TRIGGER POINT INJECTIONS FOR MYOFASCIAL PAIN

Policy Number: 0003
Effective Date: March 19, 2016
Reviewed Date: July 2023
Next Review: July 2024
Clinical Reviewer: John Borgoy, MD

BACKGROUND

CLINICAL BACKGROUND *(extracted verbatim from Hayes 2013)*

"Myofascial pain syndrome is a chronic condition affecting the connective tissue (i.e., fascia) surrounding the muscles that is characterized by pain and inflammation. A key characteristic of this condition is the presence of one or more myofascial trigger points (TPs) that are located in the muscle or muscle fascia. TPs are hyperirritable and exquisitely tender spots found in a taut, palpable band of skeletal muscle. Stimulation of TPs by either firm compression (palpation) or needle penetration can elicit local pain and tenderness, as well as motor dysfunction and autonomic dysfunction. However, palpation or other stimulation of TPs may also cause a pattern of referred pain that spreads or radiates distally to a target area that is characteristic of each muscle. Snapping (or rapid) palpation at or fast needle insertion into a TP may elicit a local twitch response (LTR), or a brisk contraction of the muscle fibers in and around the TP. Patients may have active TPs, or active and latent TPs. Active TPs cause pain at rest whereas latent TPs do not produce spontaneous pain, but instead may limit movement and cause muscular weakness.

TPIs involve the injection of a solution via a needle directly into the myofascial TP. The injectate may contain a local anesthetic, steroid, botulinum toxin, nonsteroidal anti-inflammatory drug (NSAID), 5-HT antagonist, or a combination of these substances. The goal of TPI therapy is to alleviate pain and restore function by inactivating the TP."

POLICY AND CRITERIA

Trigger point injections of anesthetic and/or corticosteroid for myofascial pain may be considered medically necessary when the following criteria are met:

- Local pain lasting longer than 3 months with all of the following:
  - Tenderness and/or weakness; AND
  - Motion restriction; AND
  - A palpable band that produces referred pain when compressed
- Documented failure or contraindication to standard conservative management (e.g., physical therapy, pharmacotherapy, or cardiovascular exercise); AND
- Injections are provided as part of a comprehensive, multidisciplinary pain program; AND
- No more than 4 injections are provided per session.

Those who exhibit at least 50% improvement in pain level and at least three months of improved function may be eligible for up to 4 sessions per year, at least 3 months apart. Additional injections are considered NOT medically necessary if these criteria are not met.

RATIONALE

EVIDENCE BASIS

Northwest Permanente Evidence-based Medicine Services reviewed the evidence on trigger point injections for myofascial pain in 2015. A recent, good quality technology assessment from Hayes

provided most findings from the evidence base (Hayes 2013). A bridge search from the date of the Hayes report through May 2018 was conducted. Six additional relevant studies were identified, including four randomized trials, one non-randomized trial, and one systematic review. Findings in subsequently published studies did not significantly differ from those reported in the Hayes review, and conclusions regarding the safety and efficacy of trigger point injections for myofascial pain remain the same.

Findings and conclusions of the Hayes review were as follows:

"The literature search identified 1 prospective study with 193 patients that investigated factors associated with the outcome of TPI for myofascial pain syndrome (Hopwood 1994). Thirty-one factors were identified for analysis based on published literature of mixed groups of pain patients, physicians' views of clinical importance, and ease of assessment in a typical clinical setting. Factors were analyzed via univariate and logistic regression analyses both for independent association with short-term treatment outcome and for magnitude of risk of failure associated with each factor following adjustment for other factors. The univariate analysis determined that an elevated risk of treatment failure was associated with unemployment arising from pain, inability of analgesic medication to provide pain relief, constant pain, high levels of pain-at-its worst and pain at-its least, extended duration of pain, alterations in social pursuits, and lower ability to cope with pain. Alcohol use was associated with lower risk for treatment failure according to the univariate analysis. The logistic regression analysis found that only unemployment, prolonged pain duration, and change in social activities were independently associated with treatment outcome.

In a randomized, double-blind trial, Hong (1994) compared lidocaine TPI and dry needling for relief of myofascial trigger points in patients that did or did not exhibit a local twitch response (LTR). Patients that showed an LTR during treatment exhibited statistically significant improvements from baseline in pain intensity, pressure pain threshold (PPT), and range of motion (ROM) immediately after treatment. However, for those patients that did not display an LTR, there was no change from baseline in pain intensity, PPT, or ROM. Thus, the beneficial effects of TPI and dry needling appear to depend upon the elicitation of an LTR during treatment.

Comparative Efficacy of TPI Versus Dry Needling: Three of the reviewed studies compared TPI therapy to dry needling for treatment of myofascial pain syndrome (Hong 1994; Ay 2010; Eroglu 2013). Findings from all 3 studies suggest that TPI is not superior to dry needling for reducing pain intensity and improving range of motion.

