



MASSACHUSETTS

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Medical Policy

Ablation Procedures for Peripheral Neuromas

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Policy Number: 719

BCBSA Reference Number: 7.01.147

NCD/LCD: N/A

Related Policies

None

Policy

Commercial Members: Managed Care (HMO and POS), PPO, and Indemnity Medicare HMO BlueSM and Medicare PPO BlueSM Members

Minimally invasive ablation procedures, RFA, and cryoablation, are considered **INVESTIGATIONAL** for treatment of peripheral neuromas.

Prior Authorization Information

Inpatient

- For services described in this policy, precertification/preauthorization **IS REQUIRED** for all products if the procedure is performed **inpatient**.

Outpatient

- For services described in this policy, see below for products where prior authorization **might be required** if the procedure is performed **outpatient**.

	Outpatient
Commercial Managed Care (HMO and POS)	This is not a covered service.
Commercial PPO and Indemnity	This is not a covered service.
Medicare HMO Blue SM	This is not a covered service.
Medicare PPO Blue SM	This is not a covered service.

CPT Codes / HCPCS Codes / ICD Codes

Inclusion or exclusion of a code does not constitute or imply member coverage or provider reimbursement. Please refer to the member's contract benefits in effect at the time of service to determine coverage or non-coverage as it applies to an individual member.

Providers should report all services using the most up-to-date industry-standard procedure, revenue, and diagnosis codes, including modifiers where applicable.

The following codes are included below for informational purposes only; this is not an all-inclusive list.

According to the policy statement above, the following CPT codes are considered investigational for the conditions listed for Commercial Members: Managed Care (HMO and POS), PPO, Indemnity, Medicare HMO Blue and Medicare PPO Blue:

CPT Codes

CPT codes:	Code Description
64632	Destruction by neurolytic agent; plantar common digital nerve
64640	Destruction by neurolytic agent; other peripheral nerve or branch

Description

NEUROMA

A neuroma is a pathology of a peripheral nerve that develops as part of a normal reparative process. Neuromas may develop after nerve injury or result from chronic irritation, pressure, stretch, poor repair of nerve lesions or previous neuromas, laceration, crush injury, or blunt trauma. Neuromas typically appear 6 to 10 weeks after trauma, with most presenting within 1 to 12 months after injury or surgery. They may gradually enlarge over 2 to 3 years and may or may not be painful. Pain from a neuroma may be secondary to traction on the nerve by scar tissue, compression of the sensitive nerve endings by adjacent soft tissues, ischemia of the nervous tissue, or ectopic foci of ion channels that elicit neuropathic pain. Patients may describe the pain as low-intensity dull pain or intense paroxysmal burning pain, often triggered by external stimuli such as touch or temperature. Neuroma formation has been implicated as a contributor of neuropathic pain in residual limb pain, postthoracotomy, postmastectomy, and postherniorrhaphy pain syndromes. They may coexist with phantom pain or can predispose to it.

Morton Neuroma

Morton intermetatarsal neuroma is a common and painful compression neuropathy of the common digital nerve of the foot that may also be referred to as interdigital neuroma, interdigital neuritis, and interdigital or Morton metatarsalgia. Morton neuroma is usually associated with a throbbing, burning, or shooting pain localized to the plantar aspect of the foot. It is typically located between the third and fourth metatarsal heads, although it may appear in other proximal locations. It is histologically characterized by perineural fibrosis, endoneurial edema, axonal degeneration, and local vascular proliferation. Thus, some investigators do not consider Morton neuroma to be a true neuroma; instead, they consider it to be an entrapment neuropathy occurring secondary to compression of the common digital nerve under the overlying transverse metatarsal ligament. Morton neuroma appears 10-fold more often in women than in men, with an average age at presentation of around 50 years.

Diagnosis

Although a host of imaging methods are used to diagnosis Morton neuroma, including plain radiographs, magnetic resonance imaging, and ultrasonography, objective findings are unique to this condition and are primarily used to establish a clinical diagnosis. Thus, a patient's toes often show splaying or divergence. Patients may describe the feeling of a "lump" on the foot bottom or a feeling of walking on a rolled-up or wrinkled sock. Clinical examination with medial and lateral compression may reproduce the painful symptoms with a palpable "click" on interspace compression (Mulder sign).

