of KIM-1 (278±5 pg/ml versus 259±5 pg/ml, P=0.01; Figure 2), and to more frequent elevations in CK to >10x and >40x the baseline level (30.9% versus 26.5%, p=0.032, and 2.1% versus 0.7%, p=0.016, respectively), whereas postoperative concentrations of GDF-15, IL-6, PCT, PLGF, and NGAL were similar between groups. In multivariable analyses, insulin treatment, baseline KIM-1, combined coronary artery bypass grafting (CABG) and aortic valve replacement (AVR) surgery, and allocation to rosuvastatin were all independently associated with AKI as defined by both creatinine and cystatin C (Table 2). Odds ratios for rosuvastatin compared to placebo for both creatinine- and cystatin C-defined AKI were not materially altered by further adjustment for post-randomization increases in CK.

Conclusions Perioperative rosuvastatin initiation increased the absolute risk of AKI after cardiac surgery by 4-5%, whether defined by creatinine or cystatin C, and led to higher postoperative KIM-1, suggesting a deleterious effect on renal function, possibly mediated by proximal tubular injury. Insulin treatment, baseline KIM-1, combined CABG/AVR surgery, and allocation to rosuvastatin were all independently associated with AKI by any definition. Temporary statin cessation in the perioperative period in patients undergoing cardiac surgery may be a reasonable option to consider on a case-by-case basis.

Abstract 191 Table 1 Characteristics of the patients at baseline

Characteristic	Rosuvastatin (n=960)	Placebo (n=962)
Age		
Mean – years	59.3±9.4	59.5±9.5
≤60 years	516 (53.8%)	504 (52.4%)
>60 years	444 (46.3%)	458 (47.6%)
Female sex	194 (20.2%)	205 (21.3%)
Body-mass index, kg/m²	25.7±3.2	25.7±3.1
CKD-EPI estimated GFR (ml/min/1.73m²)‡	90±15	90±15
Current smoker	229 (23.9%)	245 (25.5%)
Medical history		
Hypertension	621 (64.7%)	614 (63.8%)
Myocardial infarction	282 (29.4%)	274 (28.5%)
Stroke/transient ischaemic attacks	115 (12.0%)	119 (12.4%)
Peripheral arterial disease	23 (2.4%)	19 (2.0%)
Heart failure	46 (4.8%)	37 (3.8%)
Chronic obstructive pulmonary disease	5 (0.5%)	14 (1.5%)
Diabetes mellitus	310 (32.3%)	291 (30.2%)
Chronic kidney disease	10 (1.0%)	8 (0.8%)
Contrast agents (last 2 weeks)	383 (39.9%)	379 (39.4%)
Current/recent medication§		
Beta-blocker	813 (84.7%)	804 (83.6%)
NSAID or glucocorticoid	16 (1.7%)	7 (0.7%)
Insulin	140 (14.6%)	158 (16.4%)
Antiplatelet or anticoagulant	792 (82.5%)	779 (81.0%)
Calcium-channel blocker	445 (46.4%)	424 (44.1%)
ACE inhibitor or ARB	385 (40.1%)	384 (39.9%)
Nitrate	798 (83.1%)	800 (83.2%)
Diuretic agent	197 (20.5%)	213 (22.1%)
Statin	321 (33.4%)	332 (34.5%)
Scheduled surgery		
On-pump procedure	508 (52.9%)	515 (53.5%)
Off-pump procedure	422 (44.0%)	429 (44.6%)
CABG	832 (86.7%)	838 (87.1%)
Aortic-valve replacement	117 (12.2%)	119 (12.4%)

Abstract 191 Table 2 Fully-adjusted relevance of selected baseline measures to the odds of creatinine-defined and cystatin C-defined AKI among 1852 participants who had either CABG or AVR (or both)

