Introduction AliveCor ECG tracing, is an established tool for detecting AF (atrial fibrillation) in acquired cardiology patients. It has not yet been assessed in adult congenital cardiology patients (ACHD). 24–48 hour Holter monitor tracing has variable rates of detection in paroxysmal symptoms, therefore newer technology is required to aid diagnosis.

Aim To determine the utility of AliveCor detecting arrhythmias in ACHD patients, with paroxysmal cardiac symptoms.

Methods Retrospective analysis of AliveCor data over a two year period (2019–2021), at a single ACHD centre was performed (Leeds). AliveCor readings were reviewed by cardiologists and followed with a 12-lead ECG.

Results Of the 44 AliveCor devices, 36 (81%) were given for palpitations, 4 for dizziness, 2 for dyspnoea and 2 for syncope. 48% of patients (21) returned readings with palpitations, of which 11 (52%) had arrhythmias detected. Those identified include atrial fibrillation / flutter (6), atrial tachycardia / ectopy (3), PVC (2). 4 had sinus tachycardia only. This
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 TRANSATHERET AROTIC 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 for 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.