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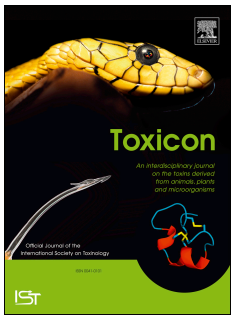

Evidence on botulinum toxin in selected disorders

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EVIDENCE ON BOTULINUM TOXIN IN SELECTED DISORDERS

ABSTRACT:

Botulinum toxin (BoNT) is a neurotoxin produced by the bacteria *Clostridium botulinum* that has become widely used for various neurologic indications. The four toxin formulations currently available for use in the United States (approved by the Food and Drug Administration) are onabotulinumtoxinA (Botox®), abobotulinumtoxinA (Dysport®), incobotulinumtoxinA (Xeomin®), and rimabotulinumtoxinB (Myobloc®). While the FDA-approved labels indicate that potency conversions should not be done, literature supports relative dose equivalents of approximately 1:1:2-4:50-100, respectively. The aim of this paper is to review the evidence on the use of BoNT formulations available in the United States for specific neurologic disorders, including blepharospasm, cervical dystonia (CD), upper and lower extremity spasticity and chronic migraine. Data from the updated 2016 American Academy of Neurology (AAN) guidelines are presented and the level of evidence for use of the four available preparations of BoNT are discussed (table 2 in appendix).

For the management of blepharospasm, the recommendations are for use of onaBoNT-A and incoBoNT-A injections with level B evidence. For the management of CD, the recommendations are for use of aboBoNT-A and rimaBoNT-B with level A evidence. For the management of upper extremity spasticity, the recommendations are for use of aboBoNT-A, incoBoNT-A and onaBoNT-A with level A evidence. For the management of lower extremity spasticity, the recommendations are for use of onaBoNT-A and aboBoNT-A with level A evidence. For the management of chronic migraines, the recommendations are for use of onaBoNT-A to help improve headache-free days, with level A evidence. It is important for the clinician to understand that BoNT is for use in symptomatic control for the underlying neurologic disorder and, at present, has not shown a role in disease modification.

KEY WORDS: BoNT; blepharospasm; cervical dystonia; limb spasticity; chronic migraine