Conclusion AFB is independently associated with increased indices of P-sel and D-dimer which indicate platelet activation and thrombosis respectively.

147 THROMBOEMBOLIC RISK STRATIFICATION, ANTI-THROMBOTIC AND ANTICOAGULATION USE FOR PATIENTS WITH ATRIAL FIBRILLATION, A CLINICAL AUDIT

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Introduction Atrial fibrillation (AF) is the most prevalent arrhythmia in primary and secondary healthcare settings. Thromboembolic (TE) risk assessment and initiation of anti-thrombotic or anticoagulation (AT/AC) therapy, according to level of risk, is recommended in both national and international guidelines. NICE guidance stratifies patients with AF in to low, moderate or high risk categories and recommends "aspirin", "aspirin or warfarin" or "warfarin" therapy respectively. ACC/ESC guidance endorses use of the $CHADS_2$ scoring system and for scores of 0, 1, or ≥2 recommends "aspirin", "aspirin or warfarin" or "warfarin" therapy respectively. In addition, it is recommended that AF episode frequency or subtype (paroxysmal (PAF), persistent (PersAF) or chronic (CAF)) does not influence TE risk assessment. We audited UK cardiologists and general practitioners (GPs) to assess adherence to these guidelines.

Methods We designed an audit questionnaire assessing: (1) use of risk stratification tools, (2) choice of AT/AC for increasing levels of risk, and (3) choice of therapy for a number of hypothetical patients with variable TE risk and variable AF subtype. The questionnaire was distributed by electronic or postal mail to 1176 cardiologists and 621 randomly selected GPs.

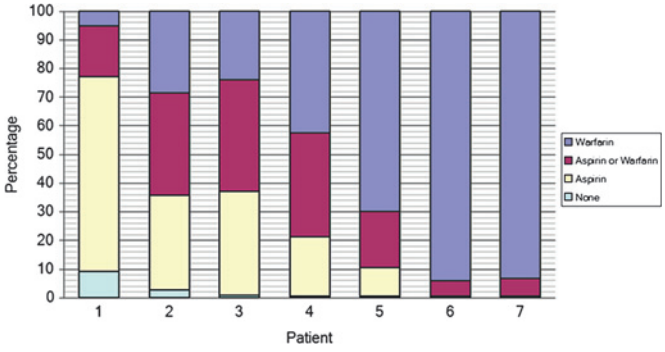
Results In total, 421 responses were received (306 cardiologists, 115 GPs). Overall, 91.4% of responders reported use of TE risk stratification tools (97.1% cardiologists, 76.5% GPs, p<0.001). NICE risk assessment is used by 26.6% of responders (24.5% cardiologists, 32.2% GPs, p=0.14), $CHADS_2$ by 79.3% (90.2% cardiologists, 50.0% GPs, p<0.001). The frequency of reported use of AT/AC for each risk level of the NICE assessment and $CHADS_2$ score are shown in Abstract 147 tables 1 and 2 respectively. Type of AF (PAF/PersAF/CAF) reportedly influences the use of AT/AC for 34.3% or responders (24.2% cardiologists, 46.3% GPs, p=0.001). Abstract 147 figure 1 demonstrates AT/AC usage for each of the following hypothetical patients: 1. 61 year old, hypertension, PAF episodes twice a year lasting 1–2 h (NICE risk: mod, $CHADS_2$ score 1/6). 2. 43 year old, diabetes, PAF episodes weekly lasting 10–12 h (NICE risk: mod, $CHADS_2$ score 1/6). 3. 53 year old, hypertension, CAF (NICE risk: mod, $CHADS_2$ score 1/6). 4. 78 year old, no other risk factors, CAF (NICE risk: mod, $CHADS_2$ score 1/6). 5. 76 year old, hypertension, diabetes, PAF episodes 3–4 times per year lasting <1 hour (NICE risk: high, $CHADS_2$ score 3/6). 6. 77 year old, hypertension, diabetes, PAF episodes occurring weekly and lasting several hours (NICE risk: high, $CHADS_2$ score 3/6). 7. 80 year old, previous TIA, CAF (NICE risk: high, $CHADS_2$ score 3/6).

