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BOTULINUM TOXIN OUTCOMES FOR IDIOPATHIC OVERACTIVE BLADDER STRATIFIED BY INDICATION: LACK OF ANTICHOLINERGIC EFFICACY VERSUS INTOLERABILITY

Hypothesis / aims of study

Anticholinergic medication is a first line therapy for overactive bladder (OAB) symptoms. Anticholinergics are ineffective for some patients and intolerable for others. Intradetrusor botulinum toxin A (BTA) injections effectively improve OAB symptoms that are refractory to anticholinergic medications. We determined the success of BTA injections in patients undergoing the procedure due to lack of anticholinergic efficacy versus medication intolerability.

Study design, materials and methods

Retrospective chart review was performed on all patients undergoing intradetrusor BTA (BOTOX®, Allergan Inc., Irvine, California) injections from 2004 to 2009 for the management of refractory idiopathic OAB with or without urge incontinence. All patients failed anticholinergic medications due to either lack of efficacy or intolerable side effects. Patient outcomes following BTA injections (150 - 200 units) were compared based on reason for discontinuing anticholinergic medications (lack of efficacy versus intolerability). Successful BTA injections were defined as $\geq$ 50% symptomatic OAB improvement warranting repeat injections upon return of symptoms.

Results

70 patients were included in the study. Overall, 47/70 (67%) reported $\geq$ 50% symptomatic improvement following BTA injections. Stratified pre and post procedural variables between the two cohorts are listed in table 1.

Table 1

	Lack of efficacy	**Intolerable side effects**	**P value**
# of patients	49	21	
Age	65.2	62.9	NS
Gender (F:M)	40:9	18:3	NS
# of medications trialed	3.8	4.3	NS
BTA success (%)	30/49 (61%)	17/21 (81%)	0.09

Interpretation of results

Anticholinergic agents and botulinum toxin act at the acetylcholine receptor level to block neuromuscular transmission, the main mechanism for detrusor contractions. Intradetrusor botulinum toxin injection is a more direct method of blockade as there is no need for systemic drug levels to be achieved. We hypothesized that in patients for whom anticholinergic agents were associated with intolerable side effects (but were effective at controlling OAB symptoms), a better response to intradetrusor BTA would be achieved when compared to patients who had no efficacy with anticholinergics. While not achieving statistical significance, we noted a trend consistent with this hypothesis.

Concluding message

While not achieving statistical significance there is a trend toward BTA injections being more successful in patients with anticholinergic intolerability as compared to patients with poor medication efficacy. This information may be helpful when counselling patients with refractory OAB symptoms. Prospective, larger scale studies are warranted.

Specify source of funding or grant	**none**
Is this a clinical trial?	**No**
What were the subjects in the study?	**HUMAN**
Was this study approved by an ethics committee?	**Yes**
Specify Name of Ethics Committee	**MCW IRB**
Was the Declaration of Helsinki followed?	**Yes**
Was informed consent obtained from the patients?	**No**