		Creatinine-defined AKI		Cystatin C-defined AKI	
Variable	**SD/N (%)**	**OR (95% CI)**	**χ^2**	**OR (95% CI)**	**χ^2**
Age, per 10 years	9.3	1.25 (1.09, 1.43)	10.7		
Insulin	288 (15.6%)	**1.41 (1.05, 1.91)**	**5.0**	**1.70 (1.09, 2.65)**	**5.1**
Contrast agent (2 wks)	742 (40.1%)	0.70 (0.55, 0.89)	8.8		
ACE or ARB	737 (39.8%)			1.91 (1.32, 2.77)	11.6
Higher log Creatinine	0.2	1.34 (1.20, 1.50)	26.3		
Higher log KIM-1	0.5	**1.31 (1.17, 1.47)**	**20.9**	**1.37 (1.15, 1.63)**	**12.4**
Higher log NT-pro BNP	1.3			1.54 (1.26, 1.87)	19.0
Surgery type			**12.6**		**20.6**
CABG only	1614 (87.1%)	1.00		1.00	
AVR only	185 (10.0%)	1.47 (1.00, 2.17)		1.61 (0.87, 3.00)	
Both	53 (2.9%)	**2.60 (1.45, 4.67)**		**5.25 (2.68, 10.30)**	
Rosuvastatin vs. placebo		**1.43 (1.14, 1.80)**	**9.8**	**2.01 (1.38, 2.93)**	**13.7**

CI, confidence interval; log, Natural logarithm; OR, Odds ratio; SD, standard deviation. For regression models, any missing values were replaced with the mean value for continuous outcomes or the modal value for binary outcomes. Variables were selected for inclusion in this Table if they were statistically significant in either the fully-adjusted model for creatinine-defined AKI or in the fully-adjusted model for cystatin C-defined AKI; variables that were statistically significant in both models are highlighted in bold.

Conflict of Interest None

192 PREVALENCE AND SIGNIFICANCE OF RIGHT BUNDLE BRANCH BLOCK IN YOUNG INDIVIDUALS; THE EXPERIENCE OF A NATIONWIDE CARDIAC SCREENING PROGRAMME

[1]Hamish MacLachlan, [2]Chris Miles, [2]Michael Papadakis, [2]Gherardo Finocchiaro, [2]Sarandeep Marwahwa, [2]Nikhil Chatrath, [3]Dimitra Antonakaki, [2]Saad Fyyaz, [2]Raghav Bhatia, [3]Joyee Basu, [2]Maite Tome, [4]Soe Maung, [2]Sanjay Sharma. *[1]St Bartholomew's Hospital; [2]St George's, University of London; [3]Oxford University Hospitals; [4]Barts NHS Trust*

10.1136/heartjnl-2023-BCS.192

Background There is limited information on the clinical significance of complete right bundle branch block (CRBBB) in young asymptomatic individuals. We sought to determine the prevalence and prognostic significance of CRBBB by reporting on clinical outcomes of a nationwide cardiac screening programme for young individuals in the United Kingdom.

Methods Between 2007 and 2018, 104,369 consecutive individuals, aged 14 to 35 years, underwent voluntary cardiac screening (mean age 20.2 ± 6.2 years, 62% male, 89% white, 91% non-athletes). Initial evaluation consisted of a health questionnaire (HQ), electrocardiogram (ECG) and clinical consultation. Selective on-site transthoracic echocardiography (TTE) was available at the discretion of the consulting physician. Secondary cardiac evaluation was recommended for individuals with abnormal findings. CRBBB was classified as 'isolated' or 'non-isolated' based on the absence or presence, respectively, of concomitant cardiovascular symptoms, relevant family history and other ECG abnormalities (Table 1). Follow-up data were obtained via telephone consultations.

Abstract 192 Table 1 ECG findings considered in non-isolated complete right bundle branch block. CRBBB = complete right bundle branch block. * Definition according to 2017 International recommendations for ECG Interpretation in Athletes.[1]

