Managing Cardiac Devices at End of Life: Our Clinic's Role in Proactive Care

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Disclosures

- None

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Objectives

- Goal for End of Life Care
- Ethical & Legal Principles
- Challenges for device clinics
- What is the evidence
- Proactive strategies
- Case Study
- Conclusion

Goal at End of Life

- Certainly an ICD can turn a terminal event into a prolonged period of suffering'

Kirkpatrick et al, Curr Opin Support Palliat Care, 2007

  - Resulting in :
    - » Pain
    - » Reduced QOL
    - » Increased distress for patient and family members

Our Goal- to support our patients in a quality/worthy/comfortable death

Goldstein et al, 2004, Ann Intern Med, 141

Ethical & Legal Principles

- Any patient with decision-making capacity has the legal right to refuse or request withdrawal of **any** medical treatment or intervention, regardless of whether they are
  - terminally ill
  - treatment prolongs life
  - withdrawal results in death

- When patient lacks capacity the legally-defined surrogate decision-maker has the same right

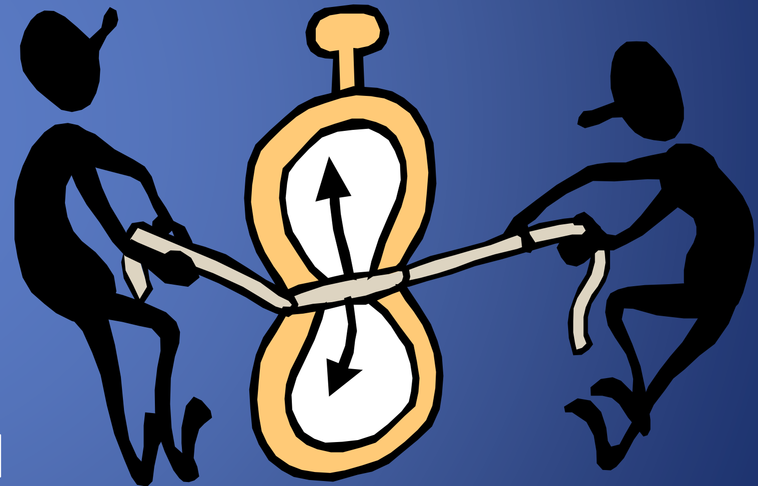
HRS Expert Consensus Statement, Lampert et al, 2010, Heart Rhythm, 7(7)

Clinic Challenges

- Focus has been more on Sudden Death Prevention
- Less on strategies to assist device patients in a "Quality/Worthy/Comfortable" Death
- Clinic volumes on the rise, more support required for OR, MRI, Radiation Oncology and now End of Life Deactivation/Programming

Clinic Challenges

- Timing of Device Deactivation-facilitating urgent & number of requests
- Outpatient requests-device deactivation in our regional hospitals, long term care facilities, and patients home
- Industry Support-sustainable?
- Lack of Knowledge- various cardiac devices, indication, magnet use, end of life considerations regarding devices



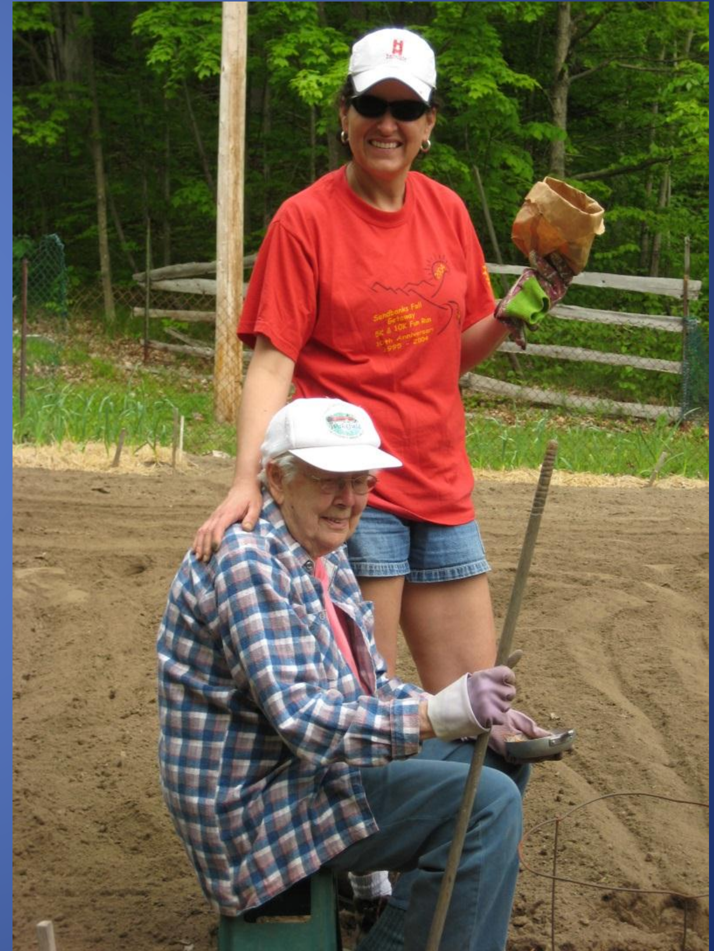
Clinic Challenges

- Coordinating Complex End of Life Concerns Requiring Interprofessional Collaboration (palliative care, social worker, psychologist, medical specialist, family physician)

