Corporate Medical Policy

Surgical Deactivation of Headache Trigger Sites

File Name: surgical_deactivation_of_headache_trigger_sites 10/2012
Origination: 5/2024
Last Review:

Description of Procedure or Service

Surgical deactivation of trigger sites is a proposed treatment of migraine headache. The procedure involves identifying an individual's predominant migraine trigger site and transecting the branches of the trigeminal nerve supplying that area of the head and neck. The treatment is based on the theory that migraine headaches arise due to inflammation of trigeminal nerve branches in the head and neck caused by irritation of the surrounding structures. The technique could potentially be used to treat other types of headache.

Migraine is a common headache disorder with a prevalence in the United States of approximately 18% in women and 6% in men. According to the International Headache Society (2018), migraine headache is a recurrent disorder with attacks lasting 4-72 hours. Typical features of migraine headaches include unilateral location, pulsating quality, moderate or severe intensity and associated symptoms such as nausea, photophobia, and/or phonophobia.

A variety of medications are used to treat acute migraine episodes. These include medications that are taken at the onset of an attack to abort the attack (e.g., triptans, ergotamines, and certain calcitonin gene-related peptide [CGRP] receptor antagonists), and medications to treat the pain and other symptoms of migraines once they are established (non-opioid analgesics, antiemetics). Prophylactic medication therapy (e.g., certain antidepressants, beta-blockers, and anti-seizure medications) may be appropriate for individuals with migraines that occur more than 2 days per week. Onabotulinumtoxin A and several CGRP receptor antagonists have also been approved by the U.S. Food and Drug Administration (FDA) as prophylactic treatments for episodic and/or chronic migraines. In addition to medication, behavioral treatments such as relaxation and cognitive therapy are used in the management of migraine headache.

Surgical deactivation of trigger sites is another proposed treatment of migraine headache. The procedure was developed by plastic surgeon Dr. Bahman Guyuron, following observations that some individuals who had cosmetic forehead lifts often reported improvement or elimination of migraine symptoms post-surgery. The procedure is based on the theory that migraine headaches arise due to inflammation of trigeminal nerve branches in the head and neck caused by irritation of the surrounding musculature, bony foramen, and perhaps fascia bands. Accordingly, surgical treatment of migraines involves removing the relevant nerve sections, muscles, fascia and/or vessels. The treatment is also based on the theory that there are specific migraine trigger sites and that these can be located in individuals. In studies conducted by Dr. Guyuron's research group, clinical evaluation and diagnostic injections of botulinum toxin have been used to locate trigger sites. The specific surgical procedure varies according to the individual's migraine trigger site. The surgical procedures are performed under general anesthesia in an ambulatory care setting and take an average of one hour.

Surgical procedures have been developed at four trigger sites; frontal, temporal, rhinogenic, and occipital. Frontal headaches are believed to be activated by irritation of the supratrochlear and suborbital nerves by glabellar muscles or vessels. The surgical procedure involves removal of the glabellar muscles encasing these nerves. Fat from the upper eyelid is used to fill the defect in the

muscles and shield the nerve. Temporal headaches may be activated by inflammation of the zygomatico-temporal branch of the trigeminal nerve by the temporalis muscles or vessels adjacent to the nerve. To treat migraines located at this trigger site, a segment (approximately 2.5 cm) of the zygomatico-temporal branch of the trigeminal nerve is removed endoscopically. Rhinogenic headaches may involve intranasal abnormalities, e.g., deviated septum, which may irritate the end branches of the trigeminal nerve. Surgical treatment includes septoplasty and turbinectomy. Finally, occipital headaches may be triggered by irritation of the occipital nerve by the semispinalis capitis muscle or the occipital artery. Surgery consists of removal of a segment of the semispinalis capitis muscle medial to the greater occipital nerve approximately 1 cm wide and 2.5 cm long, followed by insertion of a subcutaneous flap between the nerve and the muscle to avoid nerve impingement.

It has been proposed that other types of headaches, (e.g., tension headaches) may also be triggered by irritation of the trigeminal nerve. Although this mechanism of action is less well-established for headaches other than migraine, it is possible that surgical treatment of trigger sites may also be beneficial for some non-migraine headaches.

