



## Botulinum toxin type a in the temporomandibular region for Chronic Migraine treatment: a literature review

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### Introduction

Migraines, as defined by the 2018 International Headache Society, are attacks lasting 4 to 72 hours with specific characteristics. Surgical treatment of migraines dates back to 1931, with one approach targeting trigger zones, often in the temporo-occipital areas, using botulinum toxin. The success of this treatment has led to the hypothesis that facial muscle blockade with Botulinum Toxin Type A (BoNT-A) could provide similar migraine relief with fewer side effects.

### Objective

This study aims to assess the current state of BoNT-A use in the temporomandibular region for chronic migraine with or without aura. A comprehensive literature search was conducted in PubMed using the search terms "(migraine OR headache) AND (botulinum OR toxin) AND (treatment OR therapeutic OR application OR injection) AND (temporal OR temporal muscle OR temporal region OR masseter)," yielding 26 relevant articles for review.

### Methodology

While surgical resection of facial peripheral nerve terminals shows promise in treating myofascial pain and neuralgia, it carries significant complications. This study evaluates the efficacy of temporary muscle blockade with BoNT-A for migraine treatment, as reported in clinical trials and literature reviews.

### Conclusion

Initial analysis suggests promising results in preventing pain recurrence in cases refractory to standard pharmacological treatment. Intramuscular BoNT-A in the facial region has shown efficacy in prolonging symptom-free periods for tension headaches, localized myofascial pain, neuralgia, and some types of migraine. However, more structured and migraine-specific studies are necessary to minimize adverse effects and complications in treated patients.