

# Prospective Evaluation of Intradetrusor Injections of OnabotulinumtoxinA in Adults with Spinal Dysraphism

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## Introduction

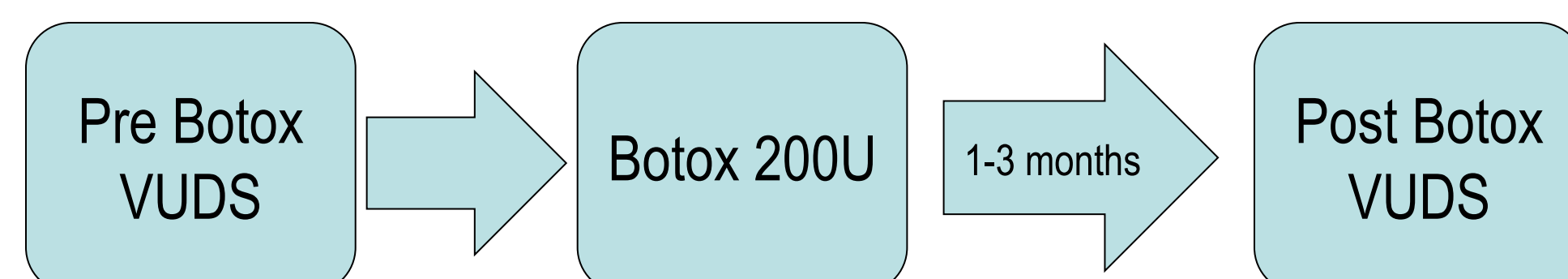
- Up to 90% of patients with congenital spinal dysraphism (CSD) develop lower urinary tract symptoms in a complex classified as neurogenic overactive bladder (NOAB).
- Current literature in treatment of NOAB in patients with CSD is concentrated in the **pediatric** population
- We aim to evaluate the efficacy of intradetrusor injection onabotulinumtoxinA (BTX-A) for NOAB in **adults** with CSD

### Objectives:

- To evaluate **subjective** symptom changes after intra-detrusor injections of BTX-A in adult CSD with NOAB. The primary outcome will be improvement in symptom scores via **validated questionnaires**.
- To evaluate **objective** changes after intradetrusor injections of BTX-A in adults with CSD using **urodynamic parameters**.

## Materials and Methods

- This is a prospective, single center non-randomized study of the effects of intradetrusor injections of BTX-A in adult CSD patients with NOAB.
- Current data with 12 out of a predicted sample of 24 patients who meet criteria received 200 U intradetrusor BTX-A injections.
- Patients are evaluated at baseline and then 1-3 months after injection of BTX-A with validated questionnaires and video urodynamic study (VUDS).



## Patient Demographics

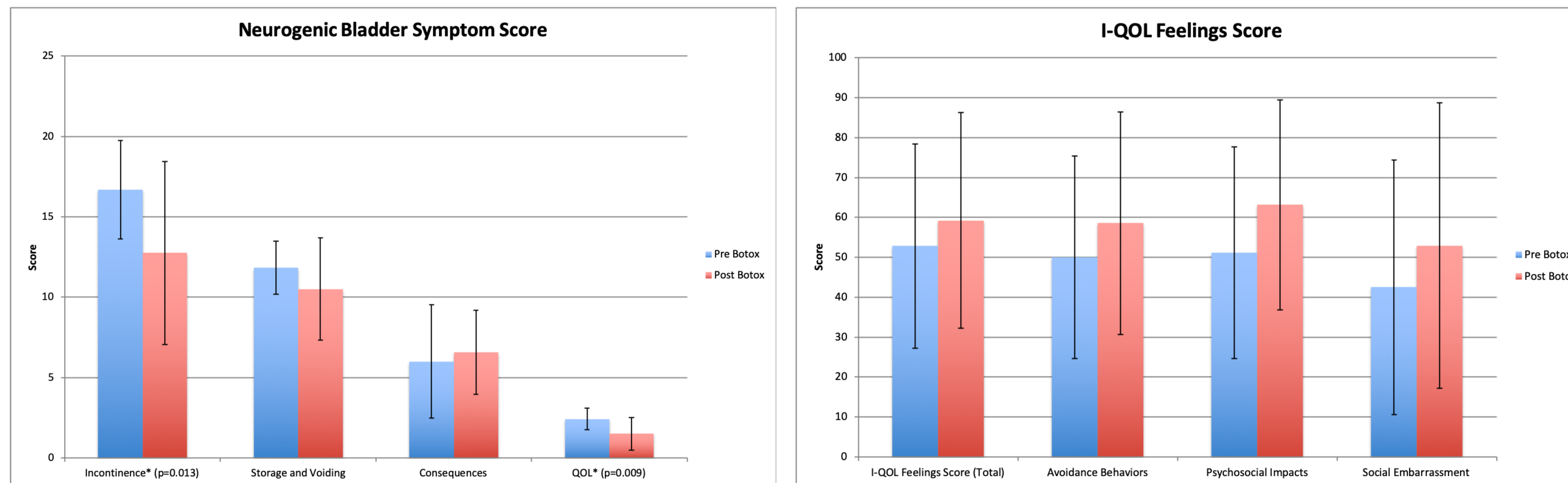
Patient Characteristics	N (%)	Mean (range)
Number of patients	12	
Gender		
Male	4	
Female	8	
BMI		28.5 (21-38.3)
Ethnicity		
White/Caucasian	8	
Black/African American	4	
Type of spinal dysraphism		
Myelomeningocele	9	
Sacral agenesis	2	
Cloacal extrophy	1	
Posterior urethral valves		
Age		26.9 (21-36)
Mobility		
Ambulatory	6	
Non-ambulatory	6	
Emptying technique		
CIC ( via channel or urethra)	10	
Spontaneous voiding	2	
Previous Intravesical Botox Injection	10	
Current anticholinergic or B3 agonist use	4	
Presence of augmentation cystoplasty (y/n)	4	

