Oxford Radcliffe Hospitals NHS
NHS Trust

A case of CRT non-response

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Case history

- *76 year old ♂*
- Hypertension, diabetes mellitus
- *Long history of ischaemic cardiomyopathy*
- 1995 impaired LV function
- 1996 PCI to LAD & LCx (POBA)
- 2001 perfusion scan showing partial thickness infarct and no inducible ischaemia
- 2004 perfusion scan showing minimal reversibility

Case history

- 2005 angiography showing LMS plaque, LAD unobstructed, D1 stenosis, LCx unobstructed & RCA ostial stenosis - for medical treatment
- *2005 develops persistent AF*
- 2006 perfusion scan shows inferior infarct plus posterior reversible ischaemia
- 2006 Angiography showing no change
- 2007 LIMA to LAD and vein graft to right coronary artery

Case history

- *2008 ongoing NYHA class III symptoms*
- *ECG AF + LBBB QRS 180 msec (ventricular rate 70-100 bpm on Holter)*
- *Severely impaired LV function (EF25%)*

Question

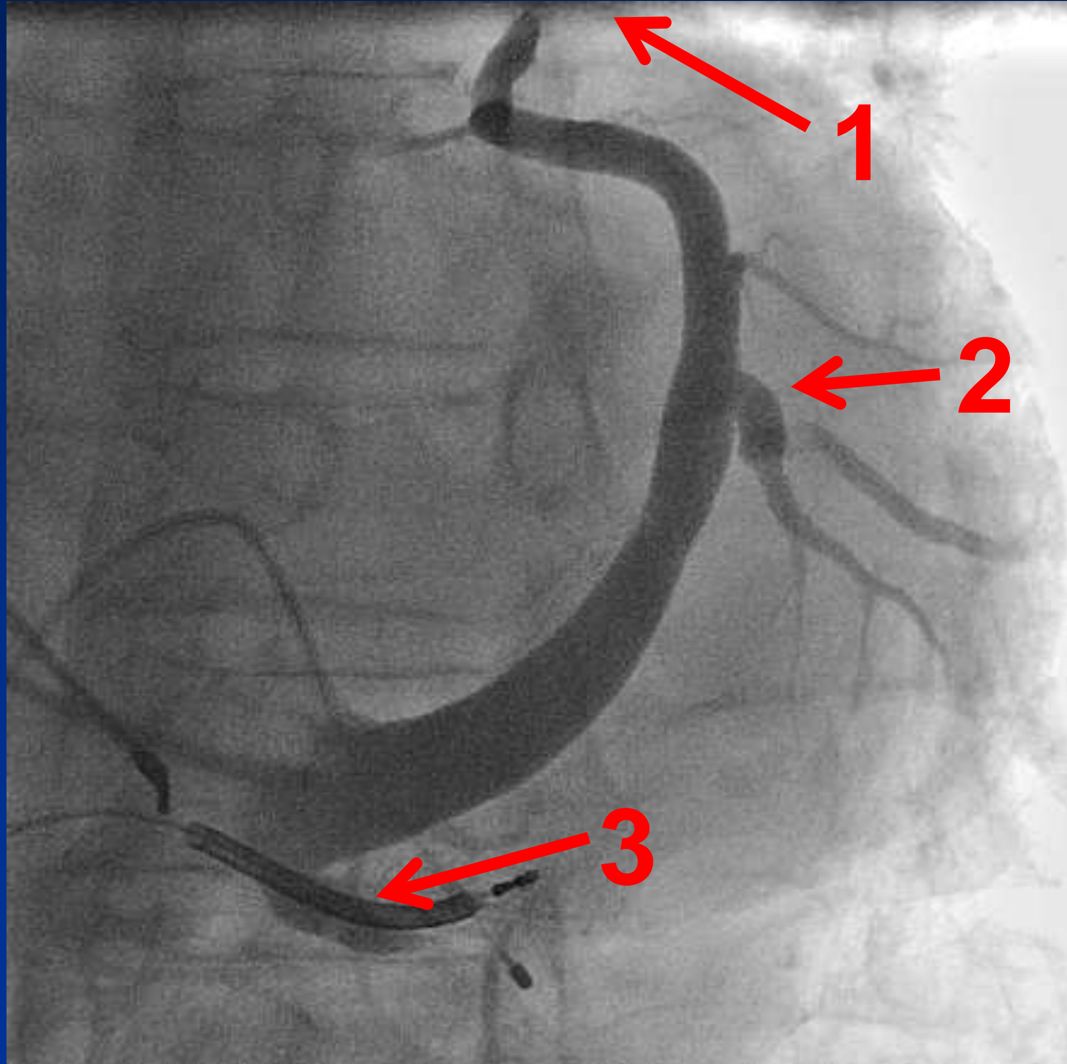
What would you do next?

