94 COMPARING THE OUTCOMES OF AN 'EARLY' VERSUS 'LATE' DIAGNOSIS OF CARDIAC SARCOIDOSIS FOLLOWING A BASELINE PRESENTATION OF HIGH-GRADE ATRIOVENTRICULAR BLOCK

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Background Cardiac Sarcoidosis (CS) can present with high-grade atrioventricular-block (hgAVB), ventricular arrhythmias or heart failure. The aim of this study was to determine the prognostic impact of a delay in diagnosing CS following presentation with hgAVB.

Methods Consecutive patients, with high grade AVB due to CS referred to our specialist tertiary care hospital between February 2007 to February 2023 were retrospectively reviewed. The median time to diagnosing CS in the study population was used as the cut-off for defining the 'Early' cohort. The primary endpoint was a composite of all-cause mortality, cardiac transplantation, ventricular arrhythmic events or heart failure hospitalisation. Secondary endpoints included difference in maintenance prednisolone dose, need for cardiac device upgrade and device complications.

Results A total of 77 CS patients met the inclusion criteria with median time of diagnosing CS as 112 days. Early Group (n=38) was defined as diagnosis of CS within 112 days of presenting with hgAVB. The mean age of the cohort was 54.4 (±10.6) years of whom 64% were male and 81% Caucasian. Patients in the Early Group had a significantly lower median timespan between AVB and first cardiac imaging (echocardiogram, cardiac MRI or FDG-PET scan): 7.5(1.0–35.5) vs 109.5 (17.3–357.8) days. Significantly more patients had signs of inflammation on index FDG-PET scan in Late Group (24/27 vs 13/25, p=0.01). After a mean follow up of 54.9 (±45.3) months, the primary endpoint was reached by significantly more patients from the Late cohort (16/39 vs 6/38, p=0.02). On multivariable analysis, late presentation was the only independent predictor of the primary endpoint (HR 6.9 95% CI 1.5–32.2, p=0.01). Patients in Early Group were more likely to have received an Implantable Cardioverter Defibrillator or

Abstract 94 Table 1 Demographic data in early and late cohort

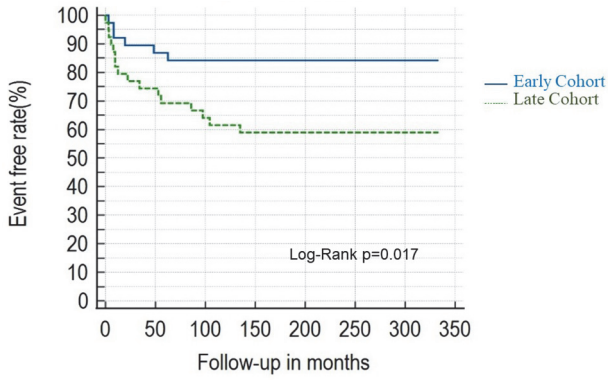
	Early (n=38) (%)	Late (n=39) (%)	p-value
Mean (SD) age at AVB	53.19(9.79)	55.64(11.15)	0.310
Median (IQR) days between AVB and CS diagnosis	7.50(1.00–27.50)	540.00(209.00–114.00)	-
Median (IQR) days from AVB to first imaging	7.50(1.00–35.50)	109.50(17.25–357.75)	-
Gender			0.022
Male	29	20	
Female	9	19	
Ethnicity			0.420
White	32	30	
Black/Asian	6	9	
Baseline cMRI - presence of LGE	25/27	23/26	0.607
Baseline Mean (±SD) LVEF	49.67(±11.04) (n=30)	47.05(±10.88) (n=32)	0.394
Baseline SUVmax>2.5	13/25	24/27	0.010
Using steroids at time of AVB	4	0	0.055
Maintenance dose of prednisolone mean (±SD) (mg)	15.33(±7.87)	20.70(±9.68)	0.022

AVB, Atrioventricular block; cMRI, Cardiac Magnetic Resonance Imaging; CS, Cardiac Sarcoidosis; IQR, Inter-quartile Range; LGE, Late Gadolinium Enhancement; LVEF, Left Ventricular Ejection Fraction; SD, Standard Deviation; SUVmax, maximum standardized uptake value.

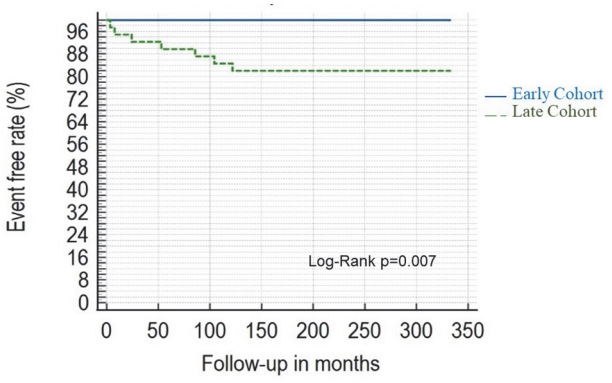
Abstract 94 Table 2 Devices data in early and late cohorts

	Early (n=38) (%)	Late (n=39) (%)	p-value
Initial device			0.001
CRT-D	10	2	
CRT-P	0	1	
ICD	9	3	
PPM	19	33	
Upgraded device			0.020
CRT-D	11	23	
ICD	8	7	
none	19	9	

CRT-D, Cardiac Resynchronisation Therapy-Defibrillator; CRT-P, Cardiac Resynchronisation Therapy-Pacemaker; ICD, Implantable Cardioverter Defibrillator; PPM, Permanent Pacemaker.



