

Our Interprofessional Partnership: The Psychiatric Hospitalization of an LVAD (Left Ventricular Assist Device) Patient

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Medical Background

Patient is a 58 yo WM, who four years PTA was diagnosed with non-ischemic cardiomyopathy due to sarcoid. He developed ventricular tachycardia, which led to an implantable defibrillator. He was referred to the Heart Transplant Team at our hospital for an evaluation.

In consultation with the transplant psychiatrist, he was deemed appropriate for advanced therapies, including a heart transplant. Due to a serious decline shortly after his evaluation, a Heart Mate II Left Ventricular Assist Device (LVAD), was implanted. The patient received training in the management of the LVAD and related self-care.

Psychosocial Background

Patient is a twice divorced male, with a reported history of chronic, intermittent depressive symptoms for most of his adult life. The first episode began with marital difficulties and a psychiatric hospitalization two years later following a separation from his wife. The marriage produced two daughters, now adults. Patient's second marriage also ended in divorce about ten years ago.

His developmental history included sexual molestation by an older child when he was in kindergarten, and physical abuse by both parents and an older brother. A suicide gesture in late adolescence while taking illicit drugs. Significant illicit drug use while in the military. Cutting and burning which began in his late teens through early 50's as a way to release emotional distress when patient did not feel appreciated.

Psychosocial Background

Patient graduated from high school and served in the Air Force of the United States Military. He worked at a call center for eleven years. Six of those years he served as a call center supervisor. Due to the cardiac illness mentioned, he went out on disability and will continue on disability for an indefinite period. Due to a decline in his health, he moved from his own apartment to living with his sister.

However, marital difficulties between sister and her husband led to an uncomfortable situation. He subsequently moved in with his mother. His parents were divorced and his father lived in a different town. There was long-standing conflict among and between family members. After the move to his mother's home, his stressors increased to a significant extent.

Identified Stressors

- In 2016, mother diagnosed with Stage IV lung cancer and hospitalized.
- Siblings and father decided to sell family home rendering patient homeless.
- He and girlfriend ended their relationship.
- Although girlfriend declined further contact with him, she continued to visit patient's mother in the hospital.
- His health worsened; he became more isolated, depressed, patient's anxiety increased and he claimed poor sleep and appetite.
- Alcohol use started and increased to a liter+ of vodka over 2-3 days.
- He began to contemplate suicide and the urge to end his life worsened.

Outpatient Mental Health Care

-Multiple medication trials including nortriptyline, trazodone, paroxetine, fluoxetine, citalopram, bupropion, aripiprazole and benzodiazepines. Patient reported stopping medications due to the stigma of use.

-Consulted various therapists over the years. He sometimes ended therapeutic relationships; other times he was discharged from care due to non-compliance with prescribed medication.

-He was in psychiatric care prior to the hospital admission and was prescribed venlafaxine by his outpatient providers.

Transfer to our University Hospital

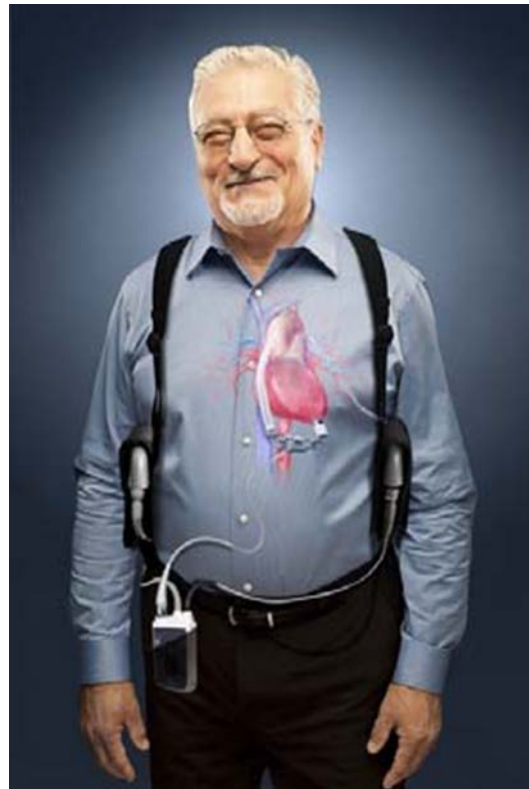
- Patient's suicidality worsened (he considered an OD or use of a gun).
- He presented to an emergency room in his home town.
- Patient stated that he had increased alcohol use; however, no illicit drug use.
- Labs reviewed and INR had begun to fluctuate. ED physician concerned.
- Transferred by ambulance to University of Rochester Medical Center.
- Admitted to the LVAD Service and seen the next day by the Psychiatric Consultation-Liaison Team. Also evaluated by the transplant psychiatrist.
- Placed on 1:1 suicide watch. Deemed to need a higher level of care and transferred to geriatric psychiatry, unit 39200.

