

A Silver Lining in the VAD Sky

A Prospective Randomized Controlled Driveline Dressing study

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Background

Left Ventricular Assist Device (LVAD) therapy is used successfully long term for patients with advanced heart failure. The physical and psychological burdens of driveline maintenance, driveline infections (DLI) and dermatitis remain a major barrier to optimizing VAD patient's life expectancy and quality of life (QOL). No widely accepted protocols exist and no prospective randomized clinical trials to date have been carried out to evaluate a specific driveline dressing protocol. We posited that a silver-based dressing with weekly changes would reduce the rate of DLI and allergic reaction while improving patients' comfort and QOL.

Methods

We deployed a single center randomized controlled .Patients were randomly assigned to one of the study arms and followed for 12 months post implant

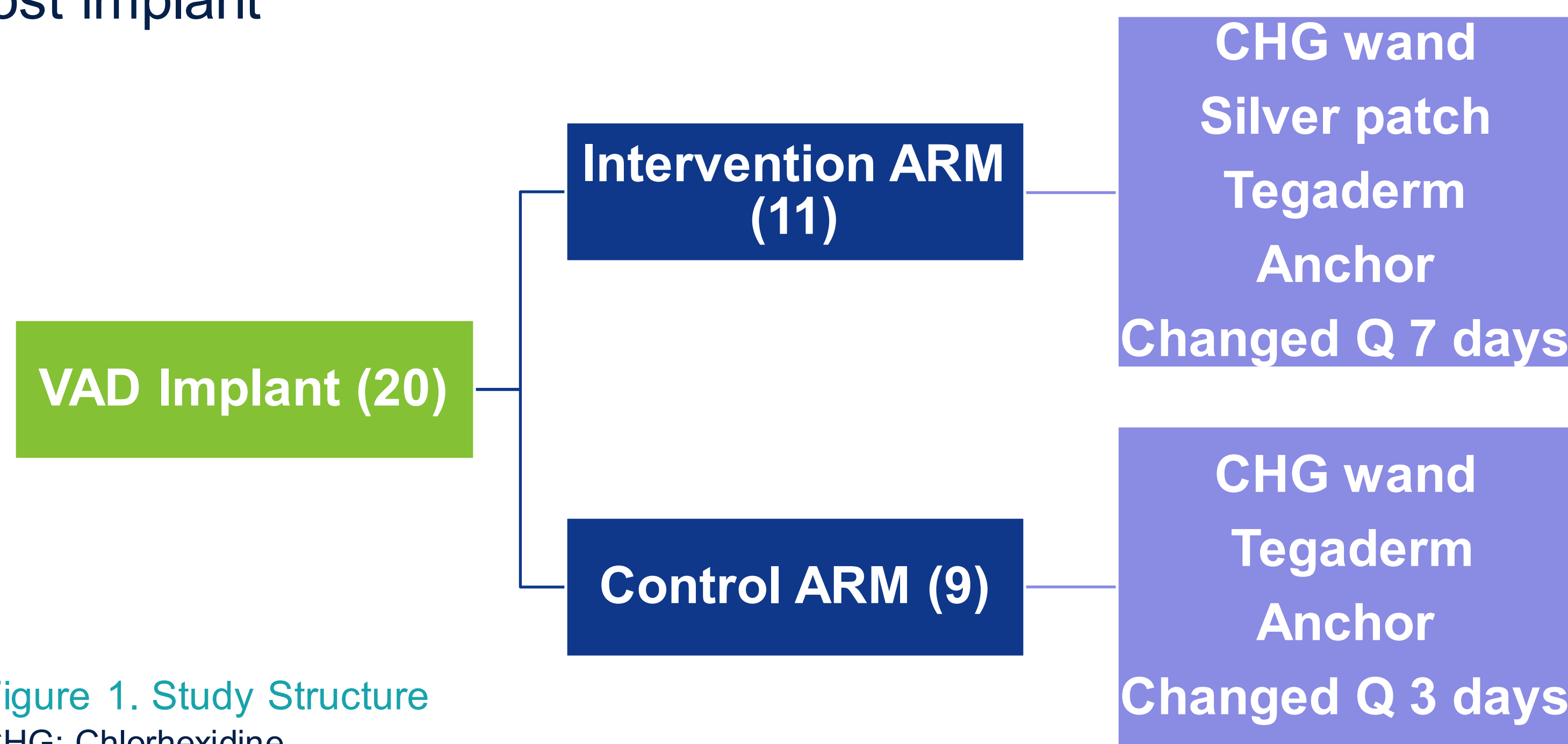


Figure 1. Study Structure
CHG: Chlorhexidine

Silver Dressings



End points evaluated were

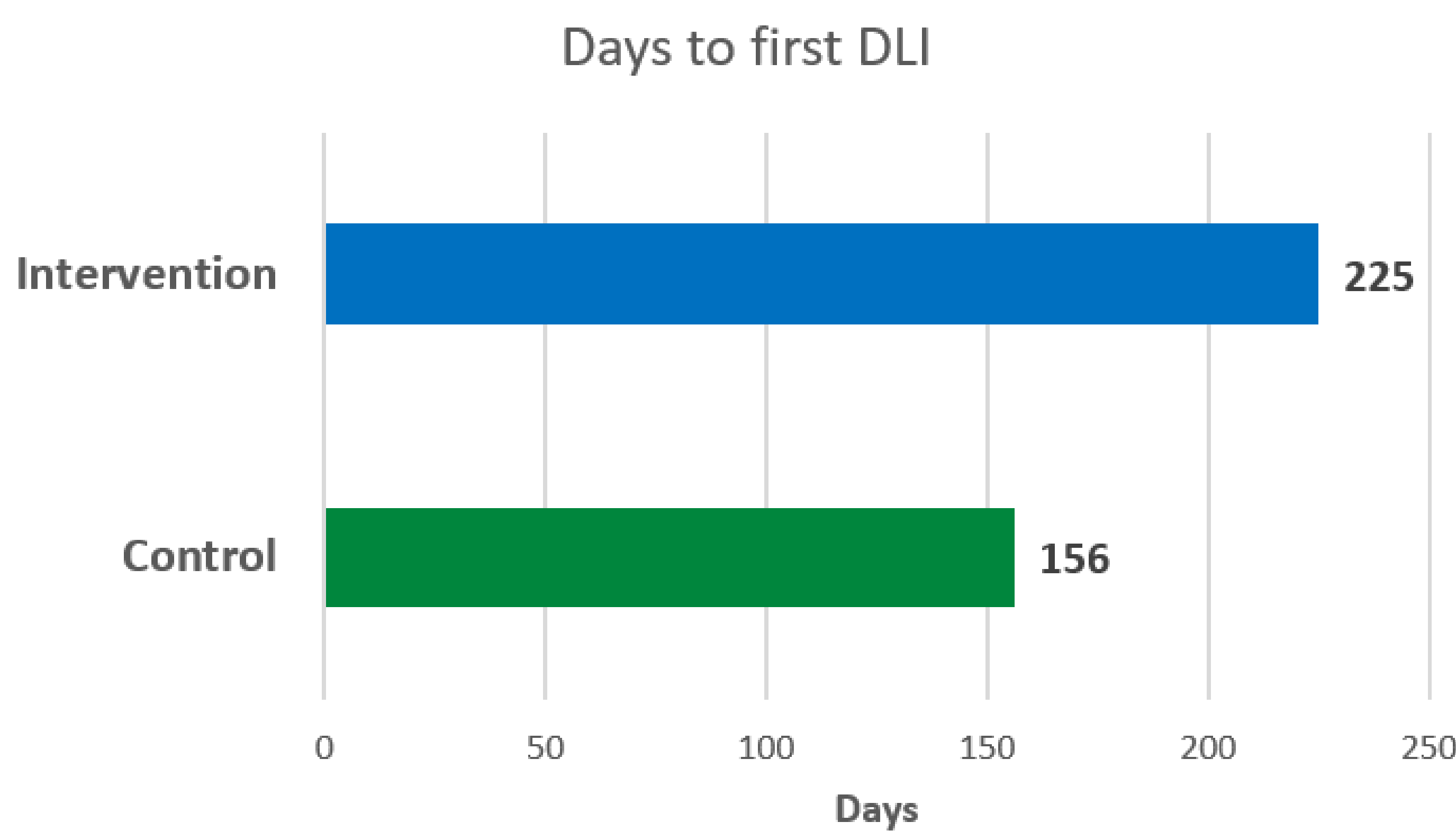
- DLI rate
- Time to first DLI

Results

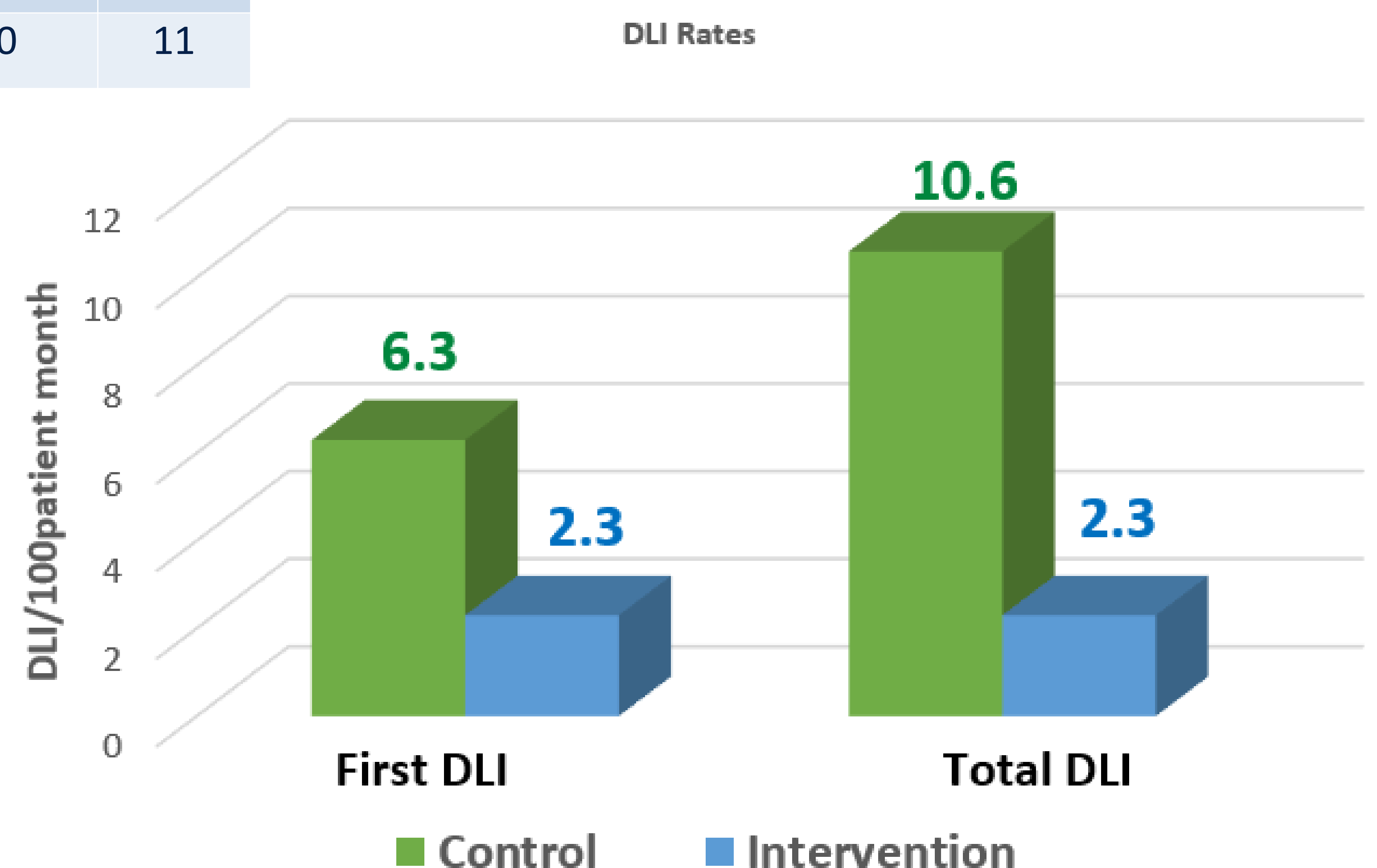
We enrolled 20 patients, 11 randomized to the intervention arm and 9 to the control arm. Baseline characteristics are highlighted in Table 1.

Arm	Mean age at implant (years)	BMI (mean ± SD)	Male (%)	INTERMACS Profile 1-2 (%)	White (%)	Hispanic (%)	Black (%)
Control	45	38 ± 5.5	78	33	22	22	55
Intervention	50	29 ± 4.9	100	68	40	40	11

Table 1: Baseline Characteristics
BMI: Body Mass Index



Graph1. Time to first DLI in days
DLI: Driveline Infection Rate



Graph 2. DLI Rates
DLI: Driveline Infection Rate

Conclusion

A driveline dressing protocol that includes addition of a silver patch surrounding the driveline and a weekly dressing change provides protection against DLI. The study is limited by the small sample size, the single center implementation and the results remain preliminary.

Acknowledgments

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