistical power.

**Conflict of Interest** -

### 31 ARRHYTHMIA AS A HERALD SIGN FOR CARDIAC LYMPHOMA IN A YOUNG AND IMMUNOCOMPETENT PATIENT

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Patient X, a forty-year-old woman, was initially admitted with a three-week history of flu like symptoms, fatigue, breathlessness and intermittent palpitations. In the emergency department, she had a run of supraventricular tachycardia which self resolved. Her blood tests showed a raised D-dimer and Troponin, severe iron deficiency anaemia and EBV DNA negative. Given her raised troponin and flu like symptoms, she was initially managed as acute myocarditis. During the admission she was started on low dose bisoprolol and placed on telemetry. This picked up several episodes of sinus pauses, therefore bisoprolol was held. The patient then went on to have further episodes of supraventricular tachycardia, once requiring chemical cardioversion with adenosine and the other with DCCV given haemodynamic instability, with further asymptomatic sinus pauses. Patient X had several investigations including a transthoracic echocardiogram, CTPA, cardiac MRI Scan and a CT abdomen and pelvis. The results overall demonstrated an abnormal thickening in the right atrial wall and interatrial septum with bilateral ovarian masses, right adrenal mass and abnormal retroperitoneal nodes. CT PET Scan was suggestive of lymphoma. Biopsies of the bone marrow and ovary confirmed diffuse large B-cell lymphoma. Given the tachy-brady arrhythmia and the diagnosis of lymphoma with cardiac involvement, an MDT took place to discuss the possible need of pacing. It was concluded to begin high dose steroids and monitor for any further arrhythmia. Patient X was started on R-CHOP chemotherapy and high dose methotrexate. She clinically improved with no further arrhythmias and was safely discharged home, she is currently in remission. Discussion: Cardiac lymphoma, particularly primary cardiac lymphoma, is rare. Whilst disseminated lymphoma, most often of non-hodgkin's type, is well recognised, the myriad presentations and the often insidious onset regularly lead to delays in diagnosis and treatment. Treatment outcomes are often poor, with 30–40% of patients requiring second line treatment. This condition most commonly affects vulnerable patient populations including the elderly and the immunocompromised. This case report is unique amongst the literature due to young age at presentation, combined with her immunocompetent state and paucity of past medical history prior to this event. The presence of thickening in the right atrium and ventricle was in keeping with the known pattern of cardiac lymphomatous infiltration. However the combination of both brady- and tachyarrhythmias was very rarely described in the literature. As this patient remained wholly stable despite the arrhythmic episodes the decision was made not to implant a pacemaker

and this has been of benefit to the patient in the long term. At 6 months the patient's follow up PET-CT was lymphoma free following 6 cycles of R-CHOP chemotherapy, conveying the importance of early diagnosis and aggressive treatment in the short to medium term. Learning points: 1) The myriad ways in which cardiac lymphoma can present confer low clinical suspicion and often delays in diagnosis and thereafter the necessary aggressive management strategy needed to treat the condition and its sequelae 2) Pacemaker insertion should be based upon clinical need and can be avoided in scenarios where the patient remains stable and chemotherapy has been initiated to good effect.

**Conflict of Interest** Nil

### 32 MAVACAMTEN ELIGIBILITY IN PATIENTS WITH HYPERTROPHIC CARDIOMYOPATHY ATTENDING CARDIOLOGY CLINIC IN ESSEX, UK

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**Introduction** Hypertrophic cardiomyopathy (HCM) is a heart muscle disease with few targeted therapies. Patients with left ventricular outflow tract obstruction (HOVM) are at risk of sudden cardiac death and may experience symptoms of dyspnoea, fatigue, dizziness and palpitations. As a result, the burden of symptoms often has a significantly detrimental effect on activities of daily living, exercise tolerance and subsequently results in a reduction in quality of life. HOVM patients have been treated historically with limited medical therapy options (beta-blockers and/or calcium channel blockers or Disopyramide) before proceeding to high-risk invasive treatments (alcohol septal ablation or myomectomy). There is a substantial unmet need in HCM for specific treatments to reduce obstruction and improve other parameters of left ventricular function. Mavacamten, a first-in-class, small molecule, selective allosteric inhibitor of cardiac myosin ATPase, is a new treatment for HOVM, but not routinely available in the UK pending marketing authorisation expected in Q4 2022.

