

Hybrid Ablation for Long-standing Persistent Atrial Fibrillation: A Two Stage Nonconcomitant Approach Using the Cobra Fusion Device and Catheter Ablation (Single-Centre Experience)

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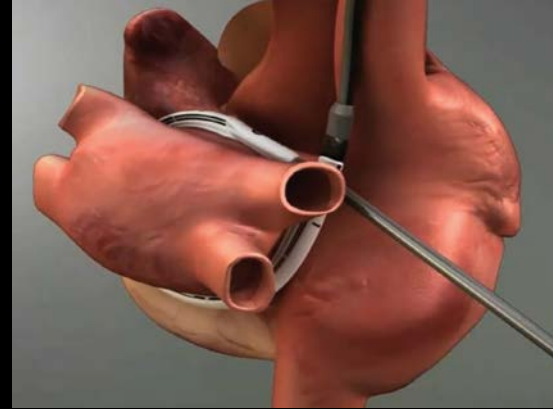
Hybrid Ablation for Long-standing Persistent AF

Patient Selection

- Drug refractory, symptomatic patients with adverse features for catheter ablation
- Longstanding persistent AF (continuous AF for > 1 year)
- LA dilatation > 5 cm
- Persistent AF with reversion to AF post DCCV within 48 hours despite antiarrhythmic drugs
- All patients reviewed at surgical/EP/ACC MDT

Stage 1

Thoracoscopic Epicardial LA ablation



57 Patients to date – VATS

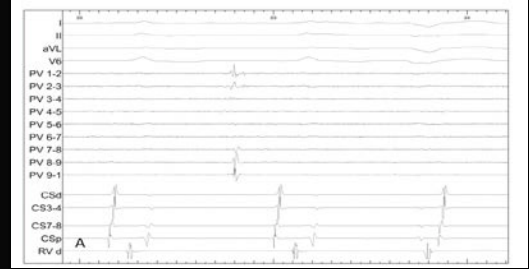
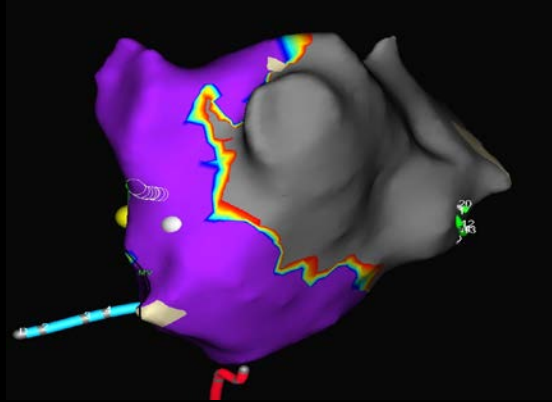
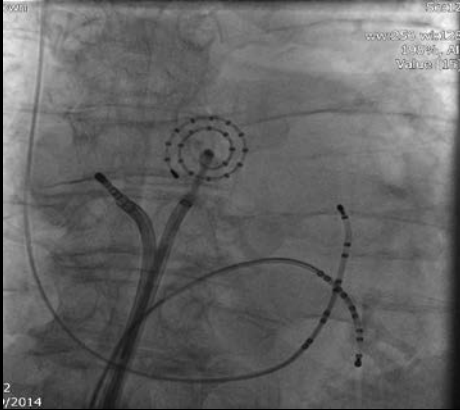
1 fatal CVE day 2 post surgery

10 asymptomatic raised R hemidiaphragm

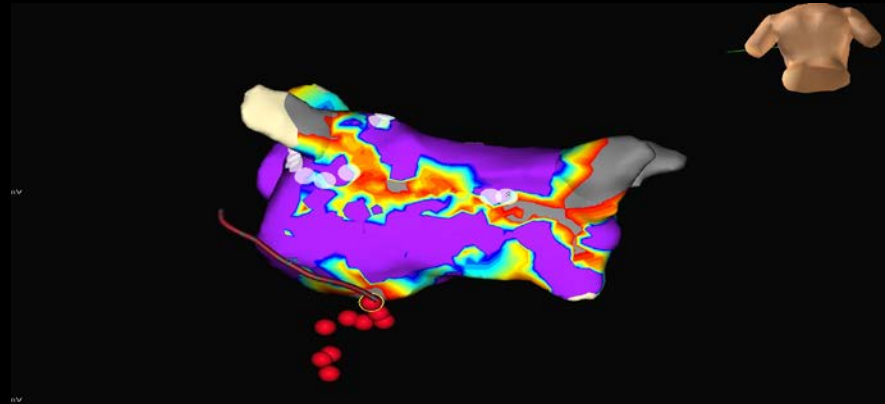
55.5 % conduction block - LOS 3 days

49 patients undergone second stage (median 156 days following VATS procedure)

