An Interdisciplinary Checklist for Left Ventricular Assist Device Deactivation

Kristen G. Schaefer, MD1 Leslie Griffin, NP2 Colleen Smith, NP2 Christopher W. May, MD3 and Lynne W. Stevenson, MD2

Dear Editor:

We applaud the work of Gafford and colleagues in their recent “Deactivation of a Left Ventricular Assist Device at the End of Life”1 to draw attention to this important issue. As with many interventions that can both preserve life and prolong death, careful attention should be focused on both the general principles and the specific details.2–5 Families may agree and accept the decision to allow natural death but find themselves unprepared for events during deactivation. Without proper planning, staff may also find themselves unprepared for the events and responsibilities. We have found the following checklist helpful to facilitate interdisciplinary preparation for left ventricular device (LVAD) deactivation (see Fig. 1). Priorities include effective communication with the family and among teams, required palliative care consultation, and coordination of interdisciplinary care at the bedside. The checklist can also be adapted for hospice.

1. The following individuals must be informed before proceeding with deactivation:
   - Physician of record
   - Advanced heart disease cardiologist (and fellow, if applicable)
   - Surgeon who implanted the LVAD
   - VAD coordinator
   - Bedside nurse and nursing manager
   - Palliative care consultant
   - Social work (SW)
   - Chaplain, as indicated
   - Ethics consult, as indicated

2. Family meeting
   - Outline the process for deactivation, including the unpredictable timing of death after deactivation (minutes to days).
   - Decide which family members will be present at the time of deactivation, and note planned religious rites, as applicable.
   - Review the goal for comfort, and specify the timing of discontinuation of other life-prolonging interventions.
   - When appropriate, discuss decisions that will be faced after death: tissue, organ, or body donation; autopsy; and funeral arrangements.
   - Document in the medical record the health care proxy, any advance directives, and content of family meeting.

3. Clinical team meeting
   - Review all orders and discontinue orders that are inconsistent with the goal of LVAD deactivation and/or have the potential of causing the patient discomfort.
   - Continue all orders addressing patient’s comfort.
   - Review the planned steps and sequence for deactivation of LVAD and other life support modalities, including mechanical ventilation if applicable.
   - Plan deactivation of ICD (both defibrillator and pacing functions), if applicable.
   - Set the date and time for deactivation of the LVAD and review each team member’s role during the procedure (some staff may prefer not to have a role).

4. Interdisciplinary preparations at the bedside
   - Identify person in charge of deactivation of the device, i.e., VAD coordinator, MD, or RN.
   - Assure SW, chaplaincy, and interpreter services at the bedside, as indicated.
   - Assess family’s perception of patient’s level of comfort and address concerns.
   - Review anticipated symptoms/signs of distress (agitation, air hunger, anxiety, pain, noisy secretions) and enter orders for anticipatory management.*
   - Ensure adequate sedation and premedication prior to deactivation (e.g., consider bolus and/or continuous infusion with fast-acting opioid and/or benzodiazepine),* and reassess frequently.
   - Turn off the monitors.

* Refer to institution-specific medication guidelines, as applicable.

FIG. 1. Preparation for LVAD deactivation checklist.

1Division of Adult Palliative Care, Dana Farber Cancer Institute, 2Advanced Heart Disease Section, Brigham and Women’s Hospital, Boston, Massachusetts.
3Advanced Heart Failure and Transplant Program, Inova Fairfax Hospital, Falls Church, Virginia.
References


Address correspondence to:
Kristen G. Schaefer, MD
Dana Farber Cancer Institute
Psychosocial Oncology and Palliative Care
D2-016A
450 Brookline Avenue
Boston, MA 02215

E-mail: Kristen_Schaefer@dfci.harvard.edu
This article has been cited by:


5. Omar Wever-Pinzon, Stavros G. Drakos, James C. Fang. 2015. Team-based Care for Advanced Heart Failure. *Heart Failure Clinics* **11**:3, 467-477. [Crossref]

6. Hassan Chamsi-Pasha, Mohammed A. Chamsi-Pasha, Mohammed Ali Albar. 2014. Ethical Challenges of Deactivation of Cardiac Devices in Advanced Heart Failure. *Current Heart Failure Reports* **11**:2, 119-125. [Crossref]