Treatment

Management of patients diagnosed with Morton neuroma typically starts with conservative approaches, such as the use of metatarsal pads in shoes and orthotic devices that alter supination and pronation of the affected foot. These approaches try to reduce pressure and irritation of the affected nerve. They may provide relief, but do not alter the underlying pathology. There is scant evidence to support the effectiveness or comparative effectiveness of these practices. In a case series, Bennett et al (1995)

evaluated a 3-stage protocol of “stepped care” through which private practice patients (N=115) advanced from stage I (education plus footwear modifications, and a metatarsal pad) to stage II (steroid injections with local anesthetic or local anesthetic alone), and into stage III (surgical resection) if stages I and II were not relieved within 3 months. Overall, 97 (85%) of 115 patients believed that pain had been reduced with the treatment program. However, 24 (21%) patients eventually required surgical excision of the nerve, and 23 (96%) of them had satisfactory results.

Ablation Techniques

Several minimally invasive procedures to treat refractory Morton neuroma are aimed at in situ destruction of the pathology: radiofrequency ablation (RFA) and cryoablation (also known as cryoneurolysis, cryolysis, cryoanalgesia). RFA uses heat generated by an electrode that conducts electromagnetic energy into a tissue or lesion to denature proteins and destroy cells. RFA is used to ablate a wide range of tissues or lesions, including osteoid osteoma; cardiovascular system pathologies; cervical pain syndromes; liver, lung, and other cancers; and varicosities. Cryoablation uses coolant to chill a cryoprobe to temperatures below -75°C, which when inserted into a lesion, freezes and kills the tissue. It has been used to treat Morton neuroma, other chronic nerve pain syndromes, and conditions for which RFA has been used.

This review primarily focuses on evidence for the use of RFA and cryoablation on painful neuromas, with emphasis on Morton neuroma and the comparative effectiveness of these less invasive therapies with open surgical resection of the nerve pathology.

Summary

For individuals who have Morton neuroma who receive RFA, the evidence includes case series. Relevant outcomes are symptoms, functional outcomes, and treatment-related morbidity. Three case series identified reported outcomes for RFA to treat Morton neuroma. The body of evidence is highly heterogeneous regarding RFA protocols, prior conservative management, patient characteristics, follow-up durations, outcome measures, and reporting of outcomes. Variable proportions of patients require surgery after RFA, making the benefit of RFA for avoiding more invasive treatment uncertain. The evidence is insufficient to determine the effects of the technology on health outcomes.

For individuals who have Morton neuroma who receive cryoablation, the evidence includes case series. Relevant outcomes are symptoms, functional outcomes, and treatment-related morbidity. Only 2 retrospective case series on the use of cryoablation to treat peripheral nerve pain were identified in a literature review. The case series were heterogeneous regarding cryoablation protocols and length of follow-up. Outcome measures did not provide information on functional end points. The evidence is insufficient to determine the effects of the technology on health outcomes.

For individuals who have peripheral neuroma(s) other than Morton neuroma who receive ablation, the evidence is very limited: no published literature was identified. Relevant outcomes are symptoms, functional outcomes, and treatment-related morbidity. The evidence is insufficient to determine the effects of the technology on health outcomes.

Policy History

Date	Action
7/2018	New references added from BCBSA National medical policy. Background and summary clarified.
7/2017	New references added from BCBSA National medical policy.
5/2015	New medical policy describing investigational indications. Effective 5/1/2015.

