

Subject: Radiofrequency and Pulsed Radiofrequency Treatment of Trigger Point Pain		Original Effective Date: 9/16/20
Policy Number: MCP-372	Revision Date(s):	
MCPC Approval Date: 9/16/20	Review Date:	

DISCLAIMER

This Molina clinical policy is intended to facilitate the Utilization Management process. It expresses Molina's determination as to whether certain services or supplies are medically necessary, experimental, investigational, or cosmetic for purposes of determining appropriateness of payment. The conclusion that a particular service or supply is medically necessary does not constitute a representation or warranty that this service or supply is covered (i.e., will be paid for by Molina) for a particular member. The member's benefit plan determines coverage. Each benefit plan defines which services are covered, which are excluded, and which are subject to dollar caps or other limits. Members and their providers will need to consult the member's benefit plan to determine if there are any exclusion(s) or other benefit limitations applicable to this service or supply. If there is a discrepancy between this policy and a member's plan of benefits, the benefits plan will govern. In addition, coverage may be mandated by applicable legal requirements of a State, the Federal government or CMS for Medicare and Medicaid members. CMS's Coverage Database can be found on the CMS website. The coverage directive(s) and criteria from an existing National Coverage Determination (NCD) or Local Coverage Determination (LCD) will supersede the contents of this Molina clinical policy document and provide the directive for all Medicare members.

Contents

DISCLAIMER..... 1

Description of Procedure/Service/Pharmaceutical..... 1

Recommendation Clinical Criteria..... 2

Summary of Medical Evidence..... 2

Coding Information..... 4

References..... 4

DESCRIPTION OF PROCEDURE/SERVICE/PHARMACEUTICAL ^{2 15 16}

Trigger points are hypersensitive areas in the skeletal muscle that are associated with palpable nodules in taut bands of muscle fibers and stimulation or compression may elicit local tenderness, referred pain, or a local twitch response. Trigger point pain most often occurs in the muscles that maintain body posture such as the neck, shoulder and pelvic girdle. Muscle injury or repetitive muscle stress may lead to the development of trigger points. This results in regional, persistent pain and decreased range of motion in the affected muscles. Trigger points may

be active or spontaneously painful or latent, only painful when stimulated by digital pressure. Physical examination may reveal a nodule of muscle fiber. Palpation of this nodule may produce pain over the trigger point or cause the pain to radiate to another area with a local twitch response. Trigger point pain is often associated with myofascial pain syndrome. Treatments for trigger point pain may include conservative management initially with activity modification in combination with oral medication such as NSAIDS, analgesics, steroids and muscle relaxants for pain relief. Physical and chiropractic therapy may be utilized to increase range of motion. Injections of anesthetics, with or without steroids, have been used to provide pain relief when conservative therapy is unsuccessful.

Radiofrequency (RF) and pulsed radiofrequency (PRF) are a proposed treatment for trigger point pain, using a high-frequency alternating current. RF energy is a form of continuous heat that is transmitted to the tip of a needle probe which is inserted through the skin and guided by x-ray or ultrasound to ablate targeted tissues. PRF is also known as cooled RF and differs from RF as PRF uses pulsed heat energy, allowing tissue cooling between energy pulses. It is speculated that PRF eliminates the potential for ablation of tissue and the exposure to a rapidly changing electrical field alone induces sufficient cellular change to provide a therapeutic effect.

RECOMMENDATION

Radiofrequency (RF) and pulsed radiofrequency (PRF) treatment of trigger points are considered experimental, investigational, unproven and not medically necessary as a treatment for trigger point pain due to insufficient published evidence to assess the safety and/or impact on health outcomes.

SUMMARY OF MEDICAL EVIDENCE²⁻¹³

There is limited published evidence in the peer reviewed scientific literature about RF and PRF as a treatment option for trigger point pain. Most of the published literature includes prospective case series and individual case reports. Large randomized controlled trials that compare RF and PRF to other treatments such as injections are lacking. Limitations across the majority of the published literature on RF and PRF in trigger-point pain include small sample sizes, lack of a control group and the safety and efficiency as well as long term follow-up remains unknown.