1. Dyssynchrony echo before any device implant
2. ICD only
3. CRT-P/D implant
4. CRT-P/D + AV node ablation

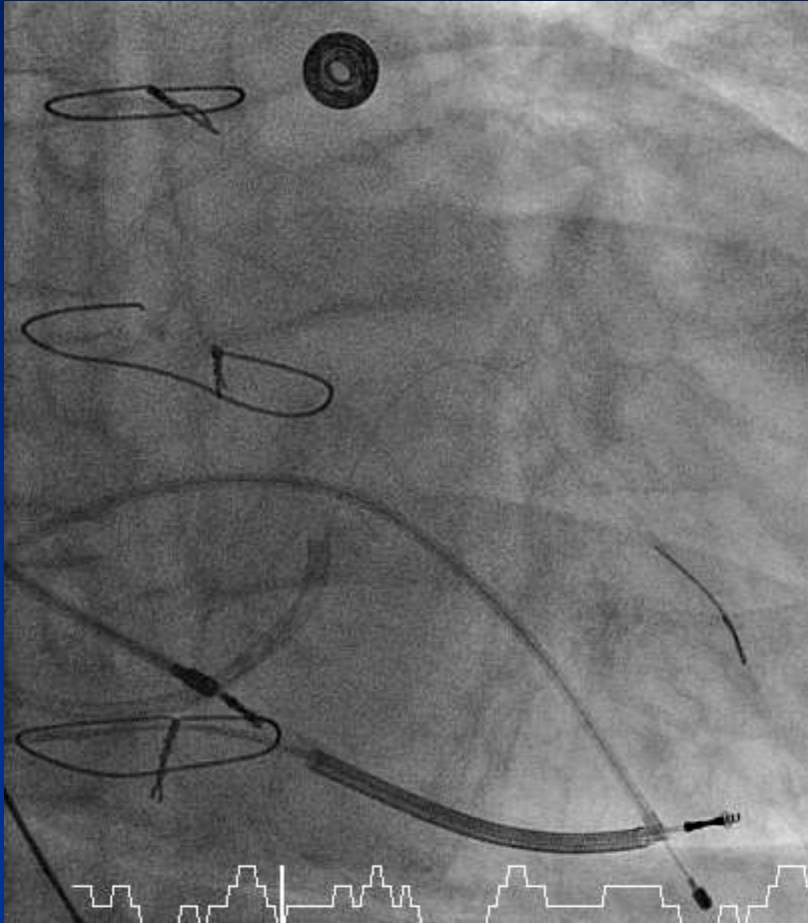
Case history

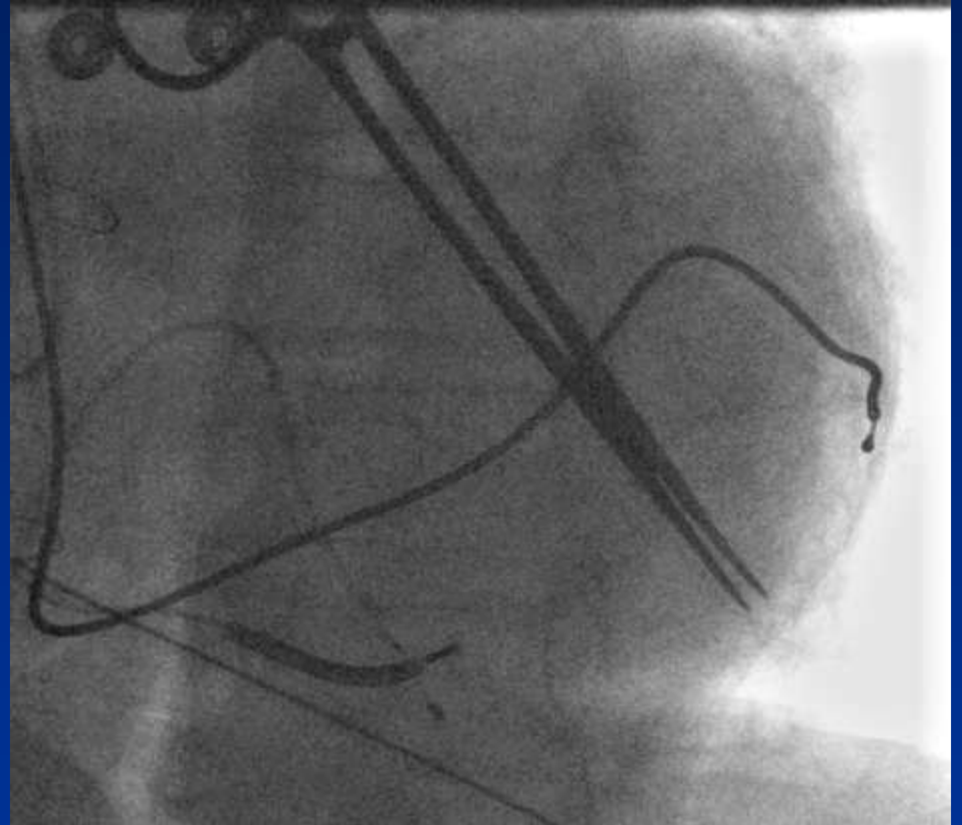
- August 2008 CRT-D implant + AV node ablation

Question – which vein?