Related Policies:
Occipital Nerve Stimulation
Botulinum Toxin Injection

******Note: This Medical Policy is complex and technical. For questions concerning the technical language and/or specific clinical indications for its use, please consult your physician.***

Policy

Surgical Deactivation of Headache Trigger Sites is considered investigational for all applications. BCBSNC does not provide coverage for investigational services or procedures.

Benefits Application

This medical policy relates only to the services or supplies described herein. Please refer to the Member's Benefit Booklet for availability of benefits. Member's benefits may vary according to benefit design; therefore member benefit language should be reviewed before applying the terms of this medical policy.

When Surgical Deactivation of Headache Trigger Sites is covered

Not applicable.

When Surgical Deactivation of Headache Trigger Sites is not covered

Surgical deactivation of trigger sites is considered investigational for the treatment of migraine and non-migraine headache.

Policy Guidelines

For individuals who have migraine headaches who receive surgical deactivation of headache trigger sites, the evidence includes randomized controlled trials (RCTs). Relevant outcomes are symptoms, change in disease status, quality of life (QOL), and treatment-related morbidity. Three RCTs have been published; only one used a sham control and blinded patients to treatment group. All three trials reported statistically significantly better outcomes at 12 months in patients who received decompression surgery for migraine headache than the control intervention. However, the trials were subject to methodologic limitations (e.g., unclear and variable patient selection processes, variability in surgical procedures depending on trigger site). In addition, two of three trials were not blinded or sham-controlled and their findings are subject to the placebo

effect. Additional sham-controlled randomized studies are needed. The evidence is insufficient to determine that the technology results in an improvement in the net health outcome.

For individuals who have non–migraine headache who receive surgical deactivation of headache trigger sites, the evidence includes no published studies. Relevant outcomes are symptoms, change in disease status, morbid events, and treatment-related morbidity. The evidence is insufficient to determine that the technology results in an improvement in the net health outcome.

Chronic migraine is defined as migraine headaches that occur on ≥15 days per month for at least 3 months, which, on at least eight days per month, has the features of migraine headache. For complete classification of primary migraine and non-migraine headaches, please see the International Headache Classification (ICHD-3) at https://ichd-3.org/.

Billing/Coding/Physician Documentation Information

This policy may apply to the following codes. Inclusion of a code in this section does not guarantee that it will be reimbursed. For further information on reimbursement guidelines, please see Administrative Policies on the Blue Cross Blue Shield of North Carolina web site at www.bcbsnc.com. They are listed in the Category Search on the Medical Policy search page.

Applicable codes: *There is no specific CPT code for this procedure.*

It might be reported using one of the following codes: 15824, 15826, 30130, 30140, 30520, 64716, 64722, 64771, 64772, or 67900.

BCBSNC may request medical records for determination of medical necessity. When medical records are requested, letters of support and/or explanation are often useful, but are not sufficient documentation unless all specific information needed to make a medical necessity determination is included.

