

827: Are botulinum toxin injections effective and safe for the treatment of refractory overactive bladder in elderly patients? Comparative analysis based on age group.



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Hypothesis / aims of study

Overactive bladder is a condition whose prevalence increases with age. This, combined with the aging population, results in a greater number of elderly patients requiring treatment. The first line of treatment consists of detrusor relaxant medications, with the injection of botulinum toxin reserved for refractory patients.

The deleterious effects of anticholinergic treatment are well-known, especially in elderly and frail patients, although the efficacy and safety profile of botulinum toxin in this patient group is not clearly established. (1)

The objective of the present study is to perform a comparative analysis of efficacy, safety, and treatment adherence with botulinum toxin in older and younger women (under 75 years) with overactive bladder, based on age.

Study design, materials and methods

A retrospective analysis was conducted on women with refractory overactive bladder who were treated for the first time with a 100 IU injection of onabotulinumtoxin A from January 2019 to March 2023.

Exclusion criteria:

- Neurogenic patients.
- Reinjections.

The procedure was performed on an outpatient basis under sedation or local anesthesia, with a prior urine culture.

Preoperative evaluation :

- Bladder diary
- Urodynamic study
- Number of pads used

Postoperative evaluation : Postoperative evaluation included

- Subjective assessment of satisfaction level (0-10)
- Number of pads used
- Bladder diary .

Complications after injection were evaluated according to the Clavien-Dindo classification.

A comparative study was conducted between the age groups (under 75 years and 76 years and older).

Group 1	Group 2
≤ 75 years	≥ 76 years
18-75 years	76-91 years
N: 52	N: 22

Data analysis was conducted using IBM® SPSS® v.22.0 (IBM Corp., Armonk, NY, USA). Parametric continuous data are expressed as means and standard deviations while categorical data are expressed as numbers and percentages. Pre and postoperative variables were compared using Student's t-test for paired samples in the case of variables with a normal distribution, the ANOVA test for variables with a non-normal distribution, and the chi-squared test for categorical variables.

Results and interpretation

N: 74	Group 1 (≤ 75 y) N: 52	Group 2 (≥ 76 y) N: 22	
BMI	27 ± 7.9	28 ± 5.4	P: 0.8
DM	8 (15%)	6 (27%)	P< 0.02
HTA	14 (29%)	14 (63%)	P< 0.05
Movility impairment	6 (11.5%)	8 (36%)	P< 0.0001
Cognitive impairment	3 (5.7%)	5 (23%)	P< 0.0001
Charlson comorbidity index	1±1.5	1±1.6	P 0
Recurrent UTI	13 (25%)	3 (13%)	P<0.05
Day time frequency	10.3 ± 4.4	10 ± 4.9	P 0.9
Night time frequency	2.9 ± 2.04	3.1 ± 0.8	P 0.56
Pads	3 ± 2.3	3.5 ± 2.1	P 0.3

Table 1: Baseline population characteristics

N: 74	Group 1 (≤ 75 y) N: 52	Group 2 (≥ 76 y) N: 22	
Subjective outcomes	50 (95%)	16 (74%)	P< 0.001
▼ Daytime frequency	2.5 ± 2.7	2 ± 1.8	P 0.56
▼ Nighttime frequency	1.9	0.6	NS
▼ Pads	2.2	1	NS
Time response	10±6	15±9	P< 0.05
Reinjection rate	28 (53.8%)	12 (54%)	P 0.9

Table 2 : Functional Results

N: 74	Group 1 (≤ 75 y) N: 52	Group 2 (≥ 76 y) N: 22	
Posterior UTI	9 (17%)	4 (17%)	P 0.9
Postvoid residual volume	102±113	104 ±117	p 0.66
Voiding symptoms	12 (23%)	4 (17%)	NS

Table 3 : Complications

- Based on our comparative analysis, elderly patients did not experience higher complication rates compared to younger patients. In our series, elderly patients had similar comorbidities to younger patients, so these results may not be extrapolated to frail patients (2).
- Based on our results, elderly patients had poorer response compared to younger patients, likely due to the presence of other factors involved in incontinence (such as underlying sphincter function).
- Additionally, elderly patients showed less decrease in nighttime urination frequency, likely due to the multifactorial etiology of nocturia in these patients.
- Despite the worse results, elderly patients had longer response times with the same treatment adherence as younger patients.

Conclusions

Intradetrusor botulinum toxin injection is a safe technique in elderly patients without major comorbidities, without increasing complications compared to younger women.

However, we should caution about poorer results in this patient group compared to younger patients

References

1: Efficacy and safety of botulinum neurotoxin in geriatric patients with an overactive bladder: a multicenter study from Turkey. A Keles et al. Turk Geriatri Dergisi. June 2019. DOI: 10.31086/tjgeri.2019.93

2: Jiang Y-H, Liao C-H, Tang D-L, Kuo H-C (2014) Efficacy and Safety of Intravesical OnabotulinumtoxinA Injection on Elderly Patients with Chronic Central