INTRADERMAL BOTULINUM TOXIN, TYPE A: TO TREAT PAIN DISORDERS

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RESULTS

In the case of painful cervical spasm, all 14 patients treated with intradermal BoNTA, had reductions in frequency and severity of pain. Average reductions were 85.2% in severity of painful muscle spasm of cervical origin, with an average response time of 9.5 weeks (range 4-21 weeks). In 12 patients with co-existent headaches, there was a 79% reduction in average headache frequency over an average of 8 weeks (range 4-18 weeks). 8 of these patients had prior cervical surgical procedures. 2 of 4 patients treated in the lumbar area responded in terms of reduced back pain. 5 patients with CRPS, type 1, were treated with intradermal BoNTA. All 5 responded with reduced burning and allodynia, as well reduced swelling. 2 cases of diabetic neuropathy were treated with excellent response, although in 1 case re-treatment did not match prior results. Tenosynovitis was markedly improved on both occasions. 5 cases of persistent median nerve entrapment surgery; 2 others did not. All 5 responded with reduction in painful symptoms. 3 cases of temporomandibular disorder (TMD) were also treated with reductions in jaw pain, popping, bruxism, clenching and muscle pain in all 3 treated subjects.

Average pain reductions in responders was 8.5 weeks in duration (range 3-20 weeks), with an average reduction of 68% in pain symptoms across all categories of patients

DISCUSSION

The results presented in this open-label study administering intradermal BoNTA in diverse painful states, suggest an excellent ability of BoNTA to reduce painful symptoms by mechanism(s) other than motor inhibition of muscle contraction. Using this novel administration of the BoNTA, the toxin fragment presumably interrupts ongoing pain signals that promote central sensitization, windup or long-term potentiation in chronic pain and headache states. Whether blockade of glutamate, Substance P, CGRP or other neuropeptides is primarily involved in this process is not known at this time. There is evidence to suggest an interaction of BoNTA with sensory afferents in nociceptive fibers, and one open label study with intradermal BoNTB treating migraines of cervical origin has shown excellent reductions in migraine headache frequency and severity. A double-blind, placebo-controlled study is being completed at this time. Again, the exact mechanism of BoNTA’s effect intradermally is unknown at this time, but double-blind placebo-controlled studies are warranted to explore BoNTA’s mechanism(s) of action.

CONCLUSIONS:

- INTRADERMAL ADMINISTRATION OF BONTA IS VERY EFFECTIVE IN TREATING DIVERSE NEUROPATHIC PAIN
- INTRAMUSCULAR ADMINISTRATION AVOIDED IN THIS TECHNIQUE
- STUDY RESULTS BEAR IMPLICATION FOR NEW MECHANISMS OF ACTION OF BONTA BEYOND EFFECTS ON CHOLINERGIC MOTOR NERVE TERMINALS