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Hospice Medical Memo

A quarterly newsletter for physicians

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THE SHOCKING TRUTH: Implantable cardioverter-defibrillators at the end of life —by Garry Snipes, MD

Case Study:
Jack is a 77-year-old man who has a history of ASHD and had implantation of a pacemaker/ICD four years ago after an MI associated with ventricular fibrillation. Since then, he has had a series of strokes that have left him with a dense right hemiparesis, totally dependent in ADLs, profoundly demented and residing in a nursing home. He had a living will and HCPOA (his wife, Shirley), and his family feels that he would want comfort care only, so have requested that a DNR order be entered into his record. At a family conference to discuss his care, Shirley asks what will happen with the ICD as Jack approaches death.

The desirability and appropriateness of every life-saving medical intervention is determined by the current goals and preferences of the patient who receives it. Unlike most other medical interventions, however, an ICD is operative until it is actively disabled. Although there has been a considerable amount of research on the medical utility and indications for insertion of ICDs, there has been little written on the problem of these devices at the end of life when their intended function is likely to represent more of a burden than a benefit to the patients who have them.

ICD Usage

ICDs are devices that are implanted under the skin with leads introduced through central vessels and positioned in the ventricle. These devices function through continuous monitoring of cardiac rhythm and delivery of electrical shocks for the purpose of conversion when abnormal cardiac rhythms are identified. They generally are combined with pacing function, and the state-of-the-art versions of ICDs offer the capacity for tiered low-energy and high-energy shocks based on sophisticated discrimination algorithms.

In 2002 alone, 96,000 ICDs were implanted in the United States. With the expansion of indications for their use, one estimate places the number of patients currently eligible in North America at over 3 million, with an additional 400,000 patients meeting the criteria for placement of an ICD each year.

These devices can prolong life and are clearly appropriate when that is the principle goal. The indications for insertion are evolving and expanding. Multiple studies have demonstrated that ICDs are superior to drug therapy in patients with a history of life-threatening ventricular tachyarrhythmias, and it is usually recommended as initial therapy in patients with sustained V-tach or resuscitated cardiac arrest. Prophylactic insertion is now widely used in patients with prior MI, LV dysfunction and spontaneous non-sustained V-tach, as well as patients with non-ischemic cardiomyopathy and significant decreased ejection fraction. Research is discovering an ever increasing number of situations providing a rationale for ICD usage.

ICDs at End of Life

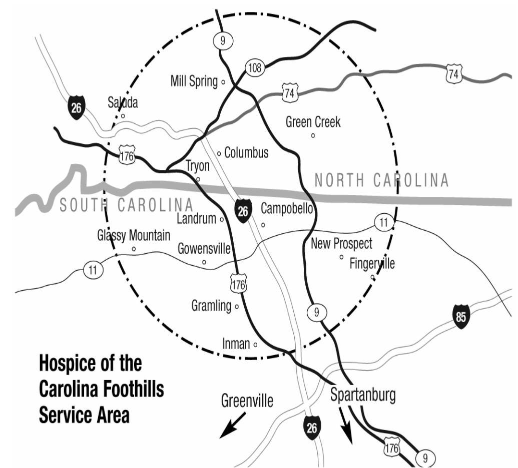
When patients are seriously ill and nearing the end of life, the burden vs. benefit considerations may shift to negative in patients with ICDs. Shocks can be painful, especially with older devices, and some patients have significant anxiety and depression associated with the uncertainty of an electrical discharge. One study on this issue demonstrated that in 100 patients with ICDs who died between 1997 and 2002, 27% received a shock in the last month of life and 8% received a shock during the minutes before death. Doctors had discussed turning off the devices with 27% of the patients prior to death.

Indications for clinicians to consider discussing deactivation of the cardioversion function (but generally not the pacer function) include the following: continued use inconsistent with

Who to call at Hospice of the Carolina Foothills

- Jean Eckert
  Executive Director
- Garry Snipes, MD
  Medical Director
- Sharon Maddox, RN, MPH
  Director of Patient Care Services
- Doug Brooks, RN
  Admissions Nurse
- Shannon Slater, LPC
  Bereavement Care Coordinator
- Maureen Murphy
  Program Liaison

To reach any of us, please call our Hospice Administration & Program Center in Columbus, NC at 828-894-7000 or 800-617-7132.



THE SHOCKING TRUTH, *continued...*

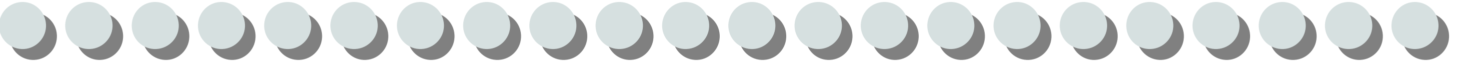
patient goals; withdrawal of adjunctive anti-arrhythmic medications; imminent death; and a DNR order in a terminally ill patient. Such considerations should be discussed in advance with the ICD physician to get his/her input since that person will be conducting the deactivation procedure. The procedure is simple with use of a programming magnet in the electrophysiology clinic. Patients should be reassured that turning off the ICD will be neither painful, nor result in immediate death.

Some clinicians might consider deactivation of an ICD ethically problematic. But the fact is that on the basis of patient autonomy, a patient's right to request non-institution or withdrawal of any medical intervention is both ethical and legal, and does not constitute physician assisted suicide or euthanasia.

The brave new world of medical technology continues to offer life-prolonging interventions that provide dramatic hope and life enhancement in one context, and an onerous burden in another. Physicians caring for people with these devices can offer them a great service by helping them discern the difference in light of their particular goals.

References:

1. Goldstein, NE, Lamperth, et al. *Ann Intern Med* 2004; 141: 835-838.



Advance Care Planning Seminar Offered At Hospice

Hospice of the Carolina Foothills is offering a two-day advance care planning seminar for area professionals. It will be offered on two back-to-back Tuesdays, August 8 and 15.

In a recent survey of physician office managers undertaken by HoCF to determine educational needs within the medical community, an advance care planning class was the number one choice.

Additionally, at the recent annual meeting of the American Medical Association, the organization voted to increase physician and patient education concerning all aspects of advance directives. The Association reiterated the need for the medical community to learn from the experience of Terri Schiavo.

Hospice of the Carolina Foothills believes that physicians and their staff play an important role encouraging conversations about the importance of planning before someone experiences a healthcare crisis. "Hospices have a strong history in educating people about end-of-life issues, including advance care planning," says Executive Director Jean Eckert. "We are proud to offer this particular workshop to professionals in our community."

The workshop will be held at the Hospice Administration & Program Center, and the all-inclusive tuition of $75 covers material and lunch both days. Continuing education credits will be offered to nurses, social workers and counselors who complete the course. Facilitators are certified "Respecting Choices®" instructors.

To find out more about the seminar, please contact Laura Ellington, MSW, LCSW of HoCF at 828-894-7000 or 800-617-7132.