Information Pertaining to All Blue Cross Blue Shield Medical Policies

Click on any of the following terms to access the relevant information:

[Medical Policy Terms of Use](#)

[Managed Care Guidelines](#)

[Indemnity/PPO Guidelines](#)

References

1. Rajput K, Reddy S, Shankar H. Painful neuromas. *Clin J Pain*. Sep 2012;28(7):639-645. PMID 22699131
2. Jain S, Mannan K. The diagnosis and management of Morton's neuroma: a literature review. *Foot Ankle Spec*. Aug 2013;6(4):307-317. PMID 23811947
3. Clinical Practice Guideline Forefoot Disorders Panel, Thomas JL, Blich ELt, et al. Diagnosis and treatment of forefoot disorders. Section 3. Morton's intermetatarsal neuroma. *J Foot Ankle Surg*. Mar-Apr 2009;48(2):251-256. PMID 19232980
4. Wu KK. Morton's interdigital neuroma: a clinical review of its etiology, treatment, and results. *J Foot Ankle Surg*. Mar-Apr 1996;35(2):112-119; discussion 187-118. PMID 8722878
5. Mulder JD. The causative mechanism in Morton's metatarsalgia. *J Bone Joint Surg Br*. Feb 1951;33-B(1):94-95. PMID 14814167
6. Adams WR, 2nd. Morton's neuroma. *Clin Podiatr Med Surg*. Oct 2010;27(4):535-545. PMID 20934103
7. Thomson CE, Gibson JN, Martin D. Interventions for the treatment of Morton's neuroma. *Cochrane Database Syst Rev*. Jul 2004(3):CD003118. PMID 15266472
8. Bennett GL, Graham CE, Mauldin DM. Morton's interdigital neuroma: a comprehensive treatment protocol. *Foot Ankle Int*. Dec 1995;16(12):760-763. PMID 8749346
9. Dierselhuis EF, van den Eerden PJ, Hoekstra HJ, et al. Radiofrequency ablation in the treatment of cartilaginous lesions in the long bones: results of a pilot study. *Bone Joint J*. Nov 2014;96-B(11):1540-1545. PMID 25371471
10. Boersma D, van Eekeren RR, Kelder HJ, et al. Mechanochemical endovenous ablation versus radiofrequency ablation in the treatment of primary small saphenous vein insufficiency (MESSI trial): study protocol for a randomized controlled trial. *Trials*. Oct 29 2014;15(1):421. PMID 25354769
11. Di Costanzo GG, Tortora R, D'Adamo G, et al. Radiofrequency ablation versus laser ablation for the treatment of small hepatocellular carcinoma in cirrhosis: a randomized trial. *J Gastroenterol Hepatol*. Mar 2015;30(3):559-565. PMID 25251043
12. Anchala PR, Irving WD, Hillen TJ, et al. Treatment of metastatic spinal lesions with a navigational bipolar radiofrequency ablation device: a multicenter retrospective study. *Pain Physician*. Jul-Aug 2014;17(4):317-327. PMID 25054391
13. Hillen TJ, Anchala P, Friedman MV, et al. Treatment of metastatic posterior vertebral body osseous tumors by using a targeted bipolar radiofrequency ablation device: technical note. *Radiology*. Oct 2014;273(1):261-267. PMID 24927327
14. Wang X, Wang X, Song Y, et al. Efficiency of radiofrequency ablation for surgical treatment of chronic atrial fibrillation in rheumatic valvular disease. *Int J Cardiol*. Jul 01 2014;174(3):497-502. PMID 24820759
15. Huang WZ, Wu YM, Ye HY, et al. Comparison of the outcomes of monopolar and bipolar radiofrequency ablation in surgical treatment of atrial fibrillation. *Chin Med Sci J*. Mar 2014;29(1):28-32. PMID 24698675
16. Avery J, Kumar K, Thakur V, et al. Radiofrequency ablation as first-line treatment of varicose veins. *Am Surg*. Mar 2014;80(3):231-235. PMID 24666862
17. Hiraki T, Gobara H, Iguchi T, et al. Radiofrequency ablation as treatment for pulmonary metastasis of colorectal cancer. *World J Gastroenterol*. Jan 28 2014;20(4):988-996. PMID 24574771
18. Morillo CA, Verma A, Connolly SJ, et al. Radiofrequency ablation vs antiarrhythmic drugs as first-line treatment of paroxysmal atrial fibrillation (RAAFT-2): a randomized trial. *JAMA*. Feb 19 2014;311(7):692-700. PMID 24549549
19. Fuller CW, Nguyen SA, Lohia S, et al. Radiofrequency ablation for treatment of benign thyroid nodules: systematic review. *Laryngoscope*. Jan 2014;124(1):346-353. PMID 24122763
20. Huang XM, Hu JQ, Li ZF, et al. Symptomatic sinus tachycardia with perpetuating slow pathway: successful treatment with radiofrequency ablation. *Pacing Clin Electrophysiol*. Oct 2014;37(10):e1-4. PMID 21077914

