64 **NON-CONCOMITANT HYBRID ABLATION USING THE NOVEL COBRA FUSION RF DEVICE PROVIDES PROMISING MEDIUM TERM OUTCOMES IN THE TREATMENT OF LONGSTANDING PERSISTENT ATRIAL FIBRILLATION**

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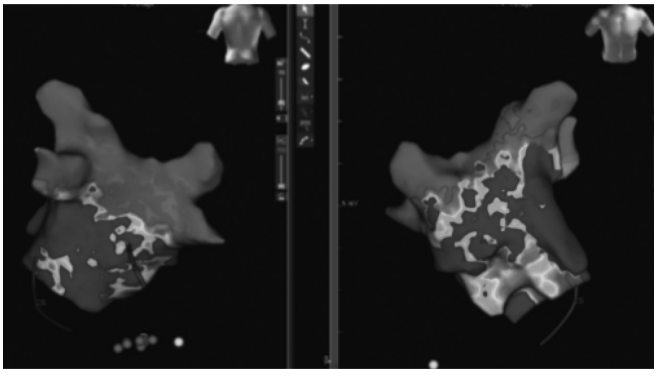
Background Outcomes for catheter ablation of long-standing persistent atrial fibrillation (LsPsAF) are inferior to those of paroxysmal atrial fibrillation and the optimal ablation strategy remains unclear. We describe our experience of non-concomitant hybrid ablation for LsPAF using a novel surgical RF ablation system.

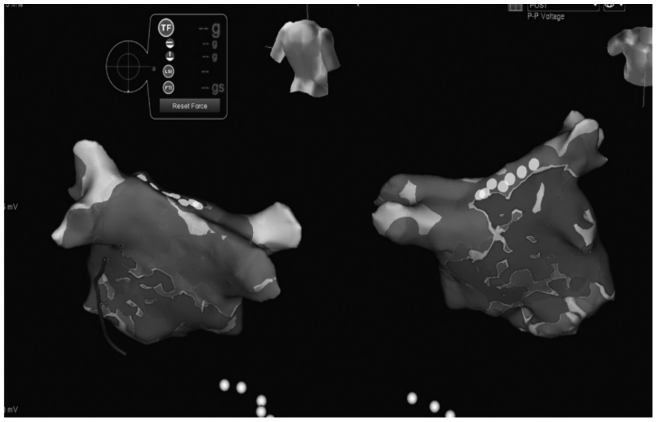
Methods Thefirst surgical stage is performed via a right-sided video assisted thoroscopic approach (VATS). The suction based Cobra Fusion RF system (Atricure Inc, West Chester, OH) is used to ablate a 'box lesion' and isolate the left atrial posterior wall (LAPW). Patients then return for a staged endocardial mapping procedure with catheter ablation to complete the 'box', treat atrial arrhythmia and create a cavo-tricuspid isthmus line.

Results Thirty-five patients underwent a VATS procedure with ablation performed in 33 (2 having dense pericardial adhesions). One patient had a fatal CVA post operatively and 5 patients developed transient phrenic nerve palsy. 32 patients (28M/4F) are therefore currently under follow-up: (all values median), age – 65, CHADSVASc – 2, BMI - 30, Left atrial diameter –46.5mm, LVEF –55%, total AF duration – 30 months. Following epicardial ablation acute LAPW isolation with entrance and exit block was demonstrated in 53%.

Twenty-one patients have undergone the 2nd catheter stage after a median of 142 days. The baseline rhythm was sinus rhythm (SR) in 24%, AF in 52% and A. Flutter in 24%. 33% had LAPW isolation at baseline (Figure 1) with further ablation isolating the LAPW (figure 2) in all except one patient, 1 patient required a mitral isthmus line, and 1 patient ablation for right atrial tachycardia. All patients were discharged in SR. Sixteen patients have greater than 3 month's follow-up (median – 13 months) post 2nd stage with ECG, clinical review and 7 day ambulatory monitoring at 4, 12 and 24 months. 15 (93%) remain in SR. Three patients required DCCV in the first 3 months and 3 remain on anti-arrhythmic drugs.



Abstract 64 Figure 1 Isolated LAPW post surgical stage



Abstract 64 Figure 2 Isolated LAPW following ablation at roof at 2nd stage

Conclusions Non-concomitant hybrid AF ablation provides excellent medium term outcomes in the treatment of long-standing persistent atrial fibrillation. Long-term outcomes of the technique and randomised study comparing with catheter ablation alone are needed.

Imaging

65 **THE CHA2DS2VASC RISK SCORE APPROPRIATELY RISK STRATIFIES PATIENTS PRIOR TO ATRIAL FIBRILLATION ABLATION AND REDUCES THE REQUIREMENT FOR TRANS-OESOPHAGEAL ECHOCARDIOGRAPHY**

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Background Prior to atrial fibrillation (AF) ablation, many centres advocate trans-oesophageal echocardiography (TOE) to exclude left atrial appendage (LAA) thrombus. Patients undergoing AF ablation are usually anticoagulated, thus making the presence of thrombus unlikely. This study aimed to determine whether the CHA_2DS_2VASc scoring system could be used for risk stratification to identify patients that do not require TOE prior to AF ablation.

Methods In this single centre retrospective study, primary and secondary care databases and electronic patient records were searched to identify patients that had undergone TOE prior to AF ablation and also correlated with catheter lab records. Patient demographics, CHA_2DS_2VASc score, TOE findings and anticoagulation status were collected.

Results Over a 7 year period (2008–2014), 346 patients underwent TOE prior to AF ablation – 14 patients were excluded due to incomplete data, leaving 332 patients (age 57 ± 10 years; 74% male). There were 227 (68%) patients with paroxysmal AF and the remainder had persistent AF. CHA_2DS_2VASc scores of 0, 1, 2 and >2 were found in 39%, 34%, 15% and 12% patients respectively. There were 31/113 (27%) patients whose score was 1 due to female gender. The prevalence of LAA thrombus was 0.6% (2 patients). One