Abstract 147 Table 1

NICE Risk	None (%)	Aspirin (%)	Aspirin or Warfarin (%)	Warfarin (%)
Low	16.7	78.3	2.9	2.1
Moderate	0.6	3.5	66.9	28.7
High	0.0	0.0	4.4	95.6

Abstract 147 Table 2

CHADS2 Score	None (%)	Aspirin (%)	Aspirin or Warfarin (%)	Warfarin (%)
Zero	27.0	70.3	1.3	1.3
One	4.7	45.1	43.2	7.0
Two	0.0	7.8	32.2	60.0
Three	0.0	0.8	11.5	87.7
Four	0.0	0.0	5.3	94.7
Five	0.0	0.0	2.9	97.1
Six	0.0	0.0	2.9	97.1



Abstract 147 Figure 1

Conclusions TE risk stratification tools are reportedly widely used in UK clinical practice. AT/AC use for NICE and $CHADS_2$ risk levels are mostly appropriate, although warfarin is under recommended for patients with a $CHADS_2$ score of 2/6. In addition, the use of AT/AC is influenced, inappropriately, by AF episode frequency and subtype.

148 THE ASSESSMENT OF TRANSIENT LOSS OF CONSCIOUSNESS: WE'RE STILL NOT ASKING THE RIGHT QUESTIONS

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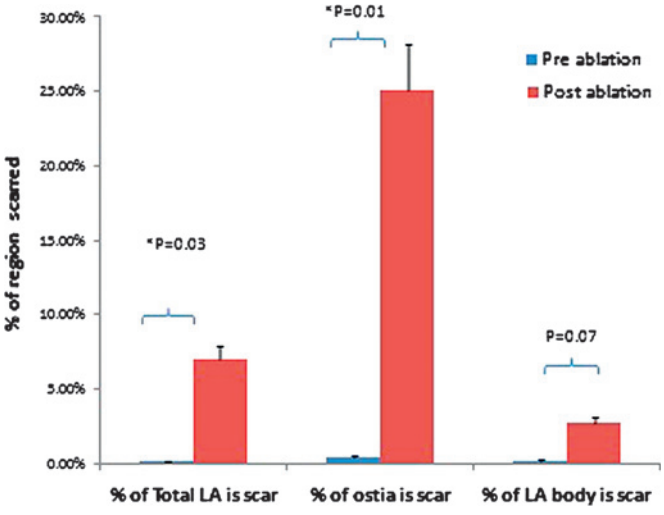
Accurately diagnosing patients with TLOC can be achieved in most cases with a detailed clinical history. We set out to assess how patients were assessed in the setting of a district general hospital (DGH) with 570 beds, receiving an unselected intake via general practice and an A&E. Using the ESC guidelines of 2009 we generated a 22-question study proforma for a retrospective review of the medical records. We identified 322 cases for possible inclusion over a 4 month period. 26 of the case notes were not available to analyse, 8 had insufficient details to identify the relevant patient. Therefore in total 288 notes were reviewed. Inclusion required the TLOC to be complete, of rapid onset and short duration with spontaneous complete recovery. A further 123 patients were therefore excluded. This left 165 data sets (58% male). The age distribution was a typical bimodal distribution with 16% between 10 and 29 years of age and 48% over the age of 70 years. 73% were assessed in A&E, 18% were assessed in the Acute Medical Unit (AMU) and 7% were assessed in rapid access ambulatory clinics. Only 4% of the initial assessments were undertaken by consultants, 12% by a Specialist Registrar (SpR), 21% by a year 1 foundation program (FP1) doctor and the majority was assessed by FP 2 or core medical trainees (CMT). Key diagnostic elements of the history are still being neglected. For example, the symptoms at the onset of the TLOC were documented in only 58% of cases; the recovery symptom

profile was reported in only 37%. Only 47% (n=78) of records described a witness account. Within the witness accounts that were recorded, key elements remained un-reported for example skin complexion was only reported in 35% of the 78. The duration of the TLOC was recorded in only 44%, Tongue biting in 27% and the presence or absence of abnormal movements was recorded in only 12% of this 78 patients. The presence or absence of a family history of sudden cardiac death was only reported in 2% cases. The family history of a cardiomyopathy was only recorded in 1% and a family history of TLOC was recorded in 1%. A patient past history of cardiac disease was asked about in 40% of cases while a past history of TLOC was only asked about in 35%. In this majority elderly study population, a recent change in drug therapy was only asked about in 2% of cases. This study highlights that in a DGH environment, the initial assessment of patients with TLOC is undertaken by junior medical staff who often do not document key diagnostically differentiating elements of the history and examination indicating an ongoing lack of adequate training regarding the most appropriate and accurate techniques for differentiating the causes of TLOC.