**Methods** In anticipation of a dedicated Inherited Cardiac Conditions service for the Essex region, patients attending a general cardiology clinic with HCM were screened, to determine potential eligibility for Mavacamten. Criteria described in the double-blind, randomised multicentre Phase 3 EXPLORER-HCM study were analysed: symptomatic New York Heart Association (NYHA) class II and III; LVEF <sup>3</sup>55%; and Left Ventricular Outflow Tract (LVOT) peak gradient <sup>3</sup>50 mmHg at rest or with provocation.

**Results** A total of 92 HCM patients were identified, with median follow up period 52 months, median age 56 years (range 15–86), and male sex in 64%. Twelve patients had an implantable cardioverter defibrillator (ICD, 13%), 3 patients had a dual chamber pacemaker (3%) and 1 patient underwent surgical myomectomy. Maximum wall thickness (MWT) ranged from 1.2cm to 3.3cm with median LVOT gradient 9 mmHg (IQR 5–21, maximum 135 mmHg). Thirteen patients (14%) met eligibility criteria for Mavacamten and of these 62% were on a beta-blocker and 15% were on Disopyramide. Mavacamten eligible HCM patients were of similar age to ineligible patients (median 56 years for both groups,  $p = 0.862$ ), with similar wall thickness (median 1.7cm for both groups,  $p =$

0.373) and LVEF (67% vs 66%,  $p = 0.471$ ), but had significantly higher LVOT gradient (median 71 mmHg vs 7 mmHg,  $p < 0.001$ ) and worse symptoms (92% vs 34% NYHA class 2/3,  $p = 0.034$ ). Despite this, there was similar survival ( $p = 0.57$ ), with a trend towards better survival in Mavacamten eligible patients compared to Mavacamten ineligible patients under proposed criteria (Figure 1).

**Conclusion** Treatment options for HCM are limited; the cardiac myosin inhibitor Mavacamten is an exciting new therapy, but it is currently unavailable in the UK. A small minority of our HCM patients meet the proposed criteria for Mavacamten, and within our cohort these patients do not have significantly reduced survival on current therapy. Given the mechanism of action of Mavacamten, further studies in all HCM patients, with or without obstructive physiology, are needed to expand potential licensing indications.

**Conflict of Interest** None to declare

### 33 VALUE OF PERICARDIAL FENESTRATION IN THE DIAGNOSIS AND TREATMENT OF TUBERCULOUS PERICARDITIS

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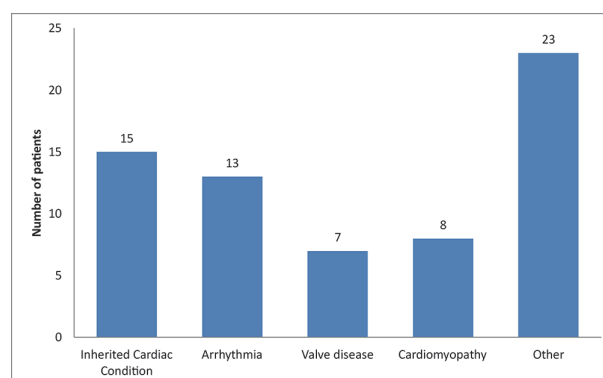
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**Objective** To explore the value of thoracoscopic pericardial fenestration in the diagnosis and treatment of tuberculous pericardial effusion.

**Methods** 55 patients with unexplained massive pericardial effusion underwent thoracoscopic pericardial fenestration.

**Abstract 33 Table 1** Modified World Health Organization classification of maternal cardiovascular risk

Risk Category	Maternal cardiac event rate	Recommended Location of Care During Pregnancy and Delivery
mWHO I	2.5-5%	Local Hospital
mWHO II	5.7-10.5%	Local hospital/Referral hospital
mWHO III	19-27%	Expert centre for pregnancy and cardiac disease
mWHO IV	40-100%	Expert centre for pregnancy and cardiac disease



**Abstract 33 Figure 1** Breakdown of patients seen in the combined obstetrics-cardiology clinic by diagnosis