21. Prologo JD, Passalacqua M, Patel I, et al. Image-guided cryoablation for the treatment of painful musculoskeletal metastatic disease: a single-center experience. *Skeletal Radiol*. Nov 2014;43(11):1551-1559. PMID 24972918
22. Kim EH, Tanagho YS, Saad NE, et al. Comparison of laparoscopic and percutaneous cryoablation for treatment of renal masses. *Urology*. May 2014;83(5):1081-1087. PMID 24560975
23. Durand M, Barret E, Galiano M, et al. Focal cryoablation: a treatment option for unilateral low-risk prostate cancer. *BJU Int*. Jan 2014;113(1):56-64. PMID 24053685
24. Duarte R, Pereira T, Pinto P, et al. [Percutaneous image-guided cryoablation for localized bone plasmacytoma treatment]. *Radiologia*. Sep-Oct 2014;56(5):e1-4. PMID 22621822
25. Rodriguez-Entem FJ, Exposito V, Gonzalez-Enriquez S, et al. Cryoablation versus radiofrequency ablation for the treatment of atrioventricular nodal reentrant tachycardia: results of a prospective randomized study. *J Interv Card Electrophysiol*. Jan 2013;36(1):41-45; discussion 45. PMID 23080326
26. Yamauchi Y, Izumi Y, Hashimoto K, et al. Percutaneous cryoablation for the treatment of medically inoperable stage I non-small cell lung cancer. *PLoS One*. Mar 2012;7(3):e33223. PMID 22413004
27. Collins KK, Schaffer MS. Use of cryoablation for treatment of tachyarrhythmias in 2010: survey of current practices of pediatric electrophysiologists. *Pacing Clin Electrophysiol*. Mar 2011;34(3):304-308. PMID 21077912
28. Kaufman CS, Bachman B, Littrup PJ, et al. Cryoablation treatment of benign breast lesions with 12-month follow-up. *Am J Surg*. Oct 2004;188(4):340-348. PMID 15474424
29. Genon MP, Chin TY, Bedi HS, et al. Radio-frequency ablation for the treatment of Morton's neuroma. *ANZ J Surg*. Sep 2010;80(9):583-585. PMID 20857612
30. Moore JL, Rosen R, Cohen J, et al. Radiofrequency thermoneurolysis for the treatment of Morton's neuroma. *J Foot Ankle Surg*. Jan-Feb 2012;51(1):20-22. PMID 22055491
31. Chuter GS, Chua YP, Connell DA, et al. Ultrasound-guided radiofrequency ablation in the management of interdigital (Morton's) neuroma. *Skeletal Radiol*. Jan 2013;42(1):107-111. PMID 23073898
32. Friedman T, Richman D, Adler R. Sonographically guided cryoneurolysis: preliminary experience and clinical outcomes. *J Ultrasound Med*. Dec 2012;31(12):2025-2034. PMID 23197557
33. Cazzato RL, Garnon J, Ramamurthy N, et al. Percutaneous MR-guided cryoablation of Morton's neuroma: rationale and technical details after the first 20 patients. *Cardiovasc Intervent Radiol*. Oct 2016;39(10):1491-1498. PMID 27189181
34. Barrett SL, Nickerson DS, Elison P, et al. Clinical Practice Guidelines. Edition 1. Wimberley, TX: Association of Extremity Nerve Surgeons; 2014.