

TREATMENT OF CHRONIC CERVICAL-ASSOCIATED HEADACHE WITH BOTULINUM TOXIN-A: A PILOT STUDY

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ABSTRACT

Background: Headache is a common finding associated with cervical neck injury. Cervicogenic Headache, which is believed to be attributable to injury of the ligaments, muscles or joints of the cervical spine, is centered in the occipital region with pain referred to the fronto-temporal region. Botulinum toxin A (BTX-A) produces prolonged muscle relaxation that is dose dependent and can be easily targeted to affected muscles. BTX-A therapy may prove to be an effective form of therapy for the treatment of headache of musculoskeletal origin.

Methods: This randomized, double-blind, placebo controlled study compares outcome measures in 26 patients suffering from chronic headache subsequent to a cervical whiplash injury. One half of the patients (treatment group) received 100 units BTX-A, diluted in 1 ml of saline, while the other half (placebo group) received only saline (1 ml). Five cervical trigger points received 0.2 ml each of injectant via a 30-gauge needle. Outcome measures included subjective head pain based on visual analogue scales as well as range of neck motion. Follow-up assessments were carried out at 2 and 4 weeks post treatment.

Results: Fourteen subjects receiving BTX-A and 12 receiving saline completed the study. At both 2 and 4 weeks post injection, the treatment group showed a significant improvement in pain and ROM from pre-injection levels ($P < 0.01$). The placebo group demonstrated no statistically significant changes at any post-treatment time.

Response of Headache to BTX-A

	<i>Preinjection</i>	<i>Week 2</i>	<i>Week 4</i>
Median Headache (range) VAS Score saline	3(0-8)	3(0-6)	4.5(1-9)
Median Headache (range) VAS Score BTX-A	6.5(2-9)	5(1-10)	3.5(1-8)
Median total ROM degrees (range) saline	337(225-380)	347(250-395)	325(225-370)
Median total ROM degrees (range) BTX-A	312(80-400)	317(145-435)	343(285-420)

References:

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