Diego et al., (2019) published a small (n=24) prospective, randomized, double-blind, and placebo-controlled trial that investigated the feasibility of radiofrequency in individuals with myofascial chronic neck pain. A total of 24 individuals were included in the study with 14 of those individuals randomly assigned to the radiofrequency group and 10 individuals randomly assigned to the control group. Radiofrequency was delivered to the radiofrequency group for 12 minutes, 2 times per week over 4 weeks totaling 8 sessions. The control group was treated for the same amount of time using the same device without an energy source. Outcomes that were assessed were reduction of neck pain intensity at myofascial trigger points using the visual analog scale (VAS), improvement in cervical range of motion (CROM) using a CROM measurement device, and reduction in neck disability using the neck disability index (NDI). The evaluator that recorded the pre- and post-treatment measurements was blind to treatment allocation. The results showed a significant difference between baseline VAS versus all measurement periods in the radiofrequency group ($p < 0.001$), but not in the control group ($p > 0.05$). The NDI significantly improved in both groups ($p < 0.05$), but there was not a significant difference when comparing results between groups ($p = 0.254$). There was no difference between the two groups for time in

all CROM. The results of this study showed that in individuals with myofascial chronic neck pain, there is no significant difference between radiofrequency and no treatment. ⁶

Niraj (2018) published a prospective study of 120 participants over a 3-year period who were diagnosed with abdominal myofascial pain syndrome (AMPS). Study enrollees were included in a structured pain management pathway and prospectively audited for pain-related outcomes. The pathway began with medical management, which included a trial with amitriptyline, pregabalin, and tramadol. In the case of localized pain, 5% lidocaine plaster was prescribed along with a TENS machine trial and a course of acupuncture. If participants' pain returned to baseline within 3 months, they were moved along in the pathway to the second treatment modality, trigger point injection with a local anesthetic agent. If injection with local anesthetic failed (no improvement at 3 months) then trigger point injections were attempted with a depot steroid added to the local anesthetic. Finally, if the aforementioned pain management techniques failed to provide pain relief for at least 3 months, enrollees were offered PRF of the trigger points. In total, 43 participants received PRF, 12 (28%) did not respond to treatment, 5 (12%) responded but the responses were not sustained, and 26 (60%) experienced a durable response (relief lasting more than 6 months). There was improvement reported in pain intensity scores, quality of life, anxiety and depression scores in the 26 participants who received PRF and had a durable response. There were 9 reported PRF complications (flare-up lasting at least 1 week). The authors concluded that, "While this study was designed to evaluate the use of a pain management pathway to treat AMPS, it provides evidence that PRF as a treatment option may hold promise for this pain syndrome. Further study, in the setting of a randomized controlled trial, may provide further evidence of PRF as a safe, effective and durable treatment option for AMPS." ¹⁰

Chou et al., (2017) published a comparison study of thirty-six patients with myofascial pain syndrome (MPS) of the trapezius muscle (TM) and randomly assigned participants into 2 groups to investigate the effects of ultrasound (US)-guided pulsed radiofrequency (PRF) stimulation on the interfascial area of the trapezius muscle. In addition a comparison of its effect with that of interfascial block (IFB) with 10 mL of 0.6% lidocaine on the interfascial area of the TM was done. Eighteen patients underwent PRF stimulation on the interfascial area of the TM (PRF group) and 18 patients underwent IFB with lidocaine on the same area (IFB group). Pain intensity was evaluated using a numerical rating scale (NRS) at pretreatment, 2, 4, and 8 weeks after treatment. At pretreatment and 8 weeks after treatment, quality of life was assessed using the Short Form-36 Health Survey (SF-36), which includes the physical component score (PCS) and the mental component score (MCS). One patient in the PRF group was lost to follow-up. Patients in both groups showed a significant decrease in NRS scores at 2, 4, and 8 weeks after treatments and a significant increase in PCS and MCS of the SF-36 at 8 weeks after treatments. Two weeks after each treatment, the decrements of NRS scores were not significantly different between the 2 groups. However, 4 and 8 weeks after the procedures, we found that the NRS score was significantly lower in the PRF group than in the IFB group. At 8 weeks after the treatments, PCS and MCS of the SF-36 in the PRF group were significantly higher than those in the IFB group. For the management of MPS of the TM, US-guided interfascial PRF had a better long-term effect on reducing the pain and the quality of life compared to US-guided IFB. The study concluded that "Therefore, we think US-guided PRF stimulation on the interfascial area of the TM can be a beneficial alternative to manage the pain following MPS of the TM." ⁵

CODING INFORMATION: THE CODES LISTED IN THIS POLICY ARE FOR REFERENCE PURPOSES ONLY. LISTING OF A SERVICE OR DEVICE CODE IN THIS POLICY DOES NOT IMPLY THAT THE SERVICE DESCRIBED BY THIS CODE IS COVERED OR NON-COVERED. COVERAGE IS DETERMINED BY THE BENEFIT DOCUMENT. THIS LIST OF CODES MAY NOT BE ALL INCLUSIVE.

