UNINTERRUPTED EDOXABAN VERSUS RIVAROXABAN VERSUS VITAMIN K ANTAGONISTS FOR ABLATION OF ATRIAL FIBRILLATION

Noha Elbanhawly*, Mark Ainslie, Sherif Eltouky, Rahul Potluri, Scott Gall, Shajil Chail, Khalid Abozguia. *Cardiology Department, Lancashire Cardiac Centre, Blackpool Teaching Hospitals, Blackpool UK*

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Background Catheter ablation in patients with atrial fibrillation/flutter is associated with a risk of stroke and major bleeding. We examined the safety and efficacy of uninterrupted anticoagulation with Edoxaban in patients undergoing atrial fibrillation/flutter ablation.

Methods A retrospective analysis of 228 patients undergoing a catheter ablation for atrial flutter or atrial fibrillation over a 14 month period was performed (table 1). The warfarin group (n=86) included 52 males and 34 females with a mean age of $68.5 \pm$ years and a mean CHADS-Vasc Score of 2.43 ± 1.34 . The Edoxaban group (n=63) included 45 males and 18 females with mean age 63.4 ± 10.6 years and a mean CHADS-Vasc Score of 1.68 ± 1.34 . The Rivaroxaban group (n=79) included 56 males and 23 females, mean age 62.3 ± 11.6 years and a CHADS- Vasc Score of 1.64 ± 1.38 . The mean left atrial sizes were 42.7 ± 6.8 mm, 42.0 ± 6 mm and 41.1 ± 6.5 mm

Abstract 35 Table 2 Acute complications: Table showing complications during and 24 hours following procedures for the Edoxaban and Rivaroxaban compared to warfarin. Note there was no significant difference between the three groups in terms of primary endpoints of major bleeding and thromboembolic complications. Categorical data were represented as numbers. CVA: Cerebrovascular accident, TIA: Transient ischemic attack, PCI: percutaneous coronary intervention.

Acute complications	Warfarin N=86	Edoxaban N=63	P value vs warfarin	Rivaroxaban N=79	P value vs warfarin
CVA/TIA	0	0	-	1	0.995
Pericardial Effusion	1	1	0.959	1	0.881
Groin Hematoma	2	1	0.998	0	1.000
Groin Pseudoaneurysm	0	0	-	0	-
Urgent Intervention	1 (PCI)	0	0.998	0	0.995

respectively (P value=0.473). All patients received uninterrupted oral anticoagulation for at least 4 weeks prior to the ablation and for a minimum of 3 months post procedure. Both bleeding and thromboembolic complications were assessed at 24 hours.

Abstract 35 Table 1 Procedure Characteristics: Continuous variables reported as a mean $\pm$ standard deviation (SD)

Procedure Characteristics	Warfarin N=86	Edoxaban N=63	P value vs warfarin	Rivaroxaban N=79	P value vs warfarin
AF ablation only	70	42	0.996	53	0.989
Flutter ablation only	13	18	0.988	17	0.999
Combination AF/Flutter	3	3	0.868	9	0.332
Flutter Type					
Typical	14	19	0.999	21	0.990
Atypical	2	2	0.977	5	0.375
AF type					
Paroxysmal	27	21	0.467	36	0.152
Persistent	59	24	0.595	27	0.415
Type of Anaesthesia					
Local	46	36	0.304	48	0.592
General	40	27	0.225	31	0.797
Energy used					
Laser	13	18	0.154	21	0.235
Cryoablation	4	9	0.825	2	0.945
RF	69	36	0.986	56	0.156
Type of Procedure					
Denovo	53	46	0.988	70	0.571
Redo	33	17	0.463	9	0.862
INR if applicable					
Less than 2	2	-	-	-	-
2-3	81	-	-	-	-
More than 3	3	-	-	-	-
Closure					
Manual only	6	4	0.994	3	0.992
z-Suture only	5	12	0.991	4	0.998
Femstop only	71	44	0.993	71	0.996
Combination	4	3	0.991	1	0.992
Fluoroscopy Dose mgy	71.8	49.7	0.006	57.4	0.661
Fluoroscopy time min	16.5	14.8	0.152	14.8	0.175

Results Data between the Warfarin, Rivaroxaban and Edoxaban groups were analysed using a multivariate analysis. Warfarin was used as the reference group with age and gender as covariates. Acute thromboembolic, bleeding and other less common complications were compared (table 2). There were 4 complications (4.6%) in the warfarin, 2 (2.5%) in the Rivaroxaban and 2 (3%) in the Edoxaban groups, respectively. (P value=0.9).

Conclusion This retrospective study demonstrated that uninterrupted Edoxaban is as safe and effective as warfarin and Rivaroxaban in patients undergoing atrial fibrillation/ flutter ablations. There was no significant difference in acute bleeding and thromboembolic complications.

