Botulinum Toxin A for Myofascial Pain Syndrome: A Review

Context
Myofascial pain syndrome is a relatively common type of chronic pain disorder that affects the muscles or their connective tissues (fascia). Patients with this syndrome develop trigger points within the muscles or fascia that, when pressure is applied to them, cause pain in other parts of the body. Myofascial pain syndrome can be treated by reducing the factors that may be stimulating it (for example, repetitive muscle strain, poor posture, and anxiety). The trigger points themselves can also be treated with muscle stretches, acupuncture, therapeutic ultrasound, drug therapy, or injection of an anesthetic or botulinum toxin into the trigger points.

Technology
Botulinum toxin A (BoNTA) is a purified neurotoxin produced from the fermentation of Clostridium botulinum type A. BoNTA inhibits the release of acetylcholine into the neuromuscular junctions, which results in a reduction in muscular contractions. In Canada, BoNTA is marketed in three distinct formulations: Botox, Dysport, and Xeomin. BoNTA is used off-label for the treatment of myofascial pain syndrome.

Issue
A review of the clinical effectiveness of BoNTA for reducing pain and improving functioning in patients with myofascial pain syndrome will help to inform treatment decisions for these patients.

Methods
A limited literature search was conducted of key resources, and titles and abstracts of the retrieved publications were reviewed. Full-text publications were evaluated for final article selection according to predetermined selection criteria (population, intervention, comparator, outcomes, and study designs).

Key Message
It is uncertain whether botulinum toxin A is effective for reducing pain and improving functioning in patients with myofascial pain syndrome.

Results
The literature search identified 100 citations, with 1 additional article identified from other sources. After screening the abstracts, 16 studies were found to be potentially relevant, and 7 met the criteria for inclusion in this review — 3 systematic reviews and meta-analyses, and 4 RCTs.