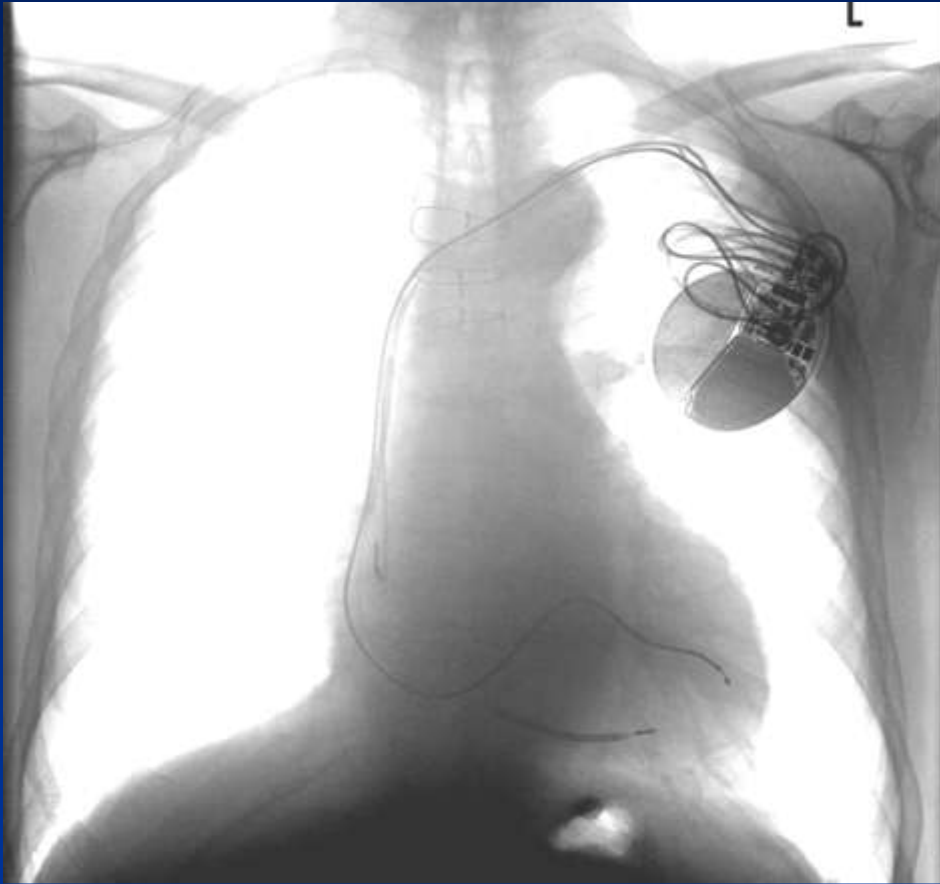


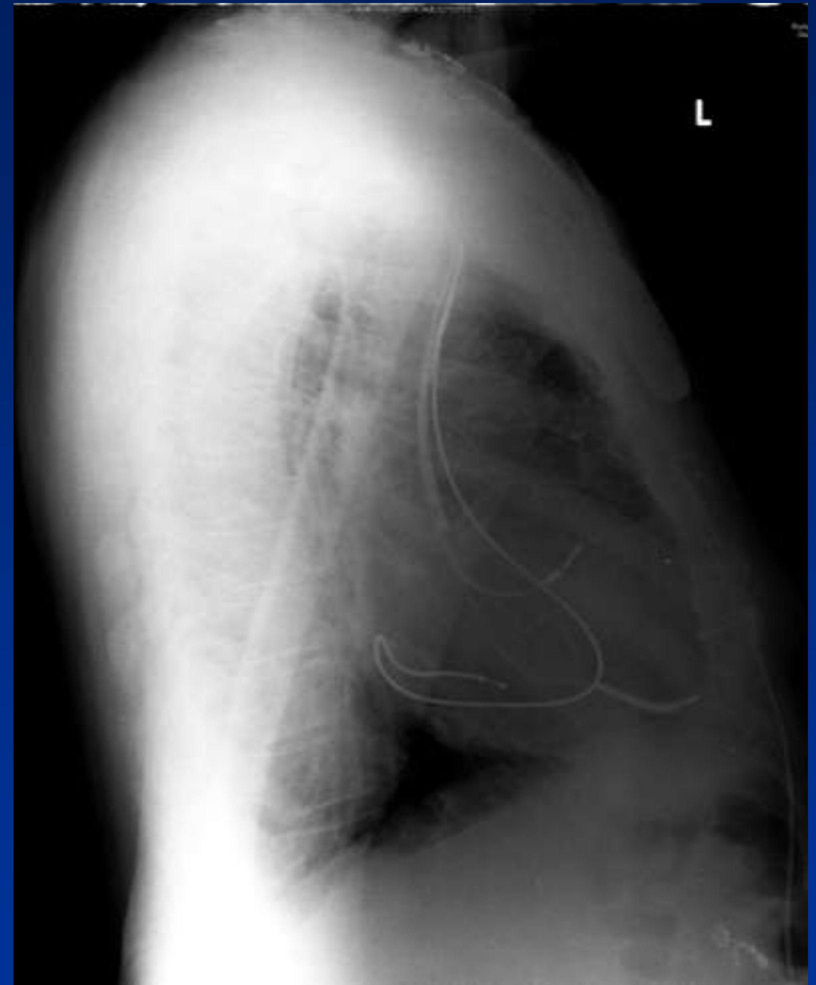
Case history





Case history





Case history

- September 2008 Interval DFT test – successful and into sinus rhythm (maintained with amiodarone)
- October 2008 Intermittent erhythema over wound
- No response so echo optimised
- Continues to deteriorate
- September 2009 ‘I do not think there is much else that we can add’
- November 2009 – generator erodes!

