Please don’t burn my node...

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Background

- 49 year old female
- Diagnosed with an atrial tachycardia aged 25
- Structurally normal heart
- Otherwise fit and well
- Poorly tolerant of various AADs
Diagnosis: atrial tachycardia

EP Study:
Left sided atrial tachycardia induced
Failed attempt at ablation
Underwent pace and ablate strategy
(Sub-mammary dual chamber with passive leads)

2001 Reposition of device for pain
2007 Box change for pain
2007 Infection pacemaker site
2007 Box change
2007 Infection pacemaker site

2008 Failing atrial lead required repositioning
2010 Further rise in atrial lead threshold

2015 Painful pacemaker site

2016 More pain at site of pocket

2016 Box change and pocket revision

Pacemaker extraction and re-implantation on the right (again sub-mammary) with a dual chamber device (passive leads)

Atrial lead capped and new passive lead implanted

Device re-positioned to right pre-pectoral region

Present
Clinic review November 2017

• Progressive rise in atrial lead threshold
• Programmed unipolar, threshold 5.5V at 1 millisecond
• Symptoms consistent with pacemaker syndrome, presumed secondary to loss of atrial lead capture
• Options:
  • New atrial lead
    or
  • Extraction of her 2 atrial leads followed by re-implantation of new atrial lead
• Venogram: Left subclavian vein occlusion
• Echo: mild LVSD and mildly dilated RV with preserved RV function, mild TR
Follow up 4 weeks later...

- NYHA 3 breathlessness
- clinically in right sided heart failure
- Echo: Severe tricuspid regurgitation, confirmed on TOE with evidence of septal leaflet damage
- Poor response to diuresis
- Referred for urgent tricuspid valve surgery
Tricuspid valve surgery 30.1.18

- Valve replacement with Hancock 33mm valve
- Removal of pacemaker and re-implantation of epicardial biventricular system
- Post-op echo: TVR well seated, working well, trivial TR
Single centre experience of 1032 lead extractions in 647 procedures in Sweden between February 1990 to October 2007

- 517 atrial leads – mean lead age of 62 months
- 505 ventricular leads – mean lead age 79 months
- 54 ICD leads - mean lead age 58 months
- 4 SVC ICD leads – mean lead age 54 months

Complication rate = 0.9%

- 1 tricuspid valve insufficiency
Summary

• Extreme case, but important for us and patients to realise the lifelong implications of AV node ablation

• Long-term transvenous pacing is associated with high rates of complications

• Extraction related tricuspid valve damage leading to severe TR appears to be rare