CPT	Description
20999	Unlisted procedure, musculoskeletal system, general [when specified as radiofrequency or pulsed radiofrequency treatment of trigger points]

HCPCS	Description
	N/A

ICD-10	Description: [For dates of service on or after 10/01/2015]
	Any/All

REFERENCES

Government Agency

- Centers for Medicare & Medicaid Services (CMS). Medicare Coverage Database. National coverage determination (NCD) Search. Accessed at: <http://www.cms.gov/medicare-coverage-database/>

Peer Reviewed Publications

- Alvarez DJ, Rockwell PG. Trigger points: diagnosis and management. *Am Fam Physician*. 2002.
- Bevacqua B, Fattouh M. Pulsed radiofrequency for treatment of painful trigger points. *Pain Pract*. 2008;8:149–1505(4):653-660.
- Byrd D, Mackey S. Pulsed radiofrequency for chronic pain. *Curr Pain Headache Rep*. 2008; 12(1):37-41.
- Cho IT, Cho YW, et al. Comparison Between Ultrasound-Guided Interfascial Pulsed Radiofrequency and Ultrasound-Guided Interfascial Block With Local Anesthetic in Myofascial Pain Syndrome of Trapezius Muscle. *Medicine (Baltimore)*. 2017 Feb;96(5):e6019
- Diego IMA, Fernández-Carnero J, Val SL, et al. Analgesic effects of a capacitive-resistive monopolar radiofrequency in patients with myofascial chronic neck pain: a pilot randomized controlled trial. *Rev Assoc Med Bras (1992)*. 2019; 65(2):156-164.
- Lee J, Yoon K, Kim K, Mi Yoon D. Pulsed radiofrequency treatment of pain relieving point in a soft tissue. *Korean J Pain*. 2011; 24(1):57-60.
- Niraj G. Pathophysiology and Management of Abdominal Myofascial Pain Syndrome (AMPS): A three-year prospective audit of a management pathway in 120 patients. *Pain Med*. 2018; 19(11):2256-2266.
- Niraj G. Ultrasound-guided pulsed radiofrequency treatment of myofascial pain syndrome: a case series. *Br J Anaesth*. 2012; 109(4):645-646.
- Niraj G, Chaudhri S. Prospective Audit of a Pathway for In-Patient Pain Management of Chronic Abdominal Pain: A Novel and Cost-Effective Strategy. *Pain Med*. 2018 Mar 1;19(3):589-597.

11. Park C, Lee Y, Kim Y, et al. Treatment experience of pulsed radiofrequency under ultrasound guided to the trapezius muscle at myofascial pain syndrome. *Korean J Pain*. 2012; 25(1):52-54.
12. Park SM, Cho YW, Ahn SH, et al. Comparison of the Effects of Ultrasound-Guided Interfascial Pulsed Radiofrequency and Ultrasound-Guided Interfascial Injection on Myofascial Pain Syndrome of the Gastrocnemius. *Ann Rehabil Med*. 2016 Oct;40(5):885-892.
13. Tamimi MA, McCeney MH, Krutsch J. A case series of pulsed radiofrequency treatment of myofascial trigger points and scar neuromas. *Pain Med*. 2009; 10(6):1140-1143.

Professional Society Guidelines

14. Practice Guidelines for Chronic Pain Management an Updated Report by the American Society of Anesthesiologists Task Force on Chronic Pain Management and the American Society of Regional Anesthesia and Pain Medicine. *Anesthesiology* 2010; 112:1–1

Other Resources:

15. Hayes a TractManager Company. Winifred Hayes Inc. Lansdale, PA.
 - Comparative Effectiveness Review of Dry Needling for Indications Other Than Neck or Trapezius Muscle Pain in Adults. June 2017, Updated July 2019.
 - Comparative Effectiveness Review of Dry Needling for Mechanical Neck and/or Trapezius Muscle Pain in Adults. April 2017, Updated May 2019.
16. UpToDate: [website]. Waltham, MA: Walters Kluwer Health; 2020.
 - Zacharia I. Management of non-radicular neck pain in adults. Last updated May, 2020.
17. AMR Peer Review Network: Policy reviewed by practicing MD Board certified in Physical Med & Rehab, Pain Management. June 28, 2020

Revision/Review History:

9/16/20: New Policy