Case history

- System explant and temporary tunnelled system
- Course of antibiotics
- December 2009 for implant of new device on right side

Question

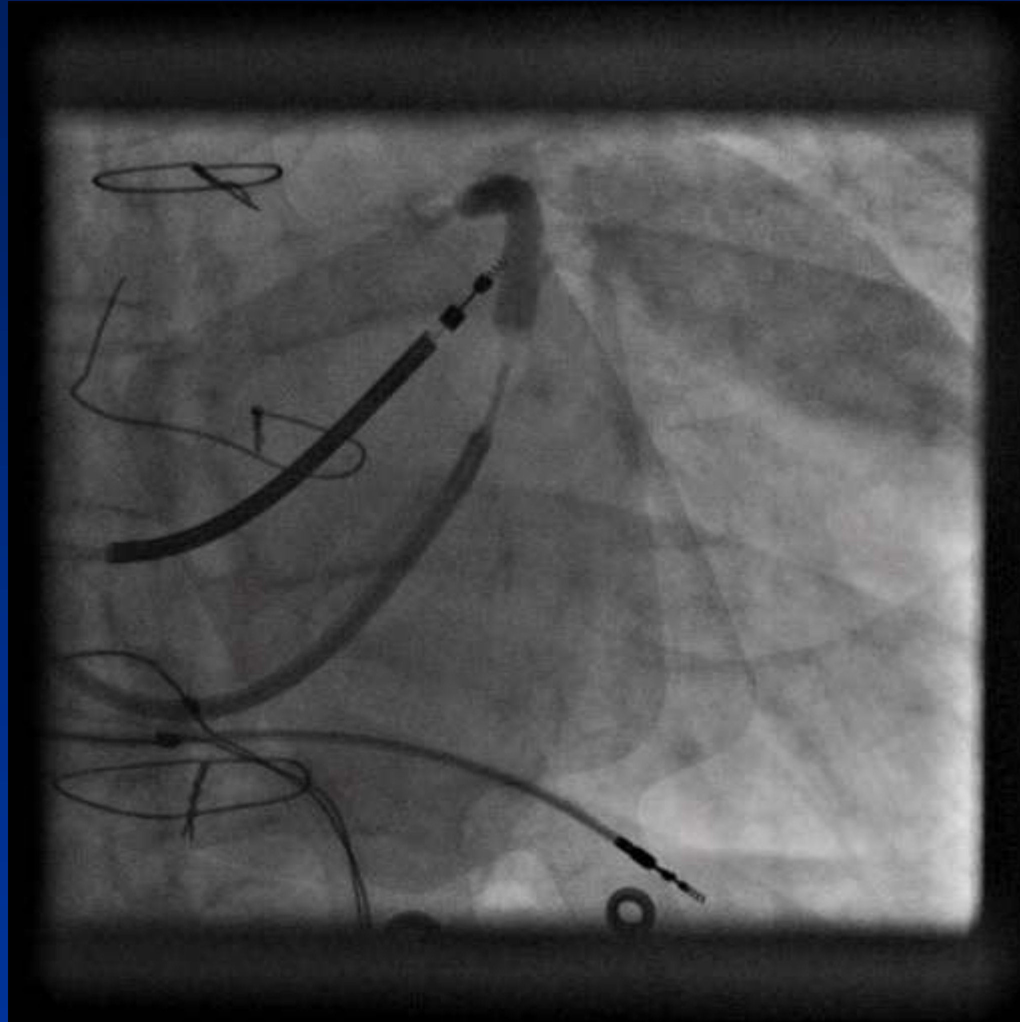
What would you do next?