- Lack of Guidelines Regarding Device Replacement Considerations

- Financial Impact on Health Care System "Just because we can, does it mean we should"

- Deactivating Devices Post Mortem-Morgue/Funeral Home



What Is The Evidence

- Very few patients have any advanced care planning
  - Only 25% of admitted patients

- Some institutions report 20% of patients with ICD's receive shocks within weeks/days/hours before they die HRS Expert Consensus Statement, Lampert et al, 2010, Heart Rhythm, 7(7)

- Only 1/3 of terminally ill patients with ICDs were able to have shock therapy withdrawn as part of a comfort care strategy (Lewis, et, 2006)

- ICD patients and advance directives
  - 35 of 57 patients had directives, NONE mentioned ICD management

Conelius, J 2010, J Amer Acad Nurse Pract, 22

Evidence

Physician/Healthcare Professional Factors:

- Agreement on need for device deactivation (When)
- Lack of Knowledge of ICD function and deactivation capability
- Concerns about ethics and legalities
  - Distinguishing deactivation from physician assisted suicide or euthanasia (**More** with PM dependent patients)
- Disagreement of which care provider should initiate the discussions
- Adequate time for discussion or sense of relationship with the patient
- Lack of basic preparation for End of Life discussions
- Fear of taking away hope or focusing on death

Goldstein et al 2007, J Geront Intern Med 23(S1)
Sherazi et al, 2008, Mayo Clin Proc

Kramer et al, 2010, Heart Rhythm
Kelley, et al, 2009, Am J Hosp Pall Care, 25

Evidence

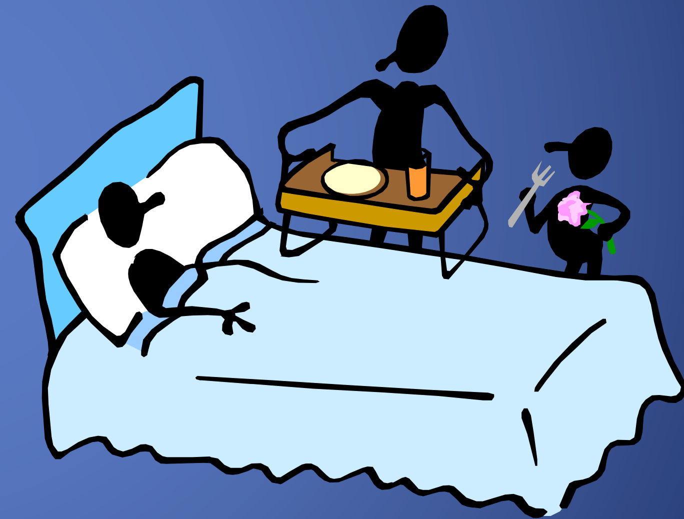
Patient Factors

- Knowledge of ICD Function
  - Many patients not clearly aware of how the ICD works
    - Patients surveyed – **none** aware device could be deactivated (Goldstein, 2008)
  - Many years since implant teaching and the goals of care may have changed but the patient does not automatically match that with device resuscitation
  - Cannot conceive situations where they should be deactivated
  - **Few patients or family initiate discussions/options about device deactivation even among patients with do not resuscitate orders**
- Complex psychological relationship with the device
  - View as life sustaining even though may no longer provide this
  - Deactivation admits finality of coming to terms with imminent death
  - May perceive deactivation as **No Hope**
  - Do not appreciate potential for harm or risk of multiple shocks

Goldstein et al, Ann Intern Med, 2010, J Gerontol Int Med, 2007
And J Gen Intern Med, 2008
Kobza et al, PACE, 2007

Literature

- Regardless of whether the health care practitioner agrees or disagrees with the patient choice, the patient has the right to choose
  - In one study most patients elected to leave ICD therapies on even in the face of terminal malignancy
    - These choices may not be what the practitioner expects (Kobza et al, PACE, 2007)



Grant, M. 2010, AACN Adv Crit Care, 21(2)