Abstract 94 Figure 1 Kaplan-Meier curve for composite end-point in early and late cohorts



Abstract 94 Figure 2 Kaplan-Meier curve for acute heart failure events in early and late cohorts

Cardiac Resynchronisation Therapy-defibrillator device straight after hgAVB (19/38 vs 6/39; p<0.01) and therefore had fewer device upgrades (19/38 vs 30/39, p=0.01) and a trend towards fewer device complications (1 vs 5, p=0.20). The maintenance dose of prednisolone was significantly higher in Late Group [20.70(±.68) mg vs 15.33(±7.87) mg, p=0.02].

Conclusion A later diagnosis of CS led to more overall adverse events, was predictive of clinical outcome, conferred a greater probability of needing an implantable device upgrade and required a higher maintenance steroid dose.

Conflict of Interest none

95 ULTRASOUND GUIDED AXILLARY VENOUS ACCESS FOR CARDIAC DEVICE IMPLANTATION: A NOVEL TECHNIQUE, SAFETY, EFFICACY, LEARNING CURVE AND RADIATION EXPOSURE

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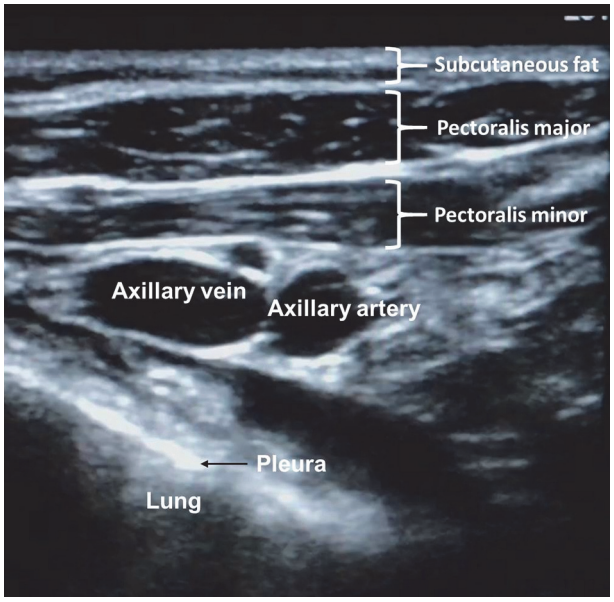
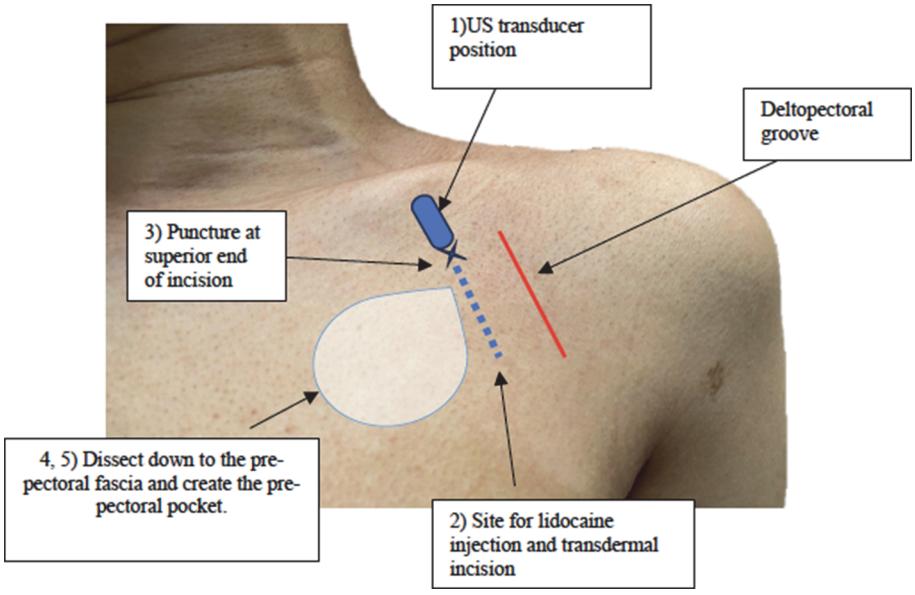
Background Ultrasound (US) guidance is not yet commonly used for cardiac device implantation, despite the first report of US-guided axillary access over twenty years ago and recent randomised trials demonstrating similar success rates to subclavian puncture or cephalic access. Changes to workflow and the learning curve represent barriers to more widespread adoption. There is limited real-world experience of the learning curve for ultrasound (US) guided axillary venous access for cardiac device implantation.

Purpose We described US-guided axillary venous access adapted to standard implant workflow, including application to device upgrade procedures, and using a standard vascular US probe. We investigated its learning curve, radiation exposure, safety, and efficacy.

Methods US-guided access was performed by an experienced electrophysiologist with no prior application of the technique. Patients underwent standard skin preparation and draping. A standard vascular ultrasound probe was placed in the deltopectoral grove, medially and upwards towards the clavicle until the axillary vein and artery could be seen in the out-of-plane projection, with the vein in the middle of the imaging field. Lidocaine was injected and transdermal incision was made from below the midpoint of the probe inferiorly and parallel to the deltopectoral groove. The punctures were made after only the dermis had been incised which maintained optimal



Abstract 95 Figure 1 Ultrasound guided axillary vein anatomy. Ultrasound images are obtained by placing a vascular probe below and perpendicular to the clavicle



Abstract 95 Figure 2 Illustration of procedural steps (step 1: position of the ultrasound transducer in the deltopectoral grove, moved medially and upwards towards the clavicle until the axillary vein and artery could be seen in the out-of-plane projection, step 2: inject the lidocaine and make transdermal incision from below the midpoint of the probe inferiorly and parallel to the deltopectoral groove, step 3: puncture at superior end of incision, step 4: dissect down to pre-pectoral fascia, step 5: create pre-pectoral pocket)