1. Implant dual chamber ICD as non-responder
2. CRT-P/D implant
3. Further imaging
4. Another option
5. Give up device therapy and stick to ablating AF!

Case history

- I was going to put in an ICD only
- Raj Khiani, fellow Consultant, suggested review of imaging data
- Confirmed lateral scar (on perfusion scan) where previous LV lead had been placed (despite good pacing parameters)
- *Suggested multi LV lead system*

Case history



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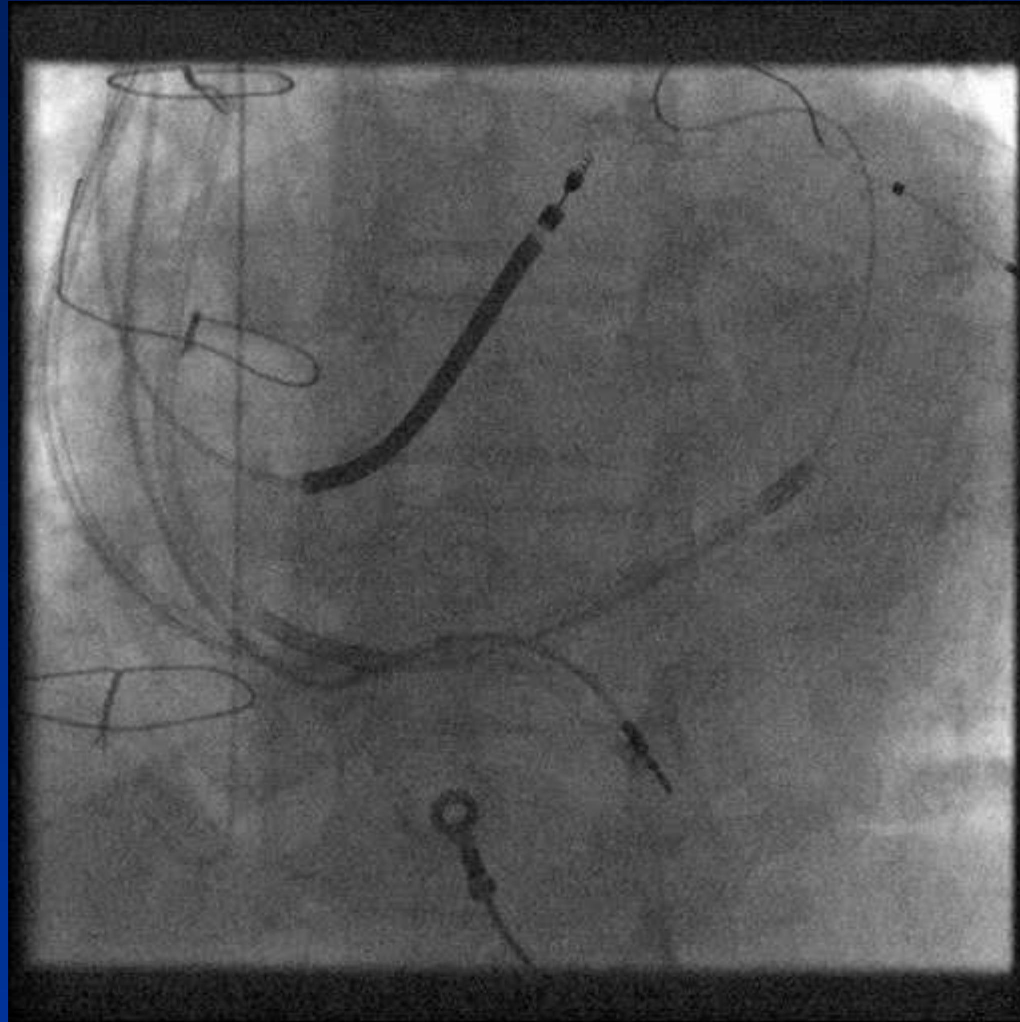