Abstract 149 Figure 1 Comparison of pre-ablation and post-ablation % scar using fixed threshold.

149 AUTOMATED ANALYSIS OF ATRIAL ABLATION-SCAR USING DELAYED-ENHANCED CARDIAC MRI

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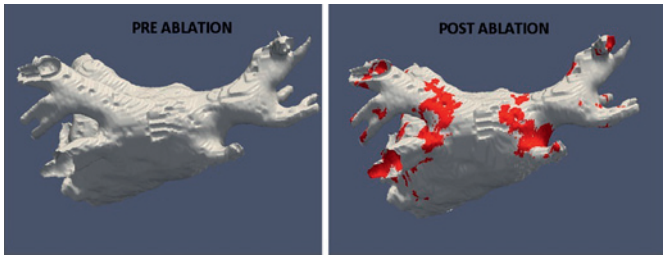
Introduction Visualisation of the ablation-related atrial scar using delayed-enhanced MRI (DE-MRI) may reveal important underlying causes for atrial fibrillation (AF) recurrence following ablation. In order to develop and objective method for delineating ablation-scar we compared pre and post DE-MRI after Cryo-balloon lesion on the basis that a more predictable lesion set would be created for validation.

Methods and Results 12 patients undergoing cryoablation for PAF were enrolled in the study, and underwent pre-ablation DE-MRI scans. Pulmonary vein isolation (PVI) was confirmed in all patients at the end of the cryoablation procedure using a circular mapping catheter. Additional ablation by RF or Freezer Max was required to achieve PVI in 59%. No ablation was performed in any region other than the PV ostia. Post-ablation DE-MRI was performed at 3 months. An automatic segmentation of the LA was produced with custom software from the MRA sequence. The preablation and postablation free breathing late gadolinium enhanced sequence was registered to the MRA and the maximum intensity within the LA wall was projected onto the post ablation LA surface. The blood pool was identified automatically using custom software as the region 1 cm inside the wall of the LA, and its mean (BPM) and SD used as a baseline. To identify a universal threshold for scar, regions of brightest myocardium were initially selected in pre and post ablation MRIs. The brightest regions were 1.9±1.2 vs 8.7±3.1 SDs above the BPM in pre-and post-ablation MRIs respectively (p=0.001). A threshold of 5 SDs above the BPM was therefore programmed into our custom software to identify regions of scar for all patients. The ostial regions were defined as extending 1 cm both proximal and distal to the PV–LA junction, and selected manually for left and right sided veins prior to scar projection. (See Abstract 149 figure 1). The scar proportion within these regions was calculated using commercially available software ITK-SNAP. Total LA scar proportion was 0.2±0.02% vs 6.3±0.75% in pre and post ablation scans respectively. The increase in scar seen in the PV ostia was 24.6±1.38% compared with 2.6±1.28% in the rest of the LA (p=0.01) (See Abstract 149 figure 2).



Abstract 149 Figure 2

Conclusion We have demonstrated the feasibility an objective, automated method of DE-MRI analysis of left atrial ablation-scar. This technique will now need to be validated against clinical outcomes.

150 IMPLANTABLE CARDIOVERTER-DEFIBRILLATOR LEAD COMPLICATIONS AND CLINICAL EFFECTIVENESS IN PATIENTS WITH INHERITED CARDIAC CONDITIONS

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Background Implantable cardioverter-defibrillator (ICD) therapy can reduce sudden death due to ventricular arrhythmia (VT/VF) but is not without complication, particularly in young patients who live for many years with a device in situ. We aimed to determine the ICD complication rate in our inherited cardiac condition (ICC) population compared with international reports. Particular importance was given to inappropriate shock therapy due to lead failure as there are new ICD technologies available.

Methods Patients with ICCs who had ICD implantation or box change between January 2006 and September 2009 were included. Data on clinical characteristics, complications and ICD therapies were obtained from pacing and hospital records. We compared our data with several ICD studies of patients with specific ICCs (Abstract 150 table 1).