

Conflict of Interest Nil

**41 DOES PROGRESSIVE FIRST DEGREE AV BLOCK INDICATE THE NEED FOR PACING?**

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10.1136/heartjnl-2019-BCS.39

**Background** First-degree AV block, though considered benign, has been reported to be associated with an increased risk for atrial fibrillation, permanent pacing, heart failure and all-cause mortality. It is possible the extent of PR prolongation indicates the severity of adverse outcome. This study investigated whether the length of PR and its change with heart rate can predict the need for permanent pacing.

**Method** We studied 21 patients with a PR over 270 ms. Nine patients underwent permanent pacing for symptomatic bradycardia or complete AV block and 12 did not. Two or more PR intervals and corresponding heart rates were measured. The unit change in PR to heart rate was calculated and defined as PR Index. We compared the two groups by Student T test or Fisher Chi Square test.

**Result** Age, sex distribution and baseline heart rate were similar in the two groups. The baseline mean PR interval was 70 ms greater (though did not reach statistical significance), a PR interval over 350 ms was more common (7/9 vs 3/12), the mean corrected PR interval by heart rate was significantly longer and the PR index was significantly higher in patients who were paced than in those who were not (all  $p < 0.05$ ).

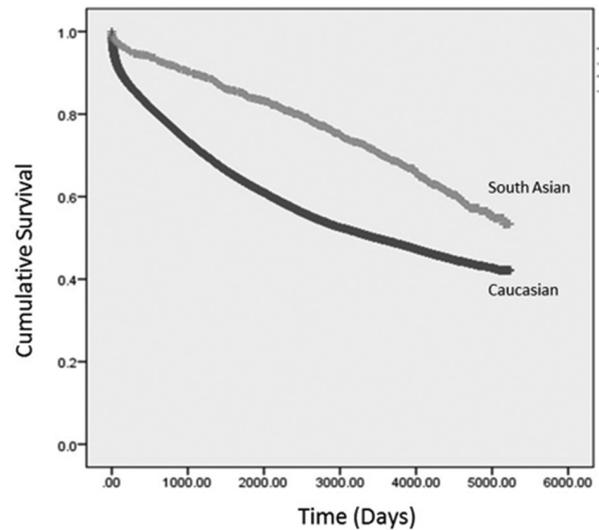
**Conclusion** A very long PR interval may lead to AV dissociation requiring permanent pacing. A PR interval over 350 ms and an exaggerated prolongation of PR per given decrease in heart rate may indicate a high risk of AV dissociation, hence the need for permanent pacing.

**Conflict of Interest** None

**42 ATRIAL FIBRILLATION AND LONG-TERM SURVIVAL IN SOUTH ASIANS: INSIGHTS FROM THE UK ACALM REGISTRY**

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10.1136/heartjnl-2019-BCS.40



**Abstract 42 Figure 1** KM curve showing long term survival of Caucasian and South Asian AF patients

**Background** Atrial Fibrillation (AF) is the most common cardiac arrhythmia and is an independent risk factor for mortality. However, the impact of race has not been fully explored. We evaluated the frequency, clinical characteristics, and long-term survival in South Asian and Caucasian White patients with AF using a ‘big data’ approach.

**Methods** Using the United Kingdom (UK) Algorithm for Comorbidity, Associations, Length of stay, and Mortality (ACALM) registry, we analyzed 1,816,230 adults hospitalized between January 2000 and July 2014 using ICD-10 and OPCS-4 coding systems. Ethnic status was identified and AF patients were selected. Using logistic regression, we examined the odds of mortality adjusted for demographics and co-morbid status.

**Results** In our large cohort, South Asian patients had a lower frequency of AF hospitalization compared with Caucasian White patients (0.8% [1876/243,363] versus 4.5% [51,576/1,151,222],  $p < 0.001$ ). Differences in demographics and baseline characteristics are highlighted in the table below. Kaplan-Meier survival was worse in Caucasian White patients with AF (figure 1). Following adjustment, White race was associated with a higher long-term mortality compared with South Asian ethnicity in patients with AF (HR 1.38, 95% CI 1.26–1.51,  $p < 0.001$ ).

**Conclusion** In a ‘big data’ UK registry, AF hospitalization in South Asians appears less common and is associated with improved survival compared with Caucasian White patients.

