One-stop multidisciplinary clinics in device therapy

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Conflicts of interest...
No patient receiving a pacemaker for bradycardia should be at risk of new or worsening heart failure.
Up to 40% of pacemaker patients have LV dysfunction \cite{Tse et al, 1997, O'Keefe et al, 2005, Thackray et al, 2003}

27% develop heart failure symptoms \cite{Thackray et al, 2003}
If it isn’t broken, don’t fix it
OPT – PPPR: programming to prevent pacemaker induced progressive remodelling – NIHR-DRF Paton

Pacing-associated left ventricular dysfunction? Think reprogramming first!

John Gierula, Haqeeel A Jamil, Rowenna Byrom, Eleanor R Joy, Richard M Cubbon, Mark T Kearney, Klaus K Witte

The deleterious effects of RV pacing: applicable to all patients?
Jeanne E Poole
Skills

• Cardiac rhythm management
• Echocardiography
• Venepuncture
• Clinical examination / history
• Medical therapy
• Administration/clinical records
Figure 1. Right ventricular avoidance algorithm

1. Consent for assessment (pacemaker interrogation, echocardiogram, blood tests, quality of life questionnaire)
   
2. Identify atrial rhythm
   
   - Atrial Fibrillation
     
     Lower base rate to 50 beats/min, sleep/rest rate/hysteresis to 40 beats/min, de-activate rate-responsive pacing
   
   - Sinus Rhythm
     
     Lower base rate to 50 beats/min, sleep/rest rate/hysteresis to 40 beats/min, deactivate rate-adaptive pacing, program right ventricular pacing avoidance algorithm on or extended atrio-ventricular delays
When is the right time?

6 weeks

Yearly

Generator replacement

Flexible follow-up
We can reduce pacing ...
...reversing heart muscle weakness...
...extending battery longevity...
...without adversely affecting patients’ quality of life.
Chronotropic Incompetence Does Not Limit Exercise Capacity in Chronic Heart Failure

Hageel A. Jamil, PhD,1 John Gennia, BS,2 Martin F. Paton, BSc, MSc,1 Rhee Byron, BS,2 Judith E. Lowery, BSc, MSc,2 Richard M. Gobbo, PhD,2 David A. Carta, PhD,2 Michael T. Kueny, MD,1 Klaus K. Witte, MD1

![Graph showing mortality over time with different dose levels of bisoprolol.](image)

![Graph showing oxygen consumption and heart rate measurements.](image)
Added Benefits

Fantastic training environment

Patient-clinician relationships

Time to treat / time to treatment
‘We strive to make each heart beat the best it can be - whether it is intrinsic or pacemaker-induced’