ECG characteristics considered in non-isolated CRBBB
1st degree AV block (PR > 200ms)
Left axis deviation (-30 to -90)
Right axis deviation (+120 to +180)
Extreme axis deviation (-90 to + 180)
Indeterminate axis (equiphasic)
Left atrial enlargement*
Right atrial enlargement*
Abnormal T wave inversion (not considered discordant)
Anterior: V3–V4
Lateral: I and AVL, V5 and/or V6
Inferolateral: II and aVF, V5–V6, I and AVL
Inferior: II and aVF
ST segment depression*
Pathologic Q waves*
Complete left bundle branch block*
Epsilon wave
Ventricular pre-excitation
Prolonged QT interval*
Brugada Type 1 pattern
Brugada Type 2 pattern
Brugada Type 3 pattern
Profound sinus bradycardia < 30 beats per minute
Mobitz Type I 2nd degree AV block
Mobitz Type II 2nd degree AV block
3rd degree AV block
≥ 1 premature ventricular complex
Atrial tachyarrhythmias
Ventricular tachyarrhythmias

Results One hundred and fifty-four (0.1%) individuals were identified with CRBBB (Figure 1). The mean QRS duration was 131 ± 12 ms. CRBBB was more prevalent in males compared to females (0.22% vs. 0.06%, p < 0.05) and in athletes compared to non-athletes (0.26% vs. 0.14%, p < 0.05). There was no significant difference in terms of age or ethnicity. The majority (n=110; 74%) of individuals presented with isolated CRBBB. Of the 39 (26%) individuals with non-isolated CRBBB, 3 (2%) had CRBBB with associated symptoms and 36 (24%) had CRBBB and additional ECG finding (Table 2).

On-site TTE and or follow-up was available for 149 (97%) individuals. On-site TTE identified 4 individuals with atrial septal defects (ASD). During a mean follow-up period of 7.3 ± 2.7 years, a further 3 individuals were identified with CRBBB-related conditions, including 1 with Brugada syndrome, 1 with progressive cardiac conduction disease (PCCD) and 1 with atrial fibrillation (AF).

A total of 7 (4%) individuals were identified with CRBBB-related conditions; including 4 (3%) with ASD, 1 (0.7%) with Brugada syndrome, 1 (0.7%) with PCCD and 1 (0.7%) with AF. An additional 2 (1%) individuals were identified with non-CRBBB-related cardiac conditions which could be considered incidental findings; including 1 (0.7%) with mitral valve prolapse, and 1 (0.7%) aortic coarctation.

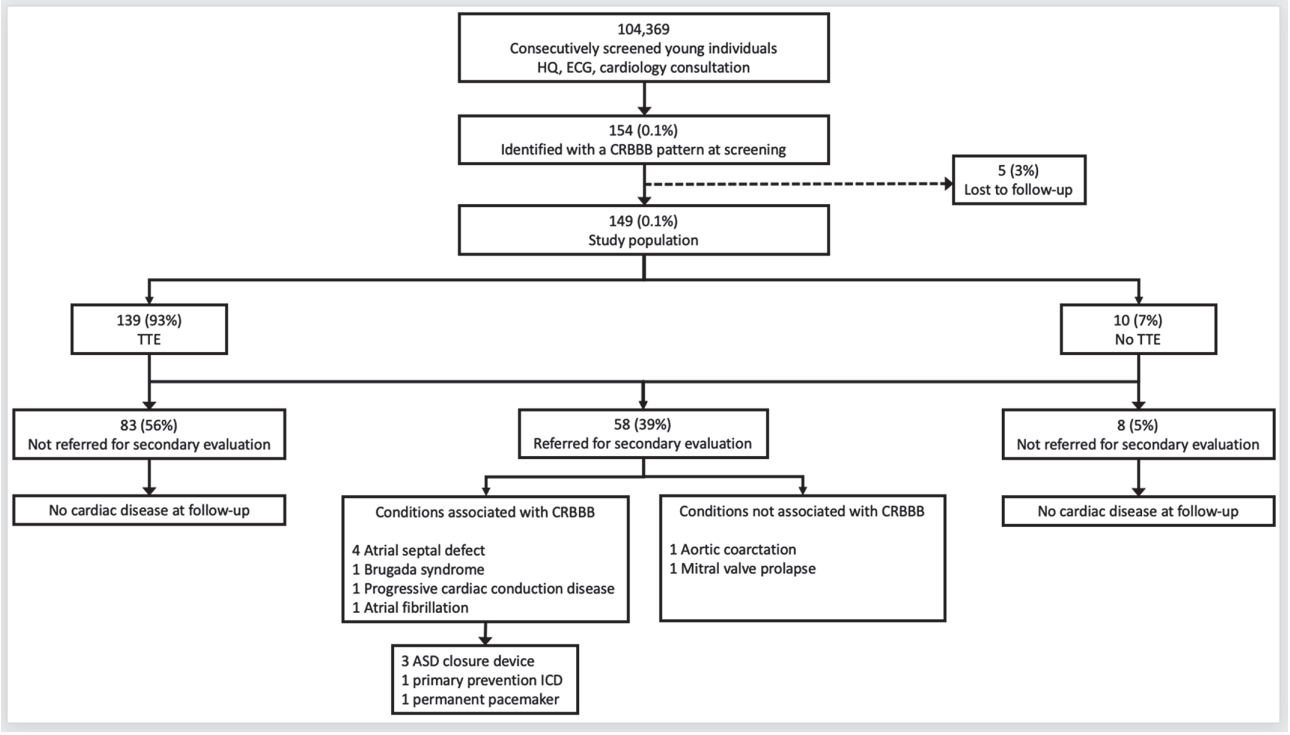
The prevalence of CRBBB-related cardiac conditions was significantly greater in individuals with non-isolated CRBBB compared to individuals with isolated CRBBB (15% vs 3%, p < 0.001), and in individuals with an abnormal ECG according to the International Recommendations for ECG interpretations in Athletes compared to those with ECGs which would be considered normal (17% vs 3%, p < 0.001) .1