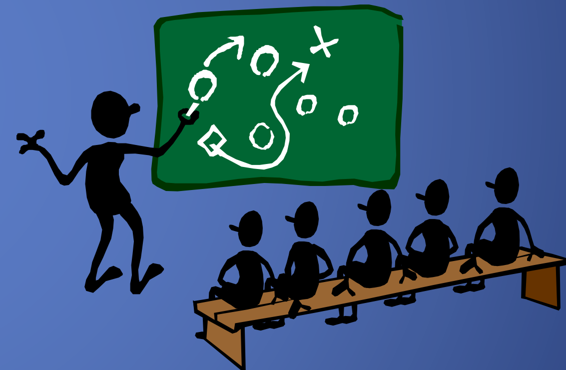
Kramer et al, 2010, Heart Rhythm, epub

Proactive Strategies

- End of Life discussions part of pre implant education
- Health history at clinic follow up- Id changes health & care goals
- Updated Hospital Policies- End of Life & Devices
- Cardiac Device Identification in Electronic Medical Records(EMR)

Proactive Strategies

- Educational Support
  - development of end of life education tool for clinical educators & interprofessionals
  - teaching opportunities for medical /nursing & allied healthcare
- Seeking Interprofessional Consult/Collaboration on Challenging Cases
- Interprofessional rounds/meetings to discuss plan of care
- Research Opportunities-Little is know regarding patient and family perspective on End of Life Decisions & Device Therapy (Guideline development/Patient centered)



Case Study: Deactivation/Replacement

- Mr. V is 87 years old
- Dual Chamber ICD implanted in Sept.2007
- Primary Indications- Ischemic Hx.(CABG/CVA/COPD/AFib)
- Pacemaker Dependant had RV Lead replaced in Dec. 2007 as a result of the 6949 Lead Advisory
- No previous tachy therapies

- Nov. 26, 2014 on routine clinic follow up device close to ERI
- Worked up for a device replacement sometime mid January 2015. Stated at this visit he was losing weight and was having some tests done to R/O cancer.
- Dec. 18, 2014 I got a call from Mrs. V. When is my husband having his device moved? Radiation Oncologist told her he would consult Cardiology

Case Study Continued

- No consult but on implant list for ICD replacement
- Clinic letter dated Dec. 11, 2014 diagnosed with extensive oral cancer involving the mandible/neck nodes & carotid
- Risk of carotid rupture with or without treatment
- A discussion took place that this was a palliative situation with inoperable disease
- Mr. V and wife agreed to palliative radiation for symptom management
- Consult Cardiology regarding device check (PM)or for advice regarding his device during radiation therapy
- Patient seen in planning Dec. 15, 2014
- Called Radiation Oncology Office when can we expect a consult so we can confirm with family
- Called Mr. V back told her we did not expect any information from planning office until the New Year
- Spoke to her regarding deactivation of the device

Case Study Continued

- Mrs. V called again **Jan. 5, 2015** confirmed I had not received anything yet
- Planning office did not have any consult /dates dose/# of treatments. Seen same day in Ca Clinic for symptom management (Pain/Weight loss/SOB/Productive Cough/Lightheadedness/Syncope/Double vision/Difficulty Swallowing)
- ER **Jan. 9, 2015** SOB/Productive Cough/Double Vision-CT Scan Head. Tx for pneumonia
- Palliative Radiation- 5 tx/20cGy
- **Jan. 16, 2015** CRDC Post Radiation- Discussion regarding deactivation
- **Jan.21, 2015** seen in CRDC for a reported shock. Confirmed appropriate-K+ ↓/INR↑/started on low dose Amiodarone/Discussion occurred Re: Deactivation/PM replacement only/Postpone replacement until seen by palliative service
- Expressed too much to consider/giving up/loss of hope if they did not pursue the ICD. Pt now in wheelchair/continued wt. loss/difficulties eating.
- MD gave contact information in the event they change their mind

Case Study Continued

- **Jan. 25, 2015** admitted to CSU- 3 Appropriate shocks+1 ATP
- Battery Addressed ERI (4.79V)
  - Tec support called
  - **Tachy "on" battery 3 more months & 6 shocks**
  - **Or 13 more shocks battery depleted & loss of pacing**
  - **Or Tachy off battery > 3 months**
- Family Meeting
  - No CPR want ICD replaced & activated
  - ICD Replacement Jan. 30, 2015

Note:

Describes shocks as getting hit in the chest with a sledge hammer

On review of medical record

Echo May 9, 2011 EF= 40-45%

Echo June 13, 2012 EF=48%

Points For Discussion

Should ICD be an option?

What if this was fee for service situation?

What impact does this approach have on healthcare economics? Is this sustainable?

Should we have considered PM only given Echo reports 2011 & 2012?

Suggestions on care management?

Conclusion

- We require improved strategies to meet the needs of device patient who are facing end of life decisions
- More Interprofessionals education is required
- We require established guidelines regarding the ethical, clinical, and logistical aspects of device replacements
- Can we count on industry support regarding device deactivation in the future
- We require improved interprofessional collaboration regarding end of life decisions especially for very challenging cases
- Communication regarding End of Life decisions for device patients starts at the time of consultation and throughout their care continuum
- Clinic staff are often the best connection for the patients to begin End of Life discussion

Is over-treatment a side effect of medical advances?