Scientific Background and Reference Sources

Surgical Deactivation of Migraine Headache Trigger Sites

BCBSA Medical Policy Reference Manual [Electronic Version]. 7.01.135, 8/9/2012

Senior Medical Director – 10/2012

Specialty Matched Consultant Advisory Panel – 5/2013

Surgical Deactivation of Headache Trigger Sites

BCBSA Medical Policy Reference Manual [Electronic Version]. 7.01.135, 8/8/2013

Senior Medical Director – 9/2013

Specialty Matched Consultant Advisory Panel – 5/2014

BCBSA Medical Policy Reference Manual [Electronic Version]. 7.01.135, 8/14/2014

Specialty Matched Consultant Advisory Panel – 5/2015

BCBSA Medical Policy Reference Manual [Electronic Version]. 7.01.135, 8/13/2015

BCBSA Medical Policy Reference Manual [Electronic Version]. 7.01.135, 2/11/2016

Specialty Matched Consultant Advisory Panel – 5/2016

BCBSA Medical Policy Reference Manual [Electronic Version]. 7.01.135, 2/9/2017

Specialty Matched Consultant Advisory Panel – 5/2017

BCBSA Medical Policy Reference Manual [Electronic Version]. 7.01.135, 2/8/2018

Specialty Matched Consultant Advisory Panel – 5/2018

BCBSA Medical Policy Reference Manual [Electronic Version]. 7.01.135, 2/14/2019

Specialty Matched Consultant Advisory Panel – 5/2019

BCBSA Medical Policy Reference Manual [Electronic Version]. 7.01.135, 2/13/2020

Specialty Matched Consultant Advisory Panel – 5/2020

BCBSA Medical Policy Reference Manual [Electronic Version]. 7.01.135, 2/11/2021

Specialty Matched Consultant Advisory Panel – 5/2021

Specialty Matched Consultant Advisory Panel – 5/2022

Specialty Matched Consultant Advisory Panel – 5/2023

Bigal ME, Lipton RB. The epidemiology, burden, and comorbidities of migraine. Neurol Clin. May 2009; 27(2): 321-34. PMID 19289218

Headache Classification Committee of the International Headache Society (IHS) The International Classification of Headache Disorders, 3rd edition. Cephalalgia. Jan 2018; 38(1): 1-211. PMID 29368949

Guyuron B, Reed D, Kriegler JS, et al. A placebo-controlled surgical trial of the treatment of migraine headaches. Plast Reconstr Surg. Aug 2009; 124(2): 461-468. PMID 19644260

Liu MT, Armijo BS, Guyuron B. A comparison of outcome of surgical treatment of migraine headaches using a constellation of symptoms versus botulinum toxin type A to identify the trigger sites. Plast Reconstr Surg. Feb 2012; 129(2): 413-419. PMID 21987048

Medical Director review 5/2024

Specialty Matched Consultant Advisory Panel- 5/2024

Policy Implementation/Update Information

Surgical Deactivation of Migraine Headache Trigger Sites

11/13/12 New policy. "Surgical deactivation of trigger sites is considered investigational for the treatment of migraine headache." Notification given 11/13/12. Effective date 2/12/13. (btw)

7/16/13 Specialty Matched Consultant Advisory Panel review 5/15/2013. No change to policy. (btw)

Surgical Deactivation of Headache Trigger Sites

10/1/13 Policy name changed from "Surgical Deactivation of Migraine Headache Trigger Sites" "Surgical Deactivation of Headache Trigger Sites". Description section updated to include information regarding surgical deactivation of other types of headache. Policy statement changed from "Surgical Deactivation of Migraine Headache Trigger Sites is considered investigational for all applications." To "Surgical Deactivation of Headache Trigger Sites is considered investigational for all applications." "Surgical deactivation of trigger sites is considered investigational for the treatment of migraine and non-migraine headache." Senior Medical Director review 9/14/2013. Reference added. (btw)

6/10/14 Specialty Matched Consultant Advisory Panel review 5/27/2014. No change to policy. (btw)

10/28/14 Reference added. (sk)

7/1/15 Specialty Matched Consultant Advisory Panel review 5/27/2015. (sk)

10/1/15 Reference added. (sk)

4/1/16 Reference added. (sk)

7/1/16 Policy Guidelines updated. Specialty Matched Consultant Advisory Panel review 5/25/2016. (sk)

4/28/17 Reference added. Policy Guidelines updated. Codes 64722, 64771, and 64772 added to Billing/Coding section. (sk)

6/30/17 Specialty Matched Consultant Advisory Panel review 5/31/2017. (sk)

3/29/18 Reference added. Definition of chronic migraine revised to be consistent with International Headache Classification (ICHD-3). (sk)

6/29/18 Specialty Matched Consultant Advisory Panel review 5/23/2018. (sk)

6/11/19 Reference added. Specialty Matched Consultant Advisory Panel review 5/15/2019. (sk)

6/9/20 Reference added. Biofeedback removed from list of Related Policies. Specialty Matched Consultant Advisory Panel review 5/20/2020. (sk)

6/15/21 Reference added. Specialty Matched Consultant Advisory Panel review 5/19/2021. (sk)

6/14/22 Specialty Matched Consultant Advisory Panel review 5/18/2022. (sk)

6/30/23 Specialty Matched Consultant Advisory Panel review 5/17/2023. (sk)

6/12/24 Description section updated. Added one Related Policy. References updated. Medical Director review 5/2024. Specialty Matched Consultant Advisory Panel review 5/2024. (ldh)