

Short Communication

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The Use of Botulinum Toxin-A for Neck Pain

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Botulinum Toxin Type-A (BoNT-A) is widely used and has been approved in the field of facial esthetic as well as in some neurological conditions. Its neurotoxin protein produced by bacteria called *Clostridium botulinum* as this two chain protein blocks the acetylcholine release at the NMJ through its action of the SNARE proteins which by this will temporarily inhibit striatal muscle contraction. There are different commercially available preparations like; OnabotulinumtoxinA (BOTOX®), AbobotulinumtoxinA (Dysport®), and RimabotulinumtoxinB (Myobloc®).

Recently, there was an interest in utilizing it for muscular neck pain and headache. These conditions can be chronic and difficult to treat. Although there are more consensus on migraine and cervical dystonia, the literature showed conflicting results and conclusions.^{1,2} A randomized double-blinded study showed a trend toward improvement in the BOTOX® group.³ Another prospective study showed a significant reduction of pain intensity in patients receiving BoNT-A for refractory neck pain.⁴ One more randomized controlled study for chronic neck pain after “whiplash” injuries were demonstrated a statistically significant reduction in pain for the patients who were treated with BoNT-A compared with placebo.⁵ Contradicting results were found on other studies where the injected BoNT-A failed to provide significant improvement of neck pain. In a randomized, double-blinded study, injection of BoNT-A were directly triggered to the points did not improve cervicothoracic myofascial pain.⁶ Although many studies have shown it to be safe, the adverse effects remains a concern among physicians using these injections.

The role of direct injection of trigger points with BoNT-A for neck pain and spasm is still under progressive research and study. There could be a beneficial role for BoNT-A as an alternative treatment for resistant cases with chronic pain refractory to other modalities. Now-a-days, the clinical practice should follow evidence based medicine. A clear protocol including the type of toxin injected, suggested dose, concentration, and methods of injection should be established. A multi-centered study with controlled variables could help get more clear results.

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