Five (3%) individuals required cardiac intervention including 3 individuals who underwent percutaneous ASD closure, 1 individual implanted with a primary prevention implantable cardioverter defibrillator for a diagnosis of Brugada syndrome and 1 individual implanted with a permanent pacemaker for progressive cardiac conduction disease.

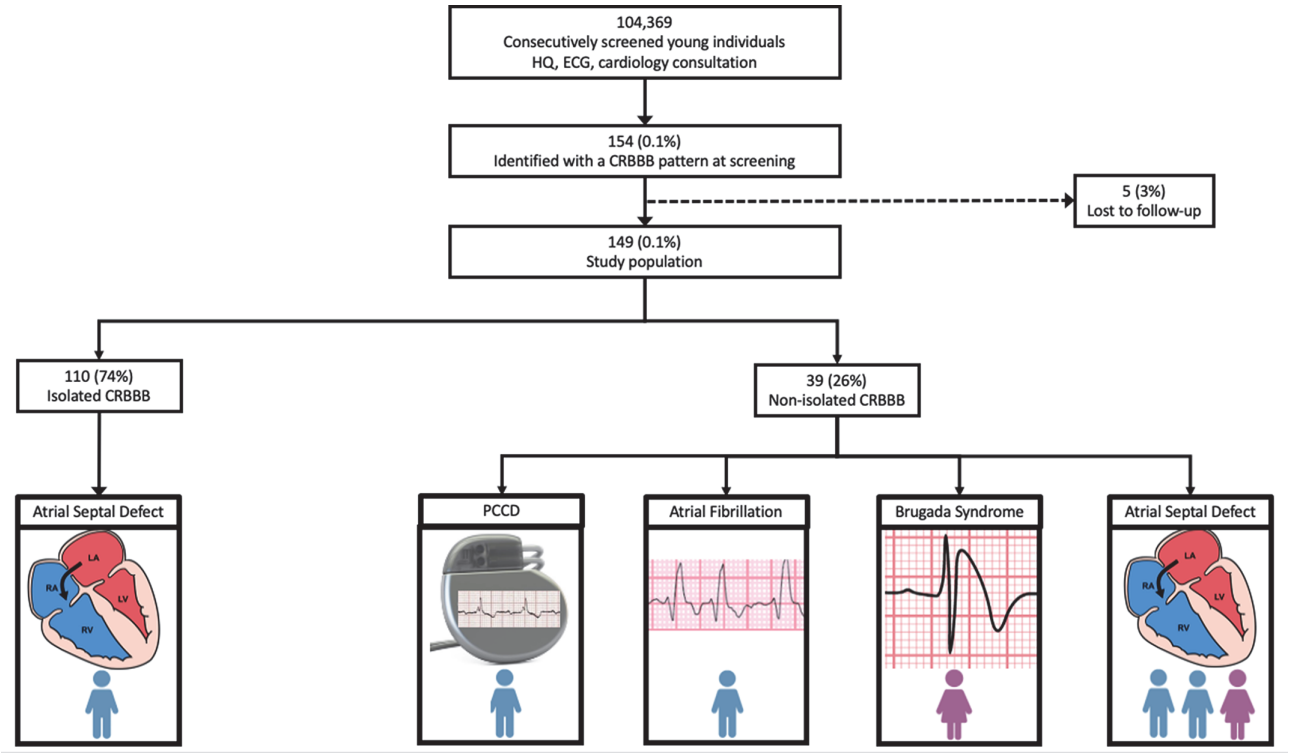
Conclusion The prevalence of CRBBB in a large cohort of young individuals was 0.1% which is similar to large observational studies of the general population. CRBBB-related

