

## DOES BOTULINUM TOXIN IMPROVE QUALITY OF LIFE?

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**Introduction/Objectives:** Botulinum toxin is one of the most potent biologic poisons known. Botulinum toxin proteins have been studied since 1900s, initially to understand botulism, a form of food poisoning. Later, they were studied because of the use of the toxins for treatment of muscle hyperactivity due to muscle paralysis induced by small amounts of the toxins. The 7 distinct serotypes A, B, C, D, E, F, and G are of similar structures. However, the serotypes differ in their cellular target sites, potency and duration of action. Types A and B have been shown effective and safe in clinical trials for the treatment of movement disorders and spasticity.

**Participants, Materials/Methods:** One of the most common movement disorders treated with botulinum toxin type-A (BTX-A) is focal dystonia (the most frequent cervical dystonia, followed by blepharospasm, oromandibular dystonia, occupational-hand dystonia, and laryngeal dystonia. Compared to general population, a negative impact of focal dystonia

on health related quality of life (HRQL) was found. BTX-A treatment significantly improves several HRQL dimensions. Dystonia influences various aspects of QoL, particularly those related to physical and social functioning. A total of 76 cervical dystonia (CD) patients were studied during 3 years of BTX-A treatment. Beck Depression Score (BDS) and HRQoL assessment were investigated in all patients before and after BTX-A treatment.

**Results:** Results of our study indicate that functional disability and depression were the best predictors of QoL in focal dystonia. BTX-A treatment significantly reduced depression in CD patients assessed by Beck Depression Score (BDS). Moreover, improvement was significantly higher in painful CD.

**Conclusions:** The data confirm that BTX-A therapy is able to induce significant amelioration of several aspect of HRQL in CD patients.