Preparation for the Transfer to 39200

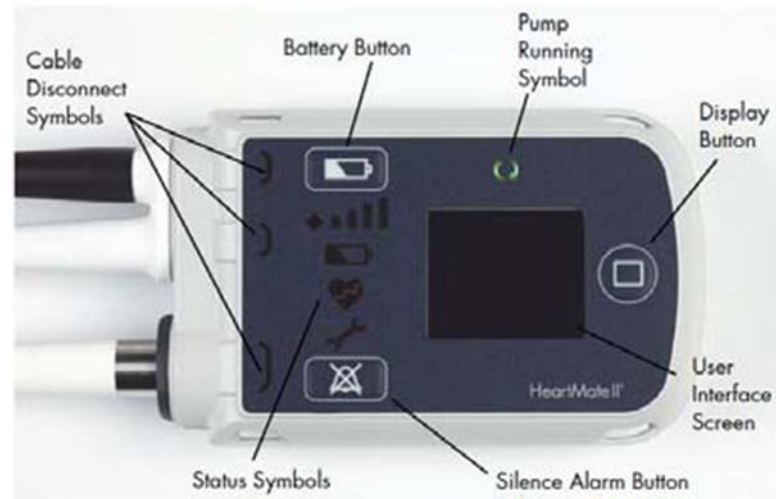
CHALLENGES: 39200 nursing staff not trained to manage patient's with LVAD equipment. Management included: medical monitoring, LVAD emergencies, including possibility of patient suicide by self-disconnection of the LVAD line drive from the power source. Reasonable apprehension, yet great interest in meeting the challenges.

SOLUTIONS: Broad administrative and leadership support. Willingness of LVAD team to urgently train the 39200 nursing staff. An algorithm was developed to provide guidelines. Medicine in Psychiatry colleagues were available to help. Open sessions were conducted to allow nursing staff to ask questions/express concerns. This was followed by intensive LVAD training, a competency exam, and instillation of special power lines.


LVAD Placement Simulation



LVAD Control Device




39200 LVAD Algorithm




3-9200 Guidelines

Daily Assessment by 392 nurses: <ol style="list-style-type: none">1. Doppler BP (goal 70-90)2. Check heart sounds: hum over LV apex3. Check peripheral pulses: likely absent or weak radial pulse4. Self-test pocket controller and power module5. Record VAD numbers6. Weight7. Driveline Dressing: check that dressing is intact.8. Backup controller and 2 charged batteries present	Weekly Assessment by 392 nurses: <ol style="list-style-type: none">1. Driveline Dressing: chloraprep, biopatch, tegaderm2. Lab work: cbc, bmp, INR.3. Equipment maintenance check by patient When to page VAD coordinator 16- 7613: <ol style="list-style-type: none">1. equipment malfunction2. broken equipment3. pump power >104. any VAD related issues5. Weight gain 3lb/24hr6. BP<65 or >100	When to call MIPS: <ol style="list-style-type: none">1. nosebleed lasting more than 1 hour, sudden drop in HGB/HCT2. Falls, weakness3. Fever4. Signs or symptoms of stroke When to call MIPS and notify VAD 16-7613 <ul style="list-style-type: none">-Acute shortness of breath +/- new edemaTea or coke colored urine-VAD alarms
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Medicine in Psychiatry Guidelines

Guidelines for MIPS consult service, if called about:

1. **Bleeding** (e.g. nose bleed or drop in Hgb): check INR, If INR >3: **Call VAD coordinator for collaboration**
Reverse with FFP only. (GOAL INR 2-3) *No Kcentra/Vitamin K without CT surg approval*

2. **Fall/weakness**: eval patient, if has signs/sx of CVA: call stroke team, get stat head CT, INR.