Abstract 192 Table 2 Characteristics of individuals identified with complete right bundle branch block at screening. AF: atrial fibrillation; ASD: atrial septal defect; AV: atrioventricular; BrS: Brugada Syndrome; CRBBB: complete right bundle branch block; ECG: 12-lead electrocardiogram; Ms: millisecond; PCCD: progressive cardiac conduction disease. * Definition according to 2017 International recommendations for ECG Interpretation in Athletes.[1]

Characteristic	Number (%)	Number of identified CRBBB-related cardiac conditions (%)	CRBBB-related cardiac condition
Isolated or non-isolated	110 (74)	1 (1%)	ASD
CRBBB	39 (26)	6 (15%)	ASD (3), AF, BrS,
Isolated	3 (2)	1 (33%)	PCCD
Non-isolated	36 (24)	5 (14%)	PCCD
CRBBB + symptom/family history			ASD (3), AF, BrS
CRBBB + other ECG finding*			
QRS duration	89 (60)	2 (2%)	ASD, AF
<130ms	60 (40)	5 (8%)	ASD (3), BrS,
≥130ms			PCCD
Anterior T wave	93 (62)	1 (1%)	AF
inversion	41 (28)	5 (12%)	ASD (3), BrS,
No anterior T wave	12 (8)	1 (8%)	PCCD
inversion	3 (0)	0 (0%)	ASD
V1 to V2			-
V1 to V3			
V1 to V4			
ECG findings identified	5 (3)	1 (20%)	PCCD
in non-isolated CRBBB*	10 (7)	1 (10%)	PCCD
1st degree AV block (PR	14 (9)	2 (14%)	ASD (2)
> 200ms)	1 (1)	1 (100%)	ASD
Left axis deviation (-30 to	6 (4)	1 (17%)	BrS
-90)	3 (2)	1 (33%	BrS
Right axis deviation (+120	3 (2)	0 (0%)	-
to +180)	1 (1)	1 (100%)	BrS
Extreme axis deviation (-	1 (1)	0 (0%)	AF
90 to + 180)			
Indeterminate axis			
(equiphasic)			
Left atrial enlargement*			
Abnormal T wave			
inversion (not considered			
discordant)			
Brugada Type 1 pattern			
Atrial fibrillation			



Abstract 192 Figure 1 Clinical outcomes of individuals with complete right bundle branch block referred for secondary evaluation.



Abstract 192 Figure 2 Complete right bundle branch block-related cardiac conditions identified in individuals with isolated and non-isolated complete right bundle branch block.

cardiac conditions were identified in 5% of young individuals with CRBBB and were more likely in individuals with non-isolated CRBBB. These findings highlight the clinical significance of CRBBB in young individuals and suggest that secondary cardiac evaluation should be considered for all young individuals with CRBBB, but particularly those with CRBBB and associated symptoms or additional ECG anomalies.

Conflict of Interest None