Duration of Treatment Benefit: Limited evidence pertaining to the duration of treatment benefit of TPI was available. Follow-up duration only extended up to 3 months following cessation of treatment. Only 4 studies reported data from more than 2 follow-up assessments after the end of treatment (Ferrante et al., 2005; Göbel 2006; Ozkan 2011; Seo 2013); 3 of these studies evaluated BTX-A TPIs and 1 study (Ozkan 2011) evaluated TPIs with lidocaine. The final follow-up assessment in 3 studies was 12 weeks after end of treatment, with 3 to 6 in-person total assessments (excluding baseline) depending on the outcome measure and the study (Ferrante 2005; Göbel 2006; Ozkan 2011). The fourth study included a total of 8 assessments up to 16 weeks posttreatment (Seo 2013). This evidence was insufficient to draw any conclusions about how long treatment efficacy persists after TPI therapy.

Trigger Point Injections as an Adjunct to Other Pain Management Strategies: In a systematic review of TPI for chronic nonmalignant pain, the authors note that most of the studies included in the review evaluated TPI as a stand-alone treatment. However, they indicate that the procedure is routinely used as an adjunctive to other therapies in clinical practice and the effectiveness of TPI may be underestimated in research studies where TPI is a stand-alone therapy (Scott 2009)."

RELEVANT GUIDELINES

The American Society of Anesthesiologists (ASA) and American Society of Regional Anesthesia and Pain Medicine (ASRA) Task Force on Chronic Pain Management evaluated the efficacy of TPIs for patients with chronic pain. The guideline concluded that there was insufficient literature to determine efficacy but

concluded that TPIs may be considered for treatment of myofascial pain when included as part of a multimodal pain management program due to evidence from observational studies.

The Colorado Division of Workers' Compensation issued a guideline entitled "Chronic pain disorder medical treatment guidelines" that addressed trigger point injections for myofascial pain. The guideline notes that "trigger point injections may be used to relieve myofascial pain and facilitate active therapy and stretching of the affected areas. They are to be used as an adjunctive treatment in combination with other active treatment modalities." The guideline also states that "patients should be reassessed after each injection session for an 80% improvement in pain (as measured by accepted pain scales) and evidence of functional improvement for 3 months. A positive result would include a return to baseline function, return to increased work duties, and measureable improvement in physical activity goals including return to baseline after an exacerbation." The guideline specifies that optimum treatment consists of 4 sessions per year, with no more than 4 injections per session.

CODES

CPT or HCPCS Code	Description
20552	Injection(s); single or multiple trigger point(s), one or two muscle(s)
20553	Injection(s); single or multiple trigger point(s), three or more muscles

ICD-10 Code	Description
M79.1	Myalgia (excl. myositis)

REFERENCES

Ay S, Evcik D, Tur BS (2010). Comparison of injection methods in myofascial pain syndrome: a randomized controlled trial. Clin Rheumatol, 29(1):19-23.

Eroglu PK, Yilmaz O, Bodur H, Ates C (2013). A comparison of the efficacy of dry needling, lidocaine injection, and oral flurbiprofen treatments in patients with myofascial pain syndrome: a double-blind (for injection, groups only), randomized clinical trial. Turk J Rheumatol, 28(1):38-46.

Ferrante FM, Bearn L, Rothrock R, King L. (2005). Evidence against trigger point injection technique for the treatment of cervicothoracic myofascial pain with botulinum toxin type A. Anesthesiology, 103(2):377-383.

Göbel H, Heinze A, Reichel G, Hefter H, Benecke R. (2006). Efficacy and safety of a single botulinum type A toxin complex treatment (Dysport) for the relief of upper back myofascial pain syndrome: results from a randomized double-blind placebo-controlled multicentre study. Pain, 125(1-2):82-88.

Hayes, Inc. (2013). Medical Technology Directory: Trigger Point Injections for Myofascial Pain. Hayes, Inc.

Hong CZ. (1994). Lidocaine injection versus dry needling to myofascial trigger point. The importance of the local twitch response. Am J Phys Med Rehabil, 73(4):256-263.

Hopwood MB, Abram SE (1994). Factors associated with failure of trigger point injections. J Pain, 10(3):227-234

National Institute for Clinical Excellence (NICE) (2012). Botulinum toxin type A for the prevention of headaches in adults with chronic migraine. NICE technology appraisal guidance [TA260]. Retrieved February 2, 2015 from http://www.nice.org.uk/guidance/ta260/chapter/1-guidance

Naumann M, Argoff CE, Childers MK, Dykstra DD, Gronseth GS, Kaufman HC et al (2008). Assessment: botulinum neurotoxin in the treatment of autonomic disorders and pain (an evidence-based review). Neurology, 70(19):1707-1714.

Ozkan F, Cakır Özkan N, Erkorkmaz U. Trigger point injection therapy in the management of myofascial temporomandibular pain. Agri. 2011;23(3):119-125.

Scott NA, Guo B, Barton PM, Gerwin RD (2009). Trigger point injections for chronic non-malignant musculoskeletal pain: a systematic review. Pain Med, 10(1):54-69.

Seo HG, Bang MS, Chung SG, Jung SH, Lee SU (2013). Effect of electrical stimulation on botulinum toxin a therapy in patients with chronic myofascial pain syndrome: a 16-week randomized double-blinded study. Arch Phys Med Rehabil, 94(3):412-418.