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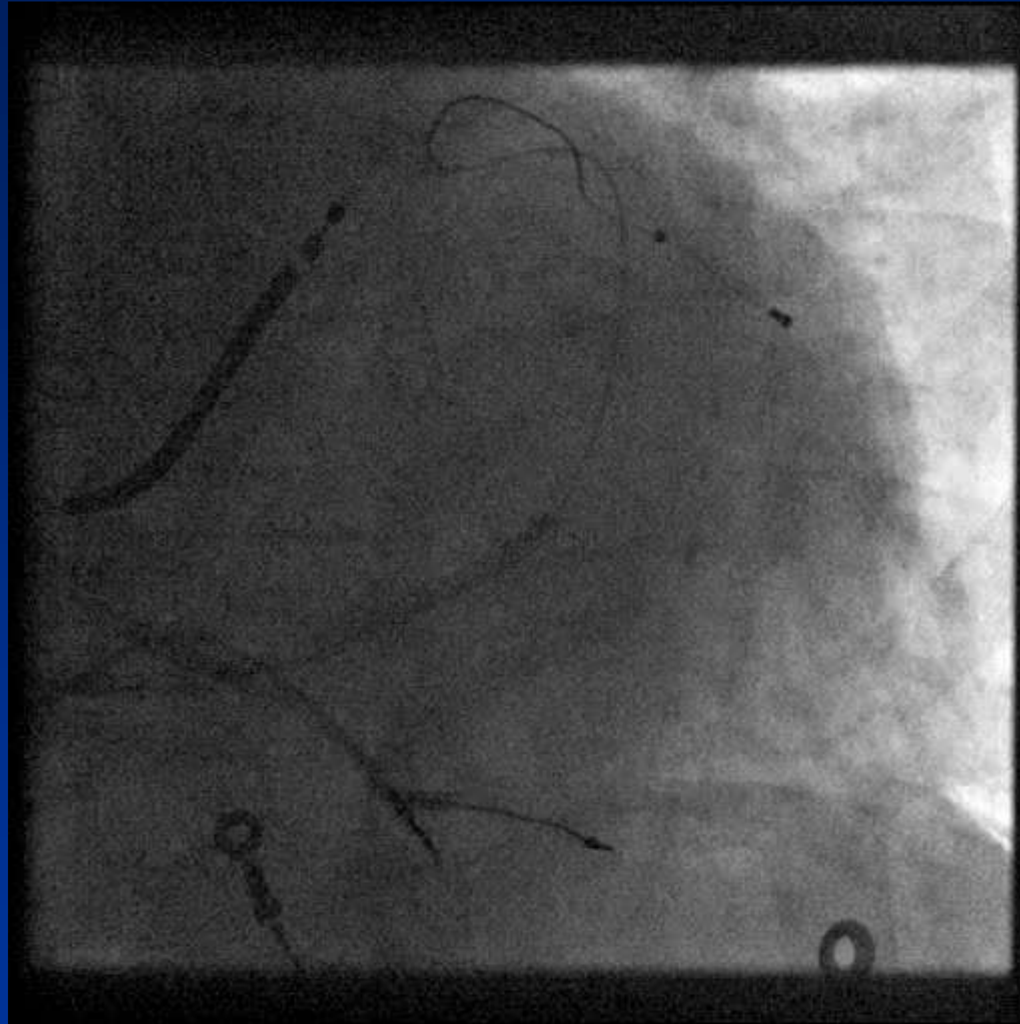

