

Ventricular Assist Device (VAD): Dressing Change (CSICU)

Site Applicability

SPH Cardiac Surgery Intensive Care Unit (CSICU)

Practice Level

Basic Skill: Registered Nurses working in the Cardiac Surgery Intensive Care Unit

Need to Know

- Dressing changes using an aseptic technique should be done daily during the patient's stay in CSICU until transfer orders are completed or when specifically ordered by the surgeon. Thereafter, the focus is using a clean technique in order to adapt to doing dressings at home by following [B-00-12-10084](#)
- If patient is to shower in CSICU, the exit site should be covered with a waterproof barrier. The dressing must be changed immediately after the shower.
- Patients will have a driveline stabilization "anchor" device in place to hold their percutaneous line still at the entry site. The driveline stabilization device should be changed PRN. To determine if it needs changing, gently pull the line to see if the device still holds the line firmly. Immobilization of the line is crucial for preventing infections as trauma to exit site increases chance for infection.
- Patients are to wear a breast binder for the first month post implant to further secure the driveline. The binder will be placed on the patient once they begin mobilizing. There will be one binder per patient (if necessary attach 2 binders together for large patient,) and only be replaced if it is exceedingly soiled. Binders will be supplied by the VAD Coordinator.
- Do not use acetone or acetone-based products near VAD line and equipment (i.e. nail polish remover or adhesive removers)
- Using alcohol swabs to clean the driveline is allowed.

Equipment and Supplies


1 x pair of clean gloves	1 x dressing tray
1 x pair of sterile gloves	2 x Chlorhexidine swab sticks
1 x face mask	2 x 9 cm x 15 cm Mepore
1 x bouffant cap	2 x 4x4 gauze squares
1 x Tube securement "anchor" device (if it needs changing) - Hollister Horizontal Drain/tube attachment device	

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Procedure

Steps (Procedures)

Steps	Rationale
1. Clean dressing table with Caviwipes	
2. Ensure garbage can close by for disposal of used items	
3. Wash hands and don bouffant, face mask and clean gloves	
4. Open all packages and place sterile items in the sterile field of the dressing tray.	Preparing all equipment in the sterile field for access once sterile gloves are donned.
5. Carefully loosen tube from driveline stabilization device	If attachment device is not loosened the operator can't clean properly under the driveline. Care should be taken to minimize movement of the line at the exit site throughout the dressing.
6. Remove old dressing and discard along with clean gloves. Check for signs of infection or irritation	Document any signs of infection. If new discharge that is purulent is seen, discuss with MRP regarding culture.
7. Wash hands and don sterile gloves	
8. Using a Chlorhexidine swab stick, clean the area around the entire driveline exit site in a circular motion (starting closest from the site then moving outwards). Flip the stick to the other side and repeat. Repeat this procedure with the second Chlorohexidine swab stick	Cleaning closest to the site and moving outwards pushes any potential infection contaminants away from the exit site
9. Allow to air dry	Moisture could impede wound healing
10. Handling a 4x4 gauze by its corners, fold gauze in half and place it snugly against the skin at the exit site under the line,	Prevents potential for friction ulcer from the driveline
11. Place final 4x4 on top of exit site, line up the corners	
12. Apply Mepore dressing to seal the area. Pinch dressing around the driveline	Pinching the dressing around the driveline provides a seal of the dressing around the site and preventing risk of infection from contamination

<p>13. Re-secure the “anchor” driveline securement device. If necessary, apply a new anchor device after the skin has been properly cleaned and dried.</p> <p>*Do not cut the “tail” off the anchor strap once secured, fold it over and tuck into the center piece of the anchor</p>	<p>Immobilization of the line is key for preventing infections as trauma to exit site increases chance for infection</p> <p>Cutting the “tail” of the anchor strap would make it extremely difficult to thread it back through when trying to release the anchor the next time</p> 
<p>14. If patient has begun mobilizing secure breast binder on patient.</p> <p>The binder should cover as much of the drive line as possible. Ensure the driveline is smooth against the skin and is not twisted or kinked. The binder should be tight enough to immobilize the driveline, but not so tight that it is cutting into the patient’s skin or causing discomfort.</p> <p>The patient should keep the binder on at all times (excluding dressing changes and showers) for at least one month post LVAD implant or as determined by the VAD Coordinator.</p>	<p>Securing and covering the driveline with the binder prevents it from being tugged or caught. It is important to keep the driveline secure at all times, especially the first month after implant to allow the site to heal. Any tugs can cause inflammation to the site and increase the risk of driveline infection.</p>

Documentation

In nursing notes and Care Map — record assessment variations from baseline, nursing interventions and patient’s response.

Patient and Family Education

VAD Nurse/Patient Educator or CNS will provide the patient and caregiver with instructions that reflect the ward procedure ([B-00-12-10084](#)) once patient and caregivers are able to participate in care

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Related Documents

1. [B-00-12-10084](#) - Ventricular Assist Device (VAD): Dressing Change (WARD)
2. Medtronic HeartWare HVAD product information - <https://www.medtronic.com/us-en/healthcare-professionals/products/cardiac-rhythm/ventricular-assist-devices/heartware-hvad-system.html#>
3. HeartWare web site (Clinician and Patient information) www.heartware.com

References

Gordon RJ. Quagliarello B. Lowy FD. Ventricular assist device-related infections. The Lancet Infectious Diseases. 6(7):426-37, 2006 Jul.

Kusne, et al. An ISHLT consensus document for prevention and management strategies for mechanical circulatory support infection. 36(10), 1137-53, 2017 Oct.

Persons/Groups Consulted:

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VAD patient/nurse educators

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