

## TRANSVAGINAL BLADDER NECK CLOSURE: A LESS INVASIVE APPROACH TO THE MANAGEMENT OF A DESTROYED URETHRA

### Hypothesis / aims of study

An inevitable consequence of chronically urethral catheterized female patients with a neurogenic bladder is an incompetent urethra leading to leakage around the catheter. This is often managed by increasing the catheter size and/or the volume in the retaining balloon. Eventually these common practices lead to further urethral dilation and an incompetent urethra. The social embarrassment and skin breakdown from the incontinence can place significant demands on the patient and/or caregiver. Surgical options for this unique patient population is often compounded by medical comorbidities, obesity, poor nutritional status, and limited functional capacity. [1] Bladder neck suspension and suburethral slings are insufficient at providing continence thereby making bladder neck closure and suprapubic catheter placement a feasible alternative. Transabdominal bladder neck closure has been reported to have a lower risk of failure; however, it also has increased morbidity. [2] Conversely, a transvaginal bladder neck closure affords a less invasive approach to a complex problem with quicker recovery while achieving satisfactory clinical continence in this difficult group of patients. [1,3]

### Study design, materials and methods

A retrospective analysis was performed in a cohort of female patients who had undergone transvaginal bladder neck and suprapubic catheter placement at a single institution by a single surgeon. All patients had an incompetent urethra secondary to the use of a chronic indwelling urethral catheter manifested by leakage around the catheter. Data reviewed included demographics, cause of neurogenic bladder, medical comorbidities, length of hospital stay, complications, and clinical continence.

### Results

Four patients underwent transvaginal bladder neck closure and suprapubic catheter placement. The etiology of neurogenic bladder included spinal cord injury secondary to MVC, multiple sclerosis, and pathologic fracture of the spine. Average age and length of foley catheter use was 44.75 years and 7 years, respectively. Hospital stay averaged 3.5 days with a range of 1-7 days. 75% of patients were clinically continent with a mean post operative follow-up of 5.2 months (range 3- 8 months). One of these patients had an improvement from global incontinence to minor stress incontinence that is being managed conservatively.

### Interpretation of results

Transabdominal bladder neck closure has been described in the literature to have a lower risk of fistulas and failure; however, it carries increased morbidity and hospital stay in a patient population with multiple complex medical problems. [2] Transvaginal bladder neck closure is reported to have a failure rate of 17 to 60% with patients developing fistulas and flord incontinence. In our experience, transvaginal bladder neck closure and suprapubic tube placement affords a less invasive approach to the incompetent urethra with a mean hospital stay of 3.5 days (1,2,4,7 days) while achieving clinical continence. One patient was initially dry at 1 month follow-up; however, developed an obstructed SPT and now has minor stress incontinence.

### Concluding message

Transvaginal bladder neck closure with suprapubic catheter placement is a less invasive approach when compared to its transabdominal counterpart for female patients with a neurogenic bladder and incompetent urethra secondary to prolonged urethral catheter drainage. While peri-operative morbidity may not be insignificant, continence rates are satisfactory.

### References

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### Disclosures

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