## Results (Table)

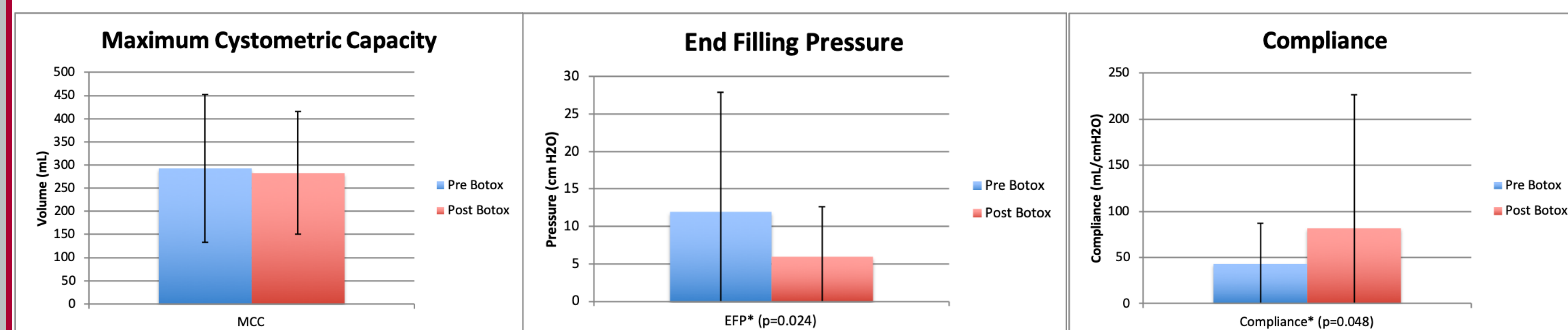
Subjective Variables	Pre-Botox (SD)	Post-Botox (SD)	P value
I-QOL Feelings Score (Total)	52.84 (25.62)	59.19 (27.02)	0.194
Avoidance Behaviors	50 (25.35)	58.59 (27.89)	0.198
Psychosocial Impacts	51.11 (26.54)	63.19 (26.3)	0.664
Social Embarrassment	42.5 (31.94)	52.92 (35.77)	0.054
Neurogenic Bladder Score			
Incontinence	16.67 (3.06)	12.75 (5.69)	0.013
Storage and Voiding	11.83 (1.64)	10.5 (3.18)	0.12
Consequences	6 (3.52)	6.58 (2.61)	0.657
QOL	2.42 (0.67)	1.5 (1.0)	0.009
Objective variables			
Maximum Cystometric Capacity	307.83 (159.72)	296.58 (133.23)	0.832
EFP	15.83 (15.94)	7.83 (6.64)	0.024
Compliance	44.05 (44.07)	113.48 (144.43)	0.048

## Results (Charts)

### Subjective Evaluation Through Validated Questionnaire Scores



### Objective Evaluation Through Urodynamic Measurements



## Interpretation of Results

- Initial findings show BTX-A injection may improve:
  - Subjective urinary symptom reporting
  - Bladder compliance
- There are no significant differences in objective measured urodynamic parameters such as maximum cystometric capacity (MCC)

## Conclusions

- Intradetrusor BTX-A in adults with CSD and NOAB may improve subjective urinary complaints and objective measurements such as bladder compliance
- Further data is needed to evaluate the efficacy and utility of BTX-A in adults with CSD

## Acknowledgement

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## References

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