subjects with sleep apnoea and with sleep apnoea on treatment were also found to have a higher prevalence of atrial fibrillation and a higher prevalence of family history of sudden death.

Conclusion Abnormal SAECG patterns with significantly reduced root mean square voltages and terminal 40 msec voltages are seen in those patients with HCM and concurrent OSA. These changes do not appear to reverse with treatment of OSA and in fact appear to shorten further still. The SAECG may prove useful as a marker of underlying sleep apnoea and also may provide utility in predicting an individual with HCM’s risk of developing arrhythmia particularly atrial fibrillation and potentially ventricular arrhythmia.

Conflict of Interest Nil

20 PREDICTORS OF PERMANENT PACEMAKER INSERTION AFTER MITRAL VALVE REPLACEMENT

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Objective As the established surgical mitral valve replacement (MVR) expands towards various contemporary techniques and access routes, the predictors and burden of procedure-related complications including the need for permanent pacemaker (PPM) implantation need to be identified.

Methods Digital databases were searched systematically to identify studies reporting the incidence of PPM implantation after MVR. Detailed study and patient-level baseline characteristics including the type of study, sample size, follow-up, number of post-MVR PPM implantations, age, gender, and baseline ECG abnormalities were abstracted.

Results A total of 12 studies, recruiting 37,124 patients were included in the final analysis. Overall, 2,820 (7.6%) patients required a PPM with the net rate ranging from 1.7% to 10.96%. Post-MVR atrioventricular (AV) block was the most commonly observed indication for PPM, followed by sinoatrial (SA) node dysfunction, and bradycardia. Age, male gender, pre-existing comorbid conditions, prior CABG, history of arrhythmias or using anti-arrhythmic drugs, AF ablation, and double valve replacement were predictors of PPM implantation post-MVR.

Conclusion Age, male gender, comorbid conditions like diabetes and renal impairment, prior CABG, double valve replacement, and anti-arrhythmic drugs served as positive predictors of PPM implantation in patients undergoing MVR.

Conflict of Interest None

21 ATHEROSCLEROSIS IN FABRY DISEASE

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Introduction Fabry disease (FD) is a lysosomal storage disorder characterised by a deficiency in the enzyme α-galactosidase A resulting in sphingolipid deposition which causes progressive cardiovascular manifestations. Angina is common in FD due to multiple mechanisms, including thickening of fibrocellular
Abstracts

**Abstract 21 Figure 1** The side effect profile of iron supplements within our population (n=29)

![Side Effect Profile of Iron Supplements](image)

**Abstract 21 Figure 2** The advice given to patients at the time of iron supplement prescription

![Advice Given at Time of Iron Supplement Prescript](image)

Introducing the burden of ambulatory care in adult congenital heart disease ischaemic pattern in patients without known coronary artery disease (see Figure 1).**Conflict of Interest NONE**

**Introduction** Adults with congenital heart disease (ACHD) are a growing, heterogeneous group requiring lifelong follow-up to detect occurrence of known complications. In contrast to other cardiovascular disorders and chronic conditions, those with ACHD generally remain within the specialist tertiary hospital setting throughout their lives. The costs and burden on the patient of outpatient healthcare are increasingly recognised in the wider healthcare setting. The primary aim of this study was to evaluate present ambulatory healthcare in ACHD for ability to detect clinically relevant problems and consider patient and service provider costs. An additional aim was to define levels of non-attendance. We also summarise clinic activities during the COVID-19 pandemic when a hybrid approach of virtual and face to face consultations were arranged according to clinician perceived priority. Methods The clinic attendances of 100 patients attending the general ACHD clinic, selected by hospital number to minimise bias, were reviewed over a five-year period (1/01/2014–30/11/2019) and the Covid 19 period (23/03/2020–23/07/2021) by interrogation of the electronic patient record. This period represented 1/6 of their total lifetime clinic attendance. Results 100 patients (Table 1) were invited to clinic annually. Non-attendance was 10% with 15 patients recurrently non-attending. 80% (459/ 575) of appointments resulted in no decision other than continued review (Figure 1). Electrocardiograms and echocardiograms were performed frequently but new findings were rare (5.1% and 4.0%). Other investigations required separate attendance. Decision-making was more common with higher ACHD AP class and new symptoms. There were 25 elective admissions, and 40 emergency admissions over half following appointments where no notable findings were recorded (Figure 2). Distance travelled to the ACHD clinic, which was supported by six clinical staff, was 14.9km (range 1.6–265) resulting in an estimated 433–564 workdays lost. During Covid 19, 56% appointments were in-person; 41% telephone; 5% video. Decisions were made at 37% in-person and 19% virtual consultations. Non-attendance was 3.9% and there were 8 emergency admissions.

**Conclusion** The primary purpose of ACHD ambulatory care is surveillance. Despite this, emergency hospital admissions

**Aims and Methods** In a contemporary cohort of FD, the aims of this study are: 1. To examine risk factor profile and control of classical risk factors for atherosclerosis. 2. To determine frequency of coronary calcification and obstructive coronary artery disease (CAD). We therefore conducted a retrospective analysis of 47 patients with genotypically confirmed FD established on ERT to assess for conventional risk factors for CAD and prevalence of CAD.

**Results** Demographic characteristics for the cohort are illustrated in Table 1. The average age was 52.4 years (47% female). In total, 13/47 (28%) patients had stage 3–5 CKD and 14/47 (30%) with stage 2 CKD. 32/47 (68%) were on anti-hypertensive medication, 18/47 (38%) were on a statin, and 12/47 (26%) had a total Cholesterol > 5 mmol/L. Within our cohort, 25/47 (53%) patients had a formal assessment of their coronary arteries (see Table 2). 12/47 (26%) underwent an invasive coronary angiogram (ICA) and 13/47 (28%) underwent a computed tomography coronary angiogram (CTCA). Of those who underwent an ICA, 7/12 (58%) had no flow-limiting CAD with the remaining 5 having significant CAD, defined as >50% coronary artery stenosis and/or revascularisation (3/12 required coronary artery bypass grafting (CABG) and 2/12 required percutaneous coronary intervention (PCI)). Although none of the patients studied by CTCA had flow-limiting or significant CAD, 7/13 (54%) had either mild or moderate coronary calcification. 9/13 (69%) had no coronary calcium. Five patients underwent a Technetium-99 m single photon emission computed tomography scan with CT attenuation, 3 of which were normal and 2 which demonstrated fixed perfusion defects in a non-