36 IMPACT OF ATRIAL FIBRILLATION TERMINATION ON LONG TERM OUTCOME IN PERSISTENT ATRIAL FIBRILLATION PATIENTS UNDERGOING ACQMAP GUIDED ABLATION

¹Michael Pope*, ²Rui Shi, ³Mark Taylor, ³Moloy Das, ³Stephen Murray, ⁴Tom Wong, ¹Timothy Betts. ¹Oxford University Hospitals NHS Foundation Trust; ²Royal Brompton and Harefield NHS Foundation Trust; ³Freeman Hospital, Newcastle; ⁴Brompton and Harefield NHS Foundation Trust

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Introduction An acute response to ablation (arrhythmia termination or cycle length prolongation) is often presented as evidence of the significance of non-pulmonary vein (PV) mechanisms for AF maintenance and is an attractive procedural end point.

Objectives To investigate whether acute AF termination with ablation predicts long-term freedom from arrhythmia recurrence.

Methods We conducted a retrospective analysis of 100 patients who have undergone AcQMap (Acutus Medical) guided catheter ablation for AF at 3 UK centres. Acute success was defined as a spontaneous conversion to sinus rhythm (SR) during the ablation procedure. Long-term success was defined as freedom from any documented arrhythmia after a 3-month blanking period.

Results Mean follow up was 11 ±4 months. Baseline characteristics were well matched between groups except that a higher proportion of those with acute success were in SR at baseline (n=11, 28%, vs. n=6, 10%, p=0.022).

During follow up, 68% (27/40) of patients with acute termination were free of arrhythmia recurrence compared with 50% (30/60) of those who required DCCV, a non-statistically significant difference of 0.18, p = 0.083. Binomial logistic regression was performed to evaluate the combined effect of acute termination and baseline SR on long-term outcome. The logistic regression model was not statistically significant ($\chi^2 = 3.857$, p = 0.145). For those undergoing first time procedures (n=81) ablation to SR vs DCCV freedom from recurrent arrhythmia was 74% vs 51% (p=0.041). In those in AF at baseline (n=83) ablation to SR vs DCCV freedom from recurrent arrhythmia was 69% vs 56% (p=0.048).

Conclusion The relationship between acute ablation to SR and long-term outcome is unclear but may be important for certain subgroups. More work is needed to fully explore the significance of this endpoint.

Conflict of Interest None

37 YOU WANT MY ADVICE AND GUIDANCE? PERFORMANCE OF A CARDIOLOGY EMAIL ADVICE LINE TO GENERAL PRACTITIONERS

¹John Belsham*, ¹David G Wilson, ¹Will Foster, ¹Jasper Trevelyan, ¹Bashar Aldhoon, ¹David Smith, ¹Deepak Goyal, ¹William Roberts, ¹Francesco Formisano, ¹Robin Taylor, ¹Charlotte Miles, ²John Tudor, ¹Simon Gates, ¹Helen Routledge. ¹Worcestershire Acute Hospitals NHS Trust; ²NHS Wyre Forest CCG

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Background Cardiologists at Worcestershire Royal Hospital have provided email advice and guidance for local general practitioners. The performance of this service has not been formally evaluated.

Methodology Data were collected prospectively throughout 2018 including patient demographics, GP practice, time/date of email and of response, the person responding, the nature of the clinical question and whether admission or clinic appointment was recommended. Patient records were reviewed two months after the email to evaluate outcome.

Results In 2018, 2157 email queries were received about patients with a median age of 68 years (IQR 53–77). 52% were male.

In total 2145 queries (99.44%) were sent on weekdays, mean of 8.25 per weekday. The median response time was 4 hours 19 minutes (IQR 1.78–17.45 hours), 14.6% received a response in under an hour, 86.1% of queries were responded to within 24 hours and 93.9% within 48 hours. Weekend emails explained the remainder.

Overall 91.4% of emails were received between 0800–1700 and 36.2% of responses were sent outside of this time. We estimate 215 consultant hours were taken replying (assuming 6 minutes/email) equivalent to 54 programmed activity (PA) episodes.

The most common queries related to interpretation or management of ECGs (44%), ambulatory ECG monitoring (12.5%) or echocardiography (9.2%).

In total 73 GP Practices sent emails (mean of 28.6 queries/practice) of which 63 (86.3 %) were from the Worcestershire CCG area. Worcestershire GPs accounted for 97.5% of all queries.

Variation exists between individual practices: three did not send any email queries; seven sent only one query over the year and one practice sent 179 queries (8.6% of total). If all practices participated as frequently, the number of emails received would increase five-fold to over 10,000 a year.

Of the 10 Cardiology consultants within the department, not all participated equally with three consultants replying to 63% of all emails and one replying to 30%.

Admission to hospital was recommended in one case and referral to outpatient clinic was recommended in 501 of 2152 cases (23.2%). Of these, a referral was only received within two months in 60.6% of cases.

We estimate that this initiative avoided up to 1493 clinic appointments (124 Consultant PA episodes or 2 per week).

Potential cost savings to CCG ($1493 \times £168$ for cost of new outpatient consultation) = £250,824. Potential revenue to cardiology for ECG interpretation (44% of $2153 \times £25 = £23,683$) and for 24 hour holter interpretation 12.5% of $2153 \times £45 = £12,110$)

(Price estimate from NICE Remote ECG interpretation consultancy services for cardiovascular disease MIB152))

Conclusion A cardiology advice and guidance email service is highly efficient use of specialist consultant time with a large