Poster 156: Safety and Efficacy of OnabotulinumtoxinA Injections in the Setting of Suprapubic Catheters

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BACKGROUND/RATIONALE

- In patients with suprapubic tubes (SPTs), urinary leakage per urethra or around the tube is a common complaint often refractory to medical therapy
  - Intradetrusor onabotulinumA (BTX-A) may be considered a "next step"
- Benefits of BTX-A injection must be balanced with risk factors inherent to indwelling catheters including bacterial colonization and chronic inflammatory changes to bladder mucosa
- This study assessed if intradetrusor BTX-A in the setting of existing or concomitantly placed SPT is a safe and efficacious treatment of urinary leakage

METHODS

- A retrospective review was performed of all patients who underwent BTX-A injection with an in situ SPT or during concomitant SPT placement at a single institution from 2007-2017
- Abstracted data included:
  - Pre-procedure urinalysis and culture and peri-procedural use of antibiotics
  - 30 day post procedure urinary tract infection (UTI), bleeding, or hospitalization
  - Degree of perceived improvement
- Statistics performed:
  - Patient characteristics – chi-square or t-test
  - Outcomes- univariable and multivariable logistic regression models

RESULTS

Table 1. Patient Demographics

Patients (n=50)	**n, (%)**
Female	43, (86)
Male	7, (14)
Mean Age	59 years (16-82)
Mean BMI	30.1 kg/m^2 (15.8-55.9)
Mean # of total BTX-A treatments/patient	4 treatments (1-12)
Overlapping Indications for BTX-A:	**%**
Neurogenic Bladder:	86
Urinary Incontinence:	52
Urinary Frequency/Urgency:	30
	n, (%)
In Situ SPT at first BTX-A:	30, (60)
Concomitant SPT at first BTX-A	20, (40)

Table 2. Complications After First BTX-A Injection

	In Situ and Concomitant SPT (n=50) at time of BTX-A n (%)	Concomitant SPT (n=20) at time of BTX-A n (%)	In Situ SPT (n=30) at time of BTX-A n (%)	p value
Overall Complication Rate	6 (12%)	4 (20%)	2 (6%)	0.16
Urinary Tract Infection	2 (4%)	1 (5%)	1 (3%)	0.77
Bleeding/ Hematuria	3 (6%)	2 (10%)	1 (3%)	0.33
Hospitalization	1* (2%)	1 (5%)	0 (0%)	0.16

*Of note, the patient who was hospitalized restarted warfarin the day after SPT + BTX-A, had hematuria and was admitted for clot evacuation

Efficacy

- 88% reported subjective improvement as well as decreased leakage (p=0.03) and went on to have an average of four BTX-A treatments (1-12)

Complications

- -Hematuria and UTI were the most common side effects
- There was no statistically significant difference in complication rate between patients with in situ vs. concomitantly placed SPT at first BTX-A

Urine Cultures and UTI Prevention

- 56% of patients had a + pre-procedural urine culture that was treated prior to procedure
- 44% received a post-procedure course of antibiotics
  - + pre-procedural urine culture correlated to increased likelihood of prescribed post-procedure antibiotics (OR: 3.56, p=0.04)
  - Post procedure antibiotic course did not cause a statistically significant difference in post procedure UTI rate
    - 22 patients received an antibiotic course after first BTX-A and one (4.5%) had a post procedure UTI compared to the 1 of 27 patients (3.7%) who did not receive post procedure antibiotics and had a UTI (OR: 0.82, p = 0.88)
- 28 patients were managed with a catheter associated urinary tract infection (CAUTI) irrigation regimen during their management
- 19 patients (38%) were on CAUTI regimen prior to first BTX-A (n =12 for in situ SPT and n =7 for concomitant SPT patients), none of whom (0%) had a post procedure UTI

CONCLUSIONS

Intradetrusor BTX-A injection appears to be safe and efficacious in patients with in situ and concomitantly placed SPTs, with the most common complication being UTI or bleeding.

The risk factors of chronic colonization and mucosal changes associated with an in situ tube and the extra bladder puncture executed with concomitant SPT placement did not contribute to a statistically significant difference in UTI or bleeding rates between sub groups

CAUTI regimens initiated prior to first BTX-A injection may help minimize complication rates of UTI and post procedure antibiotic course does not appear to decrease UTI rate

BTX-A injections should continue to be considered for diminishing urinary leakage in this challenging to manage population