Evaluating the Use of Botulinum Toxin for the Treatment of Detrusor Overactivity in Older Patients

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Aim of Study
To evaluate the outcomes of patients over the age of 70 who have received intra-detrusor botulinum toxin injection for the treatment of detrusor overactivity (DO) as compared with patients under the age of 70.

Methods
A retrospective chart review of all patients in our practice 18 years of age or older who received OnabotulinumtoxinA detrusor injections over a five year period for the treatment of DO was conducted. A total of 86 charts were included in our analysis. There were 51 patients in the age under 70 group and 35 patients aged 70 and older.

In order to analyze the association between age ≥70 years and post-injection urinary tract infection (UTI), retention and subjective improvement we fit generalized linear mixed models using the package ‘lme4’ in R. The focal predictor in our statistical models was age ≥70 years.

In addition to age, we examined the association between pelvic organ prolapse (POP), neurogenic bladder (NGB), catheter use, type II diabetes (DM) and injection number, with post-injection UTI, retention and subjective improvement. Statistical significance was set to 0.05.

Results

Post injection UTI:
Odds of UTI are 7.6 times higher in those with NGB than in those without NGB (p=0.03). Odds of UTI are 5.9 times greater in those over the age of 70 than in those under 70 years old (p=0.052). POP, DM and catheter use were not associated with UTI.

Urinary retention:
No significant associations were found with urinary retention.

Subjective improvement:
Age over 70 years is significantly associated with reduced odds of subjective improvement (p=0.023). Odds of reporting improvement are 83% lower in people over the age of 70. Odds of reporting improvement are 5.8 times higher in those with DM compared to those without DM (p=0.096).

Conclusions
Patients ≥70 are more likely to experience UTI and are less likely to report subjective improvement of their DO symptoms after intra-detrusor onabotulinumtoxin A injection.

Our findings shed important light on a frequently treated population of patients about which little is known. We hope that these findings allow for improved counseling of patients 70 years and older regarding their associated treatment risks and likelihood of symptom improvement.