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Comparing Infection Prevention Protocols in LVAD Patients

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Abstract

Left ventricular assist devices are implants intended to lengthen and improve the quality of life for patients in heart failure. LVADs also serve as a bridge to heart transplant for eligible patients. As the most common adverse event, infections related to the LVAD contribute to morbidity, mortality, and re-hospitalization in many cases. For transplant eligible patients, serious infections can reduce their chances of receiving a heart. Many studies focus on the effects of adverse events for these patients, but there is little consensus regarding infection prevention. Throughout the literature, patient education was an essential tool for prevention. Evidence supports teaching sterile technique through return demonstration and highlighting the stages of infection symptoms. Clinical follow up with outpatient offices and recording daily measurements such as temperature are essential. Finally, proper care of the driveline exit site for the LVAD is important as this is the most common reservoir for initial infection. The purpose of this research project is to analyze the ability of an infection prevention bundle to prevent infection occurrence as compared to patients who do not receive the bundle. Data will be collected over a 60 day period between two groups of participants. One group will receive a comprehensive bundle including patient education, sterile technique sessions for both patients and patient family members, and an infection staging checklist. The control group will not receive the bundle, just the current education protocol. After 60 days, the infection rates will be compared between the bundle group and the control group to evaluate the effectiveness of the bundle. Analysis will be done to evaluate the type of infections occurring, comparing the incidence of superficial driveline site infections to deeper, systemic infections.

Keywords: Left ventricular assist device, infection prevention, driveline site infection