



CLINICAL DOCUMENTATION OVERVIEW

Long-Term Study Results: LoFric vs. Conventional Catheters

Clean Intermittent Catheterization in Spinal Cord Injury Patients: Long-Term Follow-up of a Hydrophilic Low Friction Technique, Waller, Jonsson, Norlen, Sullivan, *Journal of Urology*, February 1995

Numerous long-term studies in patients on self-catheterization using conventional plastic catheters have shown patients experiencing complications in the urethra. This twelve-year study was done to see if use of the LoFric catheter helped reduce catheterization-related complications in the urethra, particularly in the long-term. Participants were evaluated every year or every two years and, in between, were asked to submit urine every other month for testing.

Study details

- Average follow-up: 7 years
- 30 spinal cord injured adults: 26 male, 4 female
- All used the LoFric catheter

The results

No new trauma, surgeries, or incidents of complications occurred in the urethra in any of the 30 patients after starting self-catheterization on LoFric over an average time period of seven years. In contrast, in long-term studies done with conventional catheters, 20-40% of participants have experienced urethral complications.

Frequency of Urinary Tract Infections: LoFric vs. Conventional Catheters

A Prospective Randomized Trial of the LoFric Hydrophilic Coated Catheter Versus Conventional Plastic Catheter for Clean Intermittent Catheterization, Vapnek, Maynard, Kim, *Journal of Urology*, March 2003

This one-year study was done to compare how often urinary tract infections (UTIs) occurred in patients using the LoFric catheter vs. patients using conventional plastic catheters.

Study details

- 62 adult male patients
- All were using conventional catheters prior to the study
- Half of the participants used LoFric for the study period
- Follow-up: every 3 months

The results

By the end of the study, the LoFric group had a 71% reduction in infections, but the group using conventional catheters only had a reduction of 30%. In addition, patients in the LoFric group had 52% less blood in the urine compared to the patients in the conventional catheter group.

Frequency of Inflammation: LoFric vs. Conventional Catheters

Urethral Cytology in Spinal Cord Injury Patients Performing Intermittent Catheterisation, Vaidyanathan, Soni, Dundas, Drishnan, *Paraplegia* (32) 1994

In this study, the authors measured the amount of inflammation that occurred in the urethras of the patients using the LoFric catheter vs. patients using conventional plastic catheters with gel.

- Study details**
- 31 patients: 14 using conventional catheter
17 using LoFric catheters
 - Follow-up: 24 days for conventional catheter group
151 days for LoFric group

The results

While 64% of the conventional catheter group had urethral inflammation, only 6% of the LoFric group had inflammation. This shows that the conventional catheter group had a greater amount of inflammation even though they catheterized more than 6 times as long as the LoFric group. It was also found that significantly more bacteria formed in the patients using the conventional catheters.

Clean Intermittent Catheterization in Boys Using the LoFric Catheter, Sutherland, Kogan, Baskin, and Mevorach, Department of Urology, UCSF, San Francisco, *Journal of Urology*, December 1996

This study evaluated the frequency of blood found in the urine of boys.

- Study details**
- 33 boys experienced in self-catheterization
 - Study duration: 8 weeks, weekly follow-up
 - 17 boys used LoFric, 16 used leading plastic catheter

The results

The boys using the conventional plastic catheters had blood and bacteria in the urine almost twice as often than the boys using LoFric.

Comparison of Urethral Trauma, Catheter Removal Friction: LoFric vs. Hydrophilic Catheters without Sodium Chloride Coating

The Importance of Osmolality in Hydrophilic Urethral Catheters: A Crossover Study, Waller, Telander, Sullivan, *Spinal Cord* (35) 1997

LoFric is the only hydrophilic catheter available that has sodium chloride (salt) added to its surface. The special surface is what makes the LoFric catheter very slippery. The purpose of adding the sodium chloride is to prevent the water layer from coming off the catheter inside the urethra, which can cause the catheter to stick once the catheter has been inserted. This study evaluated spinal cord injury patients and was done to compare the performance of the LoFric catheters to hydrophilic catheters without the sodium chloride coating.

- Study details**
- 14 male patients
 - 10 days with LoFric catheter, 10 days with other catheter
 - Total of 526 friction tests

The results When LoFric was used, removal friction levels were 55% lower than with the other hydrophilic catheter without sodium chloride in its coating. In addition, the nurse reported that sticking occurred 42 times with the other hydrophilic catheter and just 3 times with LoFric, showing that the surface on the LoFric catheter was crucial in reducing friction inside the urethra.

Patient Satisfaction Studies: LoFric vs. Conventional Catheters

Two patient satisfaction studies have been done with LoFric - one in adults and one in children. These studies were done to compare the LoFric catheter to previously used catheters in terms of convenience, ease of handling, comfort and overall opinion.

Study 1: Patient Satisfaction and the LoFric Catheter for Clean Intermittent Catheterization, Diokno, Mitchell, Nash, Kimbrough, Journal of Urology, February 1995

- Study details**
- 41 adults: 25 experienced in self-catheterization, 16 just starting out
 - All patients used LoFric for one month

Study 2: Clean Intermittent Catheterization in Boys Using the LoFric Catheter, Sutherland, Kogan, Baskin, and Mevorach, Department of Urology, UCSF, San Francisco, Journal of Urology, December 1996

- Study details**
- 33 children experienced in self-catheterization
 - 17 used LoFric, 16 used a leading catheter
 - Length of study was 8 weeks
 - Follow-up: weekly

The results In the two studies, both new and experienced self-catheterization patients rated LoFric to be highly superior to conventional catheters in terms of insertion comfort and convenience. Although both types of catheters were rated similarly in terms of ease of handling, 81% of experienced patients in both studies rated LoFric to be superior to conventional catheters overall and wished to continue using LoFric following the study. In addition, the children using the conventional catheters in study 2 experienced almost twice the number of episodes of blood in the urine, compared to the children using LoFric.

Please contact Astra Tech toll free at 1-877-4-LOFRIC (877-456-3742) to request study reprints.