3. **Doppler BP >100**: add antihypertensive, goal BP is 70-90

4. **Doppler BP <70 and patient is symptomatic**: **Call VAD coordinator for collaboration**

5. **Dark urine**: send cmp, cbc, LDH : **Call VAD coordinator for collaboration**

6. **Fever**: **check drive line site** in addition to usual infectious work up

7. **Weight gain > 3lbs/day or other signs/sx of CHF**: **call: VAD coordinator and order:**
cxr, cmp, cbc, INR, LDH

Call CT SURGERY on-call if patient requires medical admission. **VAD PATIENTS CAN ONLY BE ADMITTED TO 734 or 716 (NOT 192)**

24/7 VAD Pager: 16-7613 Web Paging: search under directory "VAD", page will go to the on-call coordinator:

Beth Carlson PA	Dana Shannon NP	Chelsey Rice RN	Dana Shannon NP
Kimberly Gibson NP	Maria Francati NP	Bill Hallinan RN	Chrystine Black RN



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Overview of the Psychiatric Admission

- Patient admitted March 14, 2016 and discharged April 14, 2016
- There were no critical incidents during this admission.
- The care was collaborative and consisted of regular rounds by the LVAD Team, phone calls, protected email exchanges and several meetings.
- Only one medication was added, aripiprazole as an adjunct to the venlafaxine, prescribed prior to admission and continued during this hospitalization.
- Therapy consisted on 1:1 strength based sessions (with a focus on Appreciative Inquiry), use of the NYS OMH SafetyNet app, and mindfulness training. Patient also prepared a genogram and sent a letter and photo to mother, as he was unable to visit her in their hometown hospital.
- Social work colleagues maintained regular contact with the family and set the stage for patient's discharge and transition to an assisted-living facility in Rochester, New York, which was his choice.

Transition to the Community

- Training of staff at the assisted-living facility by LVAD Coordinator to manage an LVAD patient.
- Pre-arranged communication by LVAD Coordinator with Rochester area emergency services in the event of a critical LVAD incident.
- Ordering and transportation of supplies to the assisted-living facility.
- Furnishing the patient's apartment at the facility.
- Transportation of the patient's cat from his hometown to Rochester.
- Arranging mental health follow-up in Rochester with the support of his hometown therapist. Patient now receives comprehensive psychiatric care at a local outpatient clinic which is part of our hospital system.
- Continuation/coordination of outpatient care by the LVAD team.

Conclusions

- There is tremendous value to interprofessional care, based on the principles of collaboration, creativity, and commitment to the well-being of our patients and their families.
- The Joint Commission reviewed our interprofessional work as an exemplar of innovation and integrated care.
- Our patient continues to do well 1.5 years later. He has a solid home base, committed teams of professionals, and a more peaceful relationship with family members.
- A paper on this topic written by our team, recently won the 2017 *Interprofessional Recognition Prize* by the Rochester Academy of Medicine.

References

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Kudos

TO the entire nursing staff of 39200, led by charge nurse, Brenda Bagnato.

The Geriatric Psychiatry 39200 nurse manager, Deborah Hale.

Our lead social worker, Korry Stevens.

The LVAD Coordinator, Christina Cheyne and her entire team.

The transplant psychiatrist, Dr. Mark Nickels who initiated the idea of an LVAD patient in psychiatry.

Our Associate Director of Psychiatric Nursing, Julie Colvin, who worked with Dr. Nickels to facilitate the transfer from cardiology to psychiatry.



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