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## DOES THE DEGREE OF BLADDER TRABECULATION PREDICT THE ONABOTULINUMTOXINA (BOTOX®) INJECTIONS OUTCOME IN SPINAL CORD INJURY PATIENTS?

### Hypothesis / aims of study

To assess the effect Onabotulinumtoxin A(BOTOX®) bladder injection on urodynamics variables in correlation with the degree of trabeculation in spinal cord injury(SCI) patients.

### Study design, materials and methods

We prospectively collected data of 83 consecutive SCI patients with refractory neurogenic bladder treated with 300u of BOTOX® in our institute between 2008-2010.

Urodynamics were conducted at baseline and 3 months post injections.

Patient s divided in to three groups according to cystoscopic findings of bladder trabeculation: group1(G1)(non or mild trabeculation),group2(G2)(moderate trabeculation with cellulules), group3(G3)(sever trabeculation with bladder diverticulum).quality of life(QOL) were assessed at the baseline and 3 months post injection using Urinary Distress Inventory (UDI-6) and Incontinence Impact Questionnaire (IIQ-7).

### Results

We have 41 patients inG1, 32 patients in G2 and in 10 patients in group3

Significant improvements in the QOL ,maximum cyctometric capacity(MCC) and maximum detrusor pressure(MDP) were seen 3 months post injection( $p < 0.001$  ).MCC increased significantly from  $224 \pm 62$ cc at baseline to  $333 \pm 98$ cc after 3 months and MDP decreased significantly from  $31 \pm 8$ cmh<sub>2</sub>o to  $20 \pm 7$ cmh<sub>2</sub>o after 3 months.

Sub group analysis showed a significant improvement in QOL, MCC and MDP in group (1and2) ,however MCC was not significantly increased in group3 (  $170 \pm 40$ cc at baseline and  $180 \pm 46$ cc after 3months ) but MDP significantly decreased from  $49 \pm 5$ cmh<sub>2</sub>o at baseline to  $39 \pm 5$ cmh<sub>2</sub>o after 3 months however it's still high pressure.

### Interpretation of results

Despite improving compliance in large number of patients, BOTOX® was not sufficient to overcome the stiffness in the poorly compliant bladders in group3

### Concluding message

BOTOX® is safe and efficacious for spinal cord injured patients with refractory detrusor overactivity as reflected in urodynamic measurements and QOL .Sever trabeculation with bladder diverticulum might be a predictable cause of failure. However, further research is necessary to identify other factors associated with a poor response.

<b>Specify source of funding or grant</b>	<b>non</b>
<b>Is this a clinical trial?</b>	<b>Yes</b>
<b>Is this study registered in a public clinical trials registry?</b>	<b>Yes</b>
<b>Specify Name of Public Registry, Registration Number</b>	<b>prince Sultan Humantarin City. #21234</b>
<b>Is this a Randomised Controlled Trial (RCT)?</b>	<b>No</b>
<b>What were the subjects in the study?</b>	<b>HUMAN</b>
<b>Was this study approved by an ethics committee?</b>	<b>Yes</b>
<b>Specify Name of Ethics Committee</b>	<b>reserch ethics committee</b>
<b>Was the Declaration of Helsinki followed?</b>	<b>Yes</b>
<b>Was informed consent obtained from the patients?</b>	<b>Yes</b>