

# Botox® to treat Levator Spasm and Obstructed Defecation

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## Background

Dysynergic defecation (DD) and Levator ani syndrome (LAS) are clinical conditions related to spasm of the pelvic floor muscles.

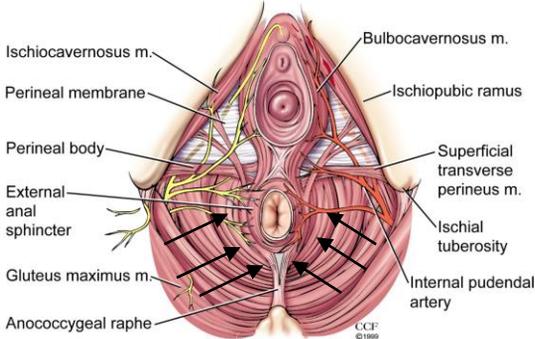
Botox® has been used successfully to treat LAS in doses between 20 to 200U,<sup>1,2</sup> and anal fissures, in dose between 10 to 30U.<sup>3,4</sup>

We aimed to evaluate the safety and the efficacy of Botox® injections to relieve symptoms of levator spasm.

## Methods

- IRB approval.
- Single-institution, retrospective electronic medical records review between Jan 2011-December 2016.
- Billing data queried for CPT 46505 (chemodenervation of internal anal sphincter) and ICD-9 564.6 (anal spasm) and 564.02 (outlet dysfunction constipation).
- 30-day complication defined as a major event requiring an intervention.
- Symptoms 4 weeks after treatment were compared to preoperative symptoms and recorded as improved (improvement of pain in LAS, or evacuation improved in ODS) or not improved.
- Patients returned in case of recurrent symptoms.
- Repeated injections were administered for recurrent symptoms if an improvement was detected after the first procedure (no less than 6 weeks after the previous procedure).

## The technique of Botox® injections



Injections done under general anesthesia, in lithotomy position, 100 or 200U of Botox® diluted in 3 or 6ml of saline injected into the levator ani muscle. Injections were administered posteriorly posterolaterally and laterally either via intra-anal or perianal.

## Results

The total of 75 patients were submitted to Botox® injections. Of these, 42 had ODS and 33, LAS. Median follow-up was 5 months (IQR, 2-11). There were no 30-day complication reported. Five patients reported mild transient fecal incontinence or urgency.

## Results

ODS PATIENTS	NOT IMPROVED N(%)	IMPROVED N = (%)	p
AGE (SD)	48 (32 – 64)	47 (31– 33)	0.43
FEMALE	9 (60)	13 (68)	0.61
BMI ≥ 25	7 (47)	15 (79)	0.05
PELVIC FLOOR PT	6 (40)	11 (58)	0.3
ODS PATIENTS	15 (44)	19 (56)	
SINGLE PROCEDURES	10 (67)	11 (58)	
MULTIPLE PROCEDURES (range 2-5)	5 (33)	8 (42)	0.60
BOTOX® 200U Single	4 (44)	8 (57)	
BOTOX® 200U Multiple	5 (56)	6 (43)	0.68
BOTOX® 100U Single	6 (100)	3 (60)	
BOTOX® 100U Multiple	0 (0)	2 (40)	0.18
LAS PATIENTS	NOT IMPROVED N(%)	IMPROVED N = (%)	p
AGE (SD)	53 (39 – 67)	52 (39 – 65)	0.43
FEMALE	9 (64)	9 (69)	0.81
BMI ≥ 25	4 (29)	10 (67)	<b>0.04</b>
PELVIC FLOOR PT	3 (21)	7 (47)	0.24
LAS PATIENTS	14 (48)	15 (52)	
SINGLE PROCEDURES	7 (50)	6 (40)	
MULTIPLE PROCEDURES (range 2-7)	7 (50)	9 (60)	0.59
BOTOX® 200U Single	7 (54)	4 (33)	
BOTOX® 200U Multiple	6 (46)	8 (67)	0.3
BOTOX® 100U Single	0 (0)	2 (67)	
BOTOX® 100U Multiple	1 (100)	1 (33)	1.0

## Conclusions

Botox® injections after failed conservative management improve symptoms of dysynergic defecation in 56% and pain of LAS in 52% patients.

High doses of Botox® injections into levators can be safely given and may improve symptoms of dysynergic defecation and levator spasm.

Repeated injections in patients who have relief of symptoms may be necessary to sustain results.

## References

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