## Physician - Heart Failure, Transplantation and Mechanical Support Systems

### [MSB-06]

### Retrospective Cohort Analysis of Ventricular Assist Device Driveline Infections: A Single-Center Experience

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**Objective:** This study aimed to discuss our approach to driveline infections (DLIs), which can be managed by debridement, open packing, delayed closure, closed catheter irrigation, and rectus muscle relocation, and define the risk factors.

**Methods:** This retrospective study reviewed all patients who underwent ventricular assist device (VAD) implantation at our institution between May 2011 and May 2023. Demographic data, comorbidities, VAD type, time from VAD implantation to infection, microbiological testing, surgical debridement, antibiotic therapy, infectious symptoms, hospital readmissions, postoperative complications, and overall survival were evaluated.

**Results:** During the study period, 90 patients underwent VAD implantation, and DLIs were detected in 20 patients. The mean VAD time was 561 days in all patients, and the mean VAD time was 1277 days in those with DLIs. A statistically significant relationship was found between the risk of DLI and the total duration of VAD time ($p<0.05$). Median time from VAD implantation to first DLI admission was 513 days. Most commonly detected pathogens were Staphylococcus spp. (64%) and *Pseudomonas aeruginosa* (25%). Surgical debridement was performed in 10 patients; nine had driveline relocation followed by vacuum-assisted closure until their culture results were negative.

**Conclusion:** Driveline infections endanger the final objectives of VAD therapy by disrupting patient autonomy, the chance of bridging to heart transplantation, and decreasing overall survival and quality of life. Management of DLI usually requires extended, repeated hospitalizations and intense outpatient care. Vacuum therapy and muscle relocation have emerged as essential adjuncts to treating DLIs. Surgical treatment modalities should be standardized.

**Keywords:** Driveline infections, surgical debridement, ventricular assist device.

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