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LONG-TERM MANAGEMENT OF NEUROPATHIC PATIENTS WITH INDWELLING TRANSURETHRAL CATHETER OR SUPRAPUBIC CYSTOSTOMY: WHAT IS BETTER?

Hypothesis / aims of study:
The optimal management of neurogenic bladder (NGB) continues to be controversial. Clean intermittent catheterization (CIC) is considered the gold-standard approach for neuropathic voiding dysfunction. However, CIC can present significant difficulty to some patients (pts). In this subset of pts, use of an indwelling catheter (transurethral (Foley) or suprapubic cystostomy (SPT)) may be the best option. Our objective was to determine which of the two techniques is better (based on morbidity rates) in the long term management of NGB.

Study design, materials and methods:
44 pts with Foley, SPT or both were suitable to a retrospective review. Those pts were divided into two comparable groups: Foley or SPT. 8/44 were managed with both a Foley and SPT at different times. Those pts were added to both study arms for the respective time period their bladder was managed with that specific method. This resulted in a total of 52 evaluable pts: Foley 35 and SPT 17. Outcomes were compared between the two with a focus on the potential morbidities associated with a catheter. Comparative variables either numerical or categorical were analyzed using the t test or Fisher exact test, respectively. $P<0.05$ considered to be statistically significant.

Results:
Both groups had mostly males at a similar age but SPT pts tended to be younger at injury. Trauma was the most common etiology (22/35 vs 15/17, p=0.11) for NGB. There was no significant difference in different study variables (UTI, asymptomatic bacteriuria, stone formation rate, macroscopic hematuria and creatinine) in both groups. However, significantly fewer patients with SPT underwent any change of their bladder management (p=0.005) (Table1). Unlike pts with a Foley, there were no urethral complications (traumatic hypospadias-3, urethrocutaneous fistula-2, urethral stricture-2, perineal sore/penile skin necrosis-6) in the SPT group (p=0.023). Similar proportion of pts remained on continuous F/U (Foley 19/35 vs SPT 11/17, p=0.55).

Table1: Changes in Bladder Management

Bladder Management	Foley (no. of pts)	SPT (no. of pts)
CIC	6	1
SPT	7	n/a
Reflex Voiding	1	0
Bladder Reconstruction	0	1
Urinary Diversion	2	1

Interpretation of results
Pts with Foley or SPT had similar frequency of UTIs, asymptomatic bacteriuria, stones or hematuria. However, pts that managed their bladder with SPT had lower frequency of changes in bladder management and had no urethral damage since SPT insertion had been done. Disadvantage of our results were that they included only retrospective review of medical records and only 54% and 64% of patients left in long term follow up after Foley or SPT placement, respectively. Our experience with patients with NGB was similar to previously described studies [1].

Concluding message
Neuropathic pts who manage their bladder either with Foley or SPT have similar rates of UTI, asymptomatic bacteriuria, stone formation, macroscopic hematuria and deterioration in blood creatinine during their F/U. However, fewer pts with SPT needed to have any change of their bladder management. Pts with Foley had significantly more urethral complication issues than pts with SPT.

References
1. Katsumi HK et al. Urethral versus suprapubic catheter: choosing the best bladder management for male spinal cord injury patients with indwelling catheters. Spinal Cord. 2010 Apr;48(4):325-9. Epub 2009 Oct 13.

Disclosures
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