End of Life Care in Heart Failure – Management of Implantable Devices

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Implantable Devices for Heart Failure

“Despite therapeutic advances, heart failure remains a progressive, incurable and ultimately fatal long term condition.”

- Difficulty in defining end-stage in the heart failure disease trajectory
- CRT and ICD device therapy increasing for the treatment of heart failure
- Permanently implanted into the body
- (LVADs)
Implantable Devices for Heart Failure

- Phase of clinical instability includes arrhythmia storms prompting multiple ICD discharges
- Shocks physically painful and psychologically stressful – affect quality of life
- Lethal arrhythmia may be a better mode of dying than progressive multi-organ failure
- Deactivation of ICD function may be appropriate when death is near
EHRA Expert Consensus statement on the management of cardiovascular implantable electronic devices in patients nearing end of life or requesting withdrawal of therapy

- Task force of EHRA & HRS
- Improve patient dying process
- Ultimate judgement made by patient (or legal representative)
  - Careful communication
  - Legal/ethical right of refusal
- Physician/industry representative conscientious objection

EHRA Expert consensus statement, Europace 2010
Deactivation of ICDs vs Pacemakers

In assisted suicide and euthanasia, the cause of death is the intervention provided, prescribed, or administered by the clinician.

In contrast, when a patient dies after a treatment is refused or withdrawn, as after pacemaker or ICD deactivation, the cause of death may be deemed to be the underlying disease.

General agreement exists that ICD deactivation in dying patients may be ethically permissible.

The practices and attitudes associated with pacemaker deactivation differ significantly from those associated with ICD deactivation.

It is therefore crucial to be aware of the legal situation in the jurisdiction in which you are practising.

Deactivation of ATP? Maintenance of CRT

Non-replacement of devices at ERI vs surgical removal

EHRA Expert consensus statement, Europace 2010
Logistics of Device Deactivation

- Deactivation, once the patient’s consent is obtained, should be performed upon the express, written order of the attending physician.
- The patient’s specific clinical situation should be considered.
- At the moment of deactivation, the presence of supportive individuals should be encouraged.
- The physician asked to deactivate the ICD and the industry representative asked to assist in the deactivation may conscientiously object to, and refuse to perform, device deactivation in terminally ill patients. In such situations, an alternative physician or industry representative must be found to carry out the patient’s request.
Careful communication about the need to deactivate an ICD in a patient who is nearing the end of life, conducted in a timely and sensitive manner, should be the standard practice.

The decision to deactivate ICDs should be part of a well deliberated and transparent process.

Ethical and legal guidance should be readily available to counsel and support these difficult decisions.

All patients, whether they have capacity or not, are due equal concern and respect.
Any ICD placement should be accompanied by a detailed and documented deliberation, in which competent patients should state their preferences as to the ways to handle possible future eventualities, including end-of-life issues.

For patients without capacity, proxies for end-of-life decisions should be sought (in jurisdictions where such procedure is legally accepted). Where this is not legally accepted, decision-making for patients without capacity must be made in accordance with legal requirements for such decision-making.
Issues relating to children

- Unless medically indicated, requests for the deactivation of an ICD in minors should be subject to strict scrutiny.

- The best interest of minors should be directed primarily towards their physical well-being. As such, it will be rare to find that the deactivation of an ICD is indicated unless failure to deactivate is likely to cause pain and suffering.

- Mature terminally ill minor patients (judged individually, according to decision-making capacity) should be given due chances to articulate their own wishes, in a supportive and sincere environment.

- The process of accepting a request for the deactivation of an ICD from parents or mature minors must be supported by professionals with paediatric expertise (paediatric electrophysiologists, psychologists, social workers, palliative care physicians, etc.).

- Practitioners must be aware of the legal requirements in their local jurisdiction regarding the legal situation concerning decision-making for minors.
Communicating with the patient & family

- Device deactivation options should be included in the discussion of pre-implantation informed consent.
- At the time of implantation of an ICD/CRT-D, the possibility that the patient’s health may deteriorate to such an extent that device deactivation may be appropriate should be discussed.
- In the event of the patient having a DNR order or receiving palliative care, a discussion about device deactivation should be undertaken at the same time. At the least, the deactivation of shock therapy should be suggested.
- The physician following the patients with a CIED should ask about significant changes in the patients’ health at each clinic visit and ask to be informed of significant new diagnoses.
Conversation with the patient

♥ A team effort should be initiated when the patient is diagnosed as having an irreversible terminal illness.

♥ Different modes of deactivation should be fully understood by the patient.

♥ When discussing deactivation with dying patients, one should respect their autonomy and clarify that they have a legal and ethical right to refuse it.

♥ Patients should be informed that after device deactivation, they can always reconsider their decision and that it is possible to re-activate all device functions.

♥ A copy of the signed consent for deactivation must be included in the patient medical report.
Principles of device management for terminally ill patients

❤ Advance care planning
❤ Transfer of information
❤ Psychological support
❤ Deactivation of ICD near death – dignity, respect, compassion.
❤ Peaceful death
Principles of device management for terminally ill patients

- Consent
- Fully competent
- Impaired mental capacity to consent
  - Advanced directive
  - Attorney or legal proxy
  - Independent Mental capacity Advocate
  - Physician in consultation with carers and healthcare team
- Children
Practicality of device deactivation

❤ In hospital
  ❤ Cardiac physiologist given appropriate instructions/authorisation

❤ In community (inc hospice)
  ❤ Ability to attend ICD clinic
  ❤ Availability of physiologists for home visits
  ❤ Emergency – magnet application

❤ Importance of written documentation
As the doctor currently caring for. 

Date

Patient Name ............................................. NHS number .................
Address ..............................................................
DOB ...........................

Tick all relevant statements:
I am satisfied that
☐ The patient wishes the ICD to be deactivated
☐ As a member of the Multidisciplinary Team caring for this patient we have consulted all relevant information in order to reach the decision that Deactivation of this patient’s ICD is the most appropriate clinical decision to be of overall benefit for the patient.
☐ I have the consent of the patient’s Attorney (Named ....................................) to withdraw ICD therapy. The Lasting Power of Attorney appointing him/her is registered and authorises him/her to make decisions on life sustaining treatment.
☐ I have the consent of the deputy appointed by the Court of Protection (Named .................................) to withdraw ICD therapy.
☐ I am satisfied that a written advance refusal of ICD therapy exists, which is valid and applicable to current circumstances and I have the patient’s authority to withdraw ICD therapy.
☐ I am satisfied that the patient lacks capacity to consent to withdrawal of treatment and confirm that I believe it is in the patient’s best interests that ICD therapy should be withdrawn. The Multidisciplinary Team and I have attempted to establish/completed the necessary steps to ascertain any relevant views/wishes of the patient prior to becoming incapacitated and have taken account of the views offered by those close to the patient (where available), the IMCA, where applicable, and the views of the multi-disciplinary team

Doctor Name

Position

Signature  Date

Coventry & Warwickshire Cardiovascular Network 2011
After Death

❤️ Deactivation of defibrillator function (if not already done)
❤️ Explantation of all devices prior to cremation
❤️ Interrogation of device may be required (by coroner) to clarify mechanism of death
Summary

- Pre-implant discussion & informed consent (arrhythmia nurse)
- Recognise “end of life” phase
- Multidisciplinary team approach to care
- Discussion with patient about deactivation of ICD – timely, time, place, personnel, mode
- Patient support at time of deactivation
- Documentation & communication
- Removal of device before cremation