Is turning off a pacemaker/defibrillator ethical?
An Ethical Analysis of the Deactivation of Cardiac Pacemakers and Defibrillators at End-of-Life

Case: Mrs. Jones (not her real name) suffered a heart attack two years ago. She recovered well with excellent medical management and placement of a pacemaker and implantable cardioverter-defibrillator (ICD—a small device implanted under the skin that can deliver a shock to treat life-threatening heart rhythms). Although she remained independent, her activity was limited by progressive congestive heart failure. Nonetheless she volunteered frequently and remained as active as she could.

Mrs. Jones suddenly developed garbled speech and weakness when dining with family. She was brought to the hospital after suffering a large stroke. After five days, Mrs. Jones remained unresponsive and her family asked the cardiologist to deactivate the pacemaker/ICD in accordance with her advance directive. They did not want any interventions that may prolong her dying. The cardiologist was hesitant, however, worried that deactivation would be euthanasia and would “directly cause the patient’s death.”

Discussion: Several million people in the U.S. have pacemakers and 650,000 have an ICD. Many, like Mrs. Jones, have both. These numbers will undoubtedly grow as our population ages. Therefore, clinical situations similar to the one described above will increase in frequency.

The right to refuse medical interventions or to request their withdrawal, including pacemakers and ICDs, is legal and ethical. Despite extensive legal and ethical analysis, however, clinicians often feel more uncomfortable deactivating or stopping pacemakers/ICDs than they do other interventions such as ventilators, hemodialysis, artificial nutrition, etc. This discrepancy is likely the result that, unlike most other interventions pacemaker/ICDs are internalized, are not easily seen, and are viewed as “part of the patient.”

Ethicist and physician Daniel Sulmasy provides good insight into how to resolve these ethical quandaries. He describes all medical therapies as restorative (i.e., something that restores health or well-being) in intent. Therapies can be further subdivided as replacement or substitutive. Replacement therapies provide the function of the diseased organ in roughly the same manner as that of a healthy organ. These therapies are also capable of growth or self-repair independent from external control. Lung, kidney, and heart transplants are examples. Clearly, these therapies cannot be withdrawn just because a patient or family requests so. Substitutive therapies, in contrast, attempt to regulate body functions by substituting for a malfunctioning organ. For example, ventilators substitute for the lungs, hemodialysis substitutes for the kidneys, and feeding tubes substitute for the gastrointestinal tract. Pacemakers/ICDs fall in this category; they substitute for the normal electrical activity of the heart. In contrast to replacement therapies, patients and families are generally within their legal, ethical, and moral rights in requesting the cessation of substitutive therapies.

Resolution: After meeting with the family and the palliative care consultants, the cardiologist agreed that the pacemaker/ICD was not contributing to Mrs. Jones quality of life in a meaningful way and that deactivating the pacemaker/ICD was in Mrs. Jones’ best interest. She died peacefully one day later.

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