How do partners of those receiving shocks from an Implantable Cardioverter Defibrillator experience episodes of electrical storm

Sue Jones FRCP(Hon) SGH
Stephanie Cruickshank
Specialist Arrhythmia Nurse
Epsom and St. Helier Trust
Likelihood of having a shock

- Likelihood of receiving a shock is quoted variously between 10-19% in the first year post-implant
- Figures for a true VT storm quoted as around 10-30%
- Inappropriate shocks are 5-7%

Figures from various literature reviews
Effect of having an ICD shock

- What is having a shock like (preparation)
  - Like a kick in the chest/back
- 1 shock is sometimes tolerable
- Multiple shocks are devastating
- Anticipation of having more shocks (anxiety/stress)
Multiple shocks

• Electrical storm is defined as the occurrence of three or more distinct episodes of VT and/or VF within a 24-h period, either resulting in a device intervention or monitored as a sustained VT (≥30 s). Some authors have set an arbitrary 5 min interval between VT/VF episodes to define ES.

Management of patients receiving implantable cardiac defibrillator shocks: Recommendations for acute and long-term patient management Europace 2010
Causes of multiple shocks

Causes of multiple shocks (electrical storm)

Appropriate
• VT/VF storm haemodynamically compromised

Unnecessary
• VT non-compromised (ATP only)
• VT therapy not programmed effectively
Multiple shocks

Inappropriate 5-7% Used to be 20-30%

• Lead/device problem ?40%
• Atrial fibrillation/Flutter
• AVNRT
• Sinus tachycardia
• Over-sensing T wave/ Myopotential
• EMI
From: Management of patients receiving implantable cardiac defibrillator shocks
Recommendations for acute and long-term patient management
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Inappropriate shock for EMI
Psychological effects

• Patients who experience ICD shocks have increased levels of psychological distress, anxiety, anger, post-traumatic stress disorder, and depression as compared with patients who do not receive shocks, and these psychological sequelae may be a contributing factor to the increased mortality seen in patients who receive ICD shocks.
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Issues for partners

- Fear of losing partner
- Fear of worsening condition
- Fear of dependency
- Fear of re-occurrence
- Lack of control
- Lack of understanding of cause
- Over-compensation on return to normal life
- Apprehension of physical activity/sex
Post shock issues

- PTSD partner and patient
- Need detailed explanation
- Loss of confidence in device (inappropriate shocks)
- ?Removal of ICD
- Counselling CBT Rehab.
- Building confidence
Issues for partners

We do not allow enough time for pre and post counselling and this is essential for patient and partner

• Need for support pre and post implant
• Education about shocks
• Use of magnet in emergencies
• Emergency help lines
• Support groups/peer/professional support
Guidelines for management

- Hospital and emergency services awareness of what to do in ICD emergencies
- Need for increased partner and patient support
- Peer support from support groups
Literature review

- Several publications going back to the 2000’s
- Early references to PTSD Sears et al
- Recommendations for patient management Europace 2010
- Anxiety and Depression in Patients With an Implantable Cardioverter Defibrillator and Their Partners PACE 2013
- 2015 Recovery post implant – impact on patient and partner

Very little reference to partner other than in a patient supportive role