**Abstract 42 Table 1**

	South Asian (n=1876)	Caucasian White (n=51,575)	p-value
<b>Demographics</b>			
Age (mean, SD)	65.5 (14.3)	74.2 (12.2)	<0.001
Female (%)	44.2	49.2	<0.001
<b>Selected baseline characteristics</b>			
Hypertension (%)	64.8	50.3	<0.001
Type 2 Diabetes (%)	43.2	17.3	<0.001
Prior MI (%)	10.7	7.2	<0.001
Prior heart failure (%)	12.3	13.6	0.883
Chronic kidney disease (%)	3.5	8.9	0.04
Charlson risk score	1.6 (1.5)	1.4 (1.5)	<0.001
<b>Clinical Outcome</b>			
1-year mortality %	5.5	15.7	<0.001

Further investigation is required to understand the impact of race on AF prevalence and outcomes.

**Conflict of Interest Nil**

### 43 A PATIENT CENTRED EVALUATION OF INNOVATIVE AMBULATORY ECG MONITORING

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10.1136/heartjnl-2019-BCS.41

**Introduction** Ambulatory ECG Holter monitoring has historically been the conventional method through which symptom and arrhythmia are correlated for diagnostic purposes. Holter recorders (e.g. SpaceLabs) have traditionally comprised a 3-lead ECG with attached wires to a wearable console. The innovation of device components has enabled smaller, wearable technology to be a reality and this has been developed into several novel, single-use devices. The older systems have multiple disadvantages including patients failing to return them on time, which in turn can reduce available units for other patients. The units are expensive and additionally, the quality of the ECG tracings is often poor. The latest technologies on the market have designed a single channel patch designed for comfort, duration of wear, non-impact to daily living and most importantly accuracy of recordings. We formulated this study to evaluate the patient's perspective on a sample of these devices.

**Method** 250 patients were randomly selected from the Barts Heart Centre outpatient cardiology clinics between October 2018 and February 2019. No exclusions were made with regards to age, gender or reason for referral and written consent was given by each patient. Patients were selected to receive patches from either Bardy,

Technomed and Zio, in addition to Spacelabs (our control group). Technomed, Zio and Spacelabs were fitted to 50 patients, and Bardy were fitted to 100 where 50 of these tapes were analysed at Barts using the Bardy software, and full disclosure was reviewed on all tapes analysed by the selected companies to ensure quality control. Patients were asked to complete a feedback form. The feedback forms included 9 questions (table 1.1) with the opportunity to give qualitative feedback in a comments section. Statistical analysis was performed using a one-way ANOVA with Bonferroni correction.

**Results** We received feedback from 80.8% of patients, a total of 202. (Zio 38, Bardy 76, Technomed 38 and Spacelabs 50). The main focus of the feedback was patient experience which can be visualised by the mean and Standard error results from questions 3, 4, 7 and 9 shown in graph 1.1. Results demonstrated significant differences between all four devices when comparing the size and shape, comfort, practicality and returning method,  $P \leq 0.0001$ .

On Bonferroni correction significant differences were seen specifically between Spacelabs and the three new patches, with the most noticeable difference between Spacelabs and Bardy and Spacelabs and Technomed (Spacelabs Vs Technomed Mean  $4.3 \pm 1.34$  and  $5.7 \pm 0.8$ ,  $P \leq 0.0001$  and Spacelabs Vs Bardy Mean  $4.3 \pm 1.34$  and  $5.5 \pm 0.95$ ,  $P \leq 0.0001$ ). There were no significant differences between Zio, Bardy and Technomed.

**Conclusion** Our data shows patients have a preference for miniaturised ambulatory ECG monitoring compared with the conventional Holter monitor which is used in most UK hospitals. Further analysis incorporating an evaluation of data accuracy in addition to a cost-effective analysis would be required in order to make the case for switching to new patch technology in the future.

**Conflict of Interest NA**

Abstract 43 Table 1

		Please circle from poor (1) to Great (6) or N/A						
		1	2	3	4	5	6	N/A
1	Ease of application (time taken for appointment)							
2	Location of application (discrete, comfortable)							
3	Size and shape of device (too big, sticks out)							
4	Comfort of device (heavy, painful, awkward, catches on clothing etc)							
5	Adhesiveness (Did it stay on for intended duration)							
6	Ease of use (pressing button/diary)							
7	Practicality (could you work, exercise etc)							
8	Removal (did it hurt, cause any reactions)							
9	Returning method (post, in person etc)							