



Urethral Foley Catheter Duration Following Ureteroneocystostomy: A Comparison of Outcomes

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INTRODUCTION

Foley catheter insertion is common following reconstructive bladder surgery; however, current literature is sparse on whether postoperative catheter duration has any association with surgical outcomes.

We sought to assess postoperative outcomes of ureteroneocystostomy (UNC) based on length of Foley catheter duration. We hypothesized that a longer duration of catheter treatment adversely affects patient outcomes over our period of interest.

METHODS

Retrospective record review, including use of preoperative retrograde nephrostogram; urine culture and urinary tract infection treatment prior to surgery; peri- and post-operative outcomes of surgical approach; evidence of urine leak; catheter, stent, and Jackson-Pratt drain duration; length of hospital stay; complication rates (by Clavien-Dindo score) at admit, 30-, 90-days; readmission (within 90 days).

Study Population:

Adult patients status-post UNC (7/2012-2/2019):

- 107 open surgery, 38 robotic-assisted surgery (n=139; 6 underwent bilateral UNC, excluded).
 - 56 – simple reimplant
 - 28 – psoas hitch (with or without omental flap interposition)
 - 33 –boari flap (with or without peritoneal or omental flap interposition)
 - 22 – concurrent psoas hitch and boari flap

Groups:

Based on duration of Foley catheter:

- 1 to 7 days (group 1)
- 8 to 13 days (group 2)
- 14 or more days (group 3)

RESULTS

- Clavien-Dindo (C-D) scores varied from 0.37 at admit to 0.77 at 90-day follow up.
- Patients in Group 3 suffered from significantly higher C-D scores in all three periods of observation.
- A highly significant relationship exists between Foley catheter duration and C-D score at inpatient evaluation, 90-day follow up, and their three observation average.
 - On average, each additional day with a catheter increases the average C-D score by 20% of the standard deviation with the effect of Foley catheter duration most pronounced at 90-day follow up.
- Moving from a classification category of less than 14 days of Foley catheter duration to 14 or more days of Foley catheter duration increases:
 - Average C-D score by 0.41 points
 - Inpatient C-D score by 0.45 points
 - 90-day C-D score by 0.52 points

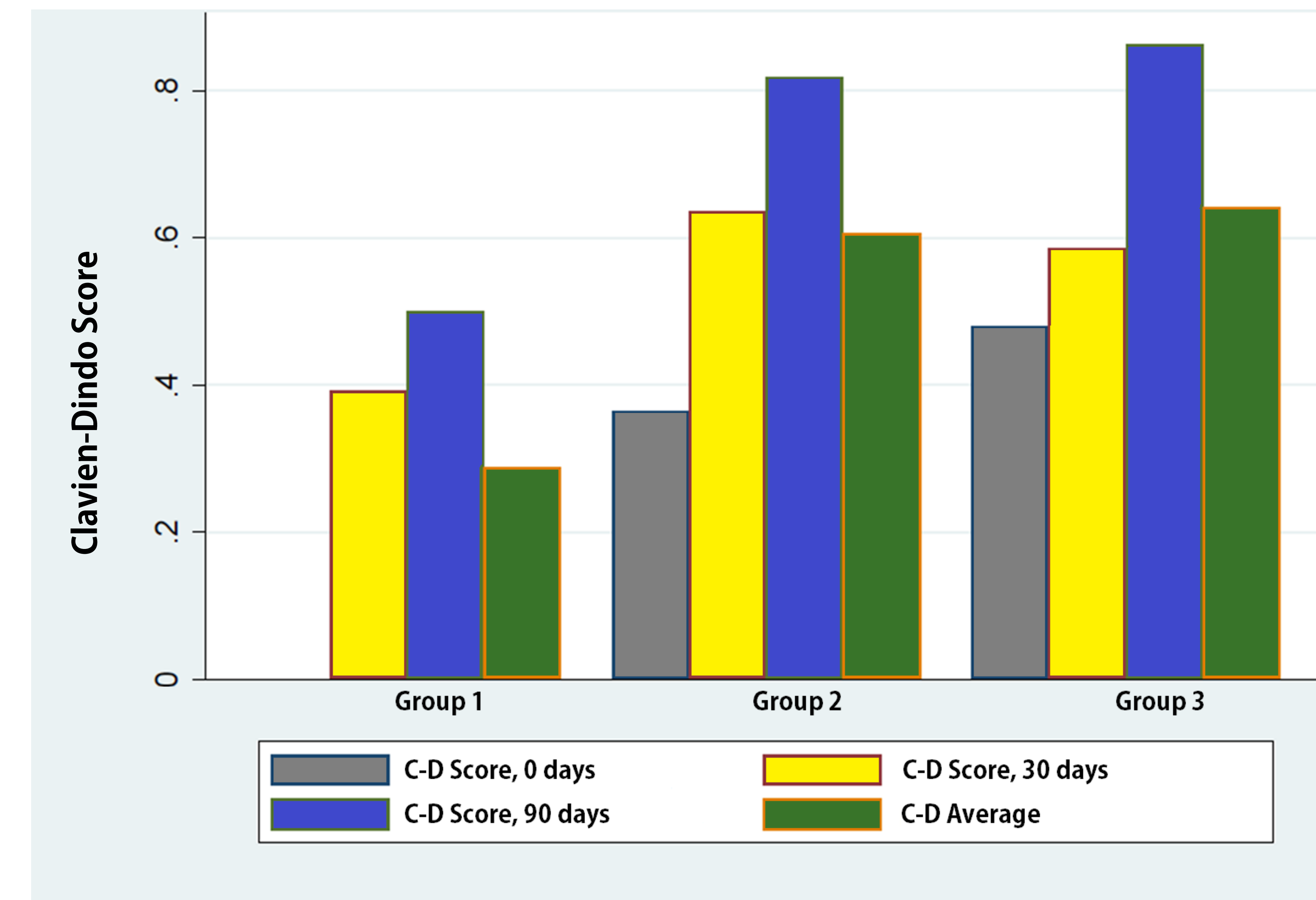


Figure 1: bar graph demonstrating average C-D scores for Group 1 (1 to 7 days of Foley catheter duration), Group 2 (8 to 13 days of Foley catheter duration), and Group 3 (14 or more days of Foley catheter duration) at time of admit, 30-day follow up, 90-day follow up, and average C-D score across all three periods observation.

CONCLUSIONS

Our analysis suggests that there is a positive relationship that indwelling catheter length of 14 or more days increases the likelihood of post-operative complications, similarly supporting our hypothesis.