Hybrid Ablation for Long-standing Persistent AF Catheter Ablation

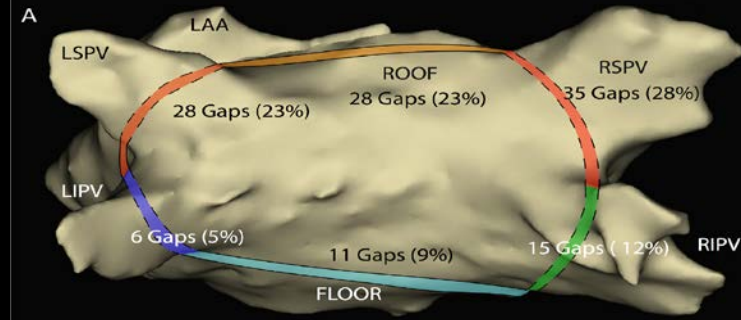
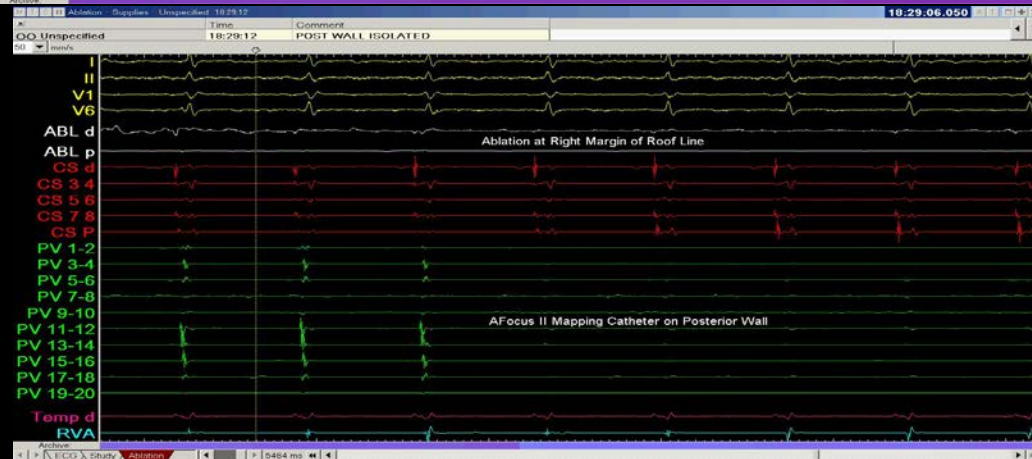
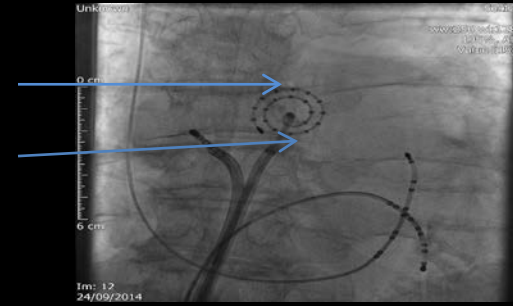
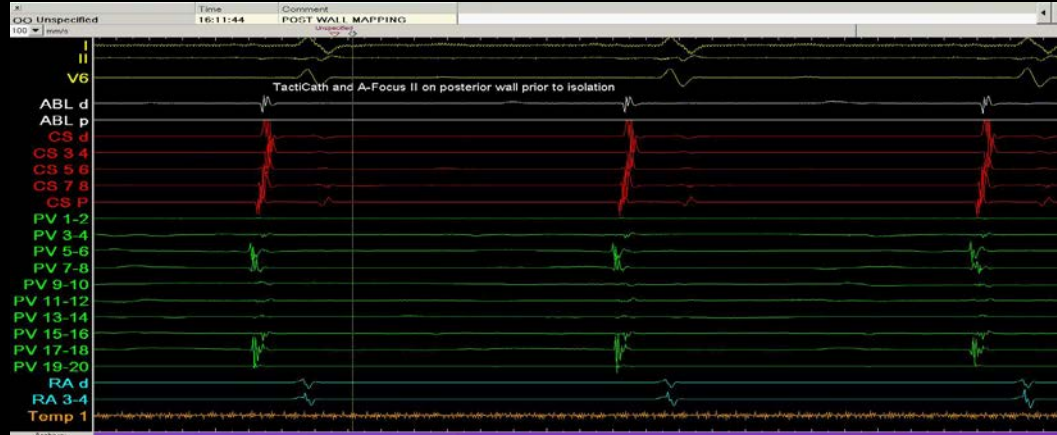


A fluoro (x-ray) image of the circular mapping catheter placed flat on the posterior wall. The ablation catheter is steered with a deflectable sheath.



Hybrid Ablation for Long-standing Persistent Atrial Fibrillation

Techniques to locate the gap



Hybrid Ablation for Long-standing Persistent AF - Results



Serial 7 day ambulatory monitoring
Atrial arrhythmia lasting 30 seconds after blanking
period
43 outside blanking period
36/43 (83.7%) are in SR - 31 (72%) off AAD
32 patients greater one year. 59.4% totally arrhythmia
free off AAD and at present 28/32 (87.5%) in SR, 23
(82%) off AAD.

Pacing from the TactiCath (top white line) within the isolated region is detected with a very short conduction time on the A-Focus II (green) also in the isolated region. Note that although there is local capture, this does not propagate out of the isolated region to the CS (Red) – The posterior wall beats independently of the rest of the heart.

Early/Intermediate experience
Unattractive catheter ablation.

2 stage

Encouraging results

Long term follow up of Hybrid
Ablation needs to be compared with
catheter only posterior wall isolation