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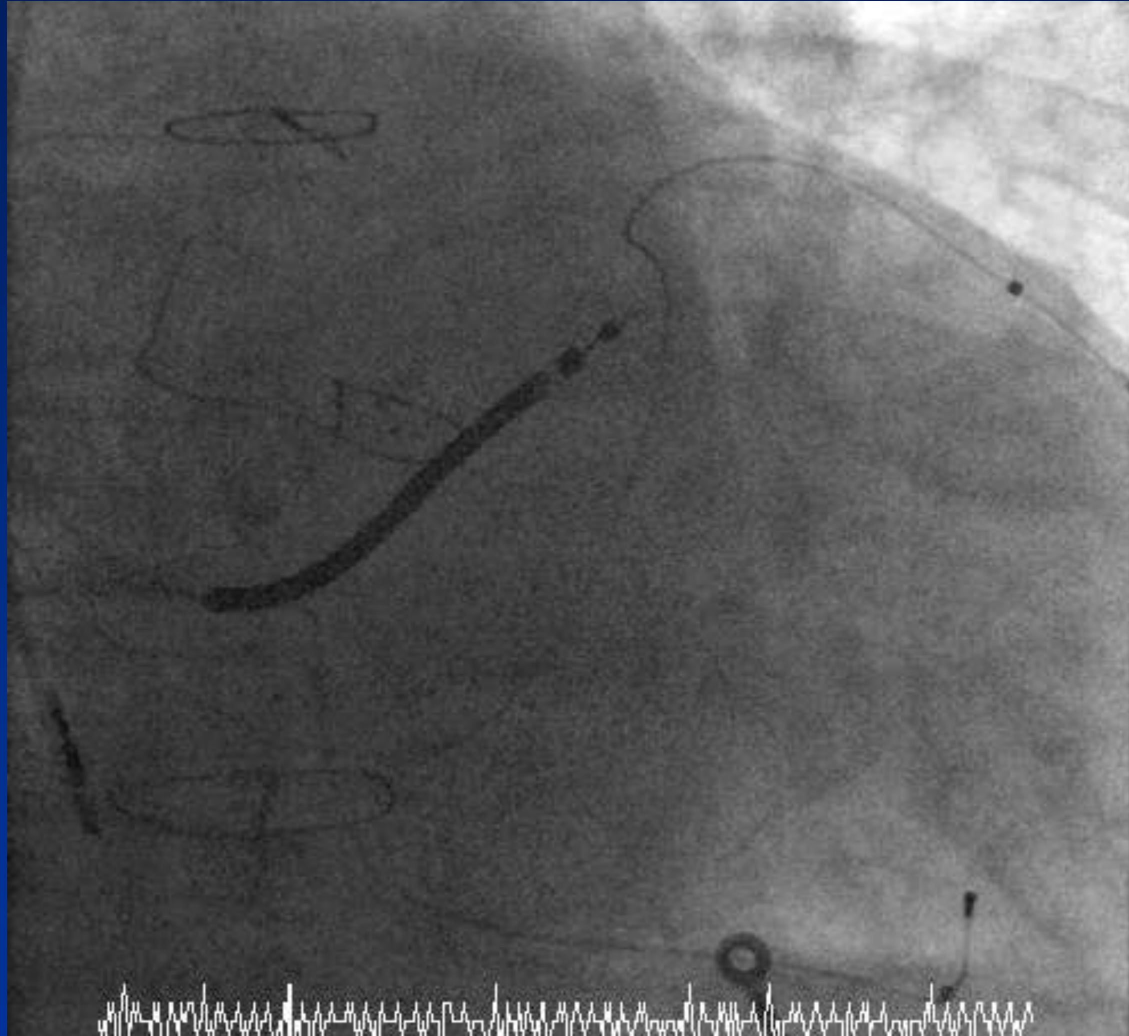

Case history

- January 2010 NYHA I
- March 2010 EF 35-40%
- Erythema over wound
- Settles with antibiotics........

What have I learnt?

- Obvious target for LV lead not always the best
- Review the data – scar is scar
- Don’t give up on non-responders
- ‘Target’ your LV lead placement (if you can)
- Don’t be too proud to ask a friend to help