

TREATMENT OF WHIPLASH-ASSOCIATED NECK PAIN WITH BOTULINUM TOXIN-A: A PILOT STUDY

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BACKGROUND: Up to 87% of patients with whiplash associated disorder (WAD) demonstrate some degree of muscle spasm which is contributory to both pain and dysfunction. Botulinum toxin A (BTX-A) produces prolonged muscle relaxation which is dose dependent and can be easily targeted to affected muscles. BTX-A therapy may prove to be an effective form of therapy offering an alternative or adjunct to conventional modalities.

METHODS: This randomized, double-blind, placebo controlled study compares outcome measures in 26 patients suffering from chronic neck pain (WAD-II chronic) subsequent to a motor vehicle accident. One half of the patients received 100 units BTX-A, diluted in 1ml of saline while the other half received just saline (1 ml). Five trigger points received 0.2 ml each of injectant via a 30 gauge needle. Outcome measures included: total subjective neck, shoulder and head pain based on visual analogue scales, objective total range of neck motion (ROM), and the Vernon-Mior subjective function index. 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. The treatment group showed a trend toward improvement in ROM and reduction in pain at 2 weeks post injection. At 4 weeks post-injection the treatment group was significantly improved from pre-injection levels ($P < 0.01$). The placebo group demonstrated no statistically significant changes at any post-treatment time. The Vernon-Mior scale demonstrated a trend to improvement for both groups.

CONCLUSIONS: BTX-A treatment of subjects suffering chronic WAD II neck pain resulted in a significant ($P < 0.01$) improvement in ROM and subjective pain as compared to a placebo group, but only a trend to improvement in subjective functioning.