

## ABSTRACT

### **Response to Repeat Botulinum Toxin A in Previously Immuno-resistant Patients With Cervical Dystonia**

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Four patients, three females, age 56-80 with duration of symptoms: 8-30 years, received total cumulative dose of botulinum toxin A (BTX-A) of 1700 U to 2875 U. An average dose per visit ranged from 200 to 300 U. All these patients became resistant to BTX-A treatment and were, therefore, tested for anti-BTX-A antibodies (+Ab) by the mouse bioassay. Latency between initial BTX treatment and development of +Ab was 6 to 39 months. Twelve to 67 months later, the +Ab response became negative (-Ab). Three of the four patients received repeat BTX-A injections after they tested -Ab. All patients had good response to the first set of injections. One patient became unresponsive after subsequent injection and another patient is still experiencing improvement following her last injection. The third patient lost responsiveness after two injections and was again found to be +Ab. Six months later, however, she turned -Ab and again improved following BTX-A injection. Two of the four patients received BTX-F injections for the period of two years and continued to benefit, although the duration of improvement after each injection was shorter than with BTX-A. In conclusion, all patients who were initially immuno-resistant (+Ab) and later reverted to -Ab had good response initially to repeat BTX-A injections, but this beneficial response usually was not maintained. Patients immuno-resistant to BTX-A, however, may benefit from treatments with other BTX serotypes.

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