Effective November 1, 2023, refer to CMS Manual 100-02, Chapter 16-General Exclusions from Coverage for services included in this policy.

BlueCross BlueShield of Alabama

Name of Blue Advantage Policy:

Surgical Deactivation of Headache Trigger Sites

Policy #: 507
Latest Review Date: March 2023
Category: Surgery
ARCHIVED EFFECTIVE 11/1/2023

BACKGROUND:

Blue Advantage *medical policy does not conflict with Local Coverage Determinations (LCDs), Local Medical Review Policies (LMRPs) or National Coverage Determinations (NCDs) or with coverage provisions in Medicare manuals, instructions or operational policy letters. In order to be covered by Blue Advantage the service shall be reasonable and necessary under Title XVIII of the Social Security Act, Section 1862(a)(1)(A). The service is considered reasonable and necessary if it is determined that the service is:*

1. *Safe and effective;*
2. *Not experimental or investigational*;*
3. *Appropriate, including duration and frequency that is considered appropriate for the service, in terms of whether it is:*

    - *Furnished in accordance with accepted standards of medical practice for the diagnosis or treatment of the patient's condition or to improve the function of a malformed body member;*
    - *Furnished in a setting appropriate to the patient's medical needs and condition;*
    - *Ordered and furnished by qualified personnel;*
    - *One that meets, but does not exceed, the patient's medical need; and*
    - *At least as beneficial as an existing and available medically appropriate alternative.*

Routine costs of qualifying clinical trial services with dates of service on or after September 19, 2000 which meet the requirements of the Clinical Trials NCD are considered reasonable and necessary by Medicare. Providers should bill* ***Original Medicare* *for covered services that are related to* ***clinical trials*** *that meet Medicare requirements (Refer to Medicare National Coverage Determinations Manual, Chapter 1, Section 310 and Medicare Claims Processing Manual Chapter 32, Sections 69.0-69.11).*

POLICY:

Blue Advantage will treat **surgical deactivation of trigger sites** as a **non-covered benefit** and as **investigational** for the treatment of migraine and non-migraine headache.

Blue Advantage does not approve or deny procedures, services, testing, or equipment for our members. Our decisions concern coverage only. The decision of whether or not to have a certain test, treatment or procedure is one made between the physician and his/her patient. Blue Advantage administers benefits based on the members' contract and medical policies. Physicians should always exercise their best medical judgment in providing the care they feel is most appropriate for their patients. Needed care should not be delayed or refused because of a coverage determination.

DESCRIPTION OF PROCEDURE OR SERVICE:

Migraine is a common headache disorder that is treated using various medications, which can be taken at the onset of an attack and/or for migraine prophylaxis. Other treatments include behavioral treatments and botulinum toxin injections. Surgical deactivation of trigger sites is another proposed treatment. Surgical deactivation is based on the theory that migraine headaches arise due to inflammation of the trigeminal nerve branches in the head and neck and that specific trigger sites can be identified in individual patients. Surgical deactivation has also been proposed for other types of headaches (e.g., tension headaches).

Migraine Headache

Migraine is a common headache disorder with prevalence in the United States of approximately 18% in women and 6% in men. According to the International Headache Society, migraine headache is a recurrent disorder with attacks lasting four to 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. International Headache Society classification criteria (3rd edition, 2018) are listed in Table 1.

Table 1. International Headache Society Classification Criteria for Migraines

Classification Criteria
Migraine without aura
Description
Recurrent headache disorder characterized by attacks lasting 4-72 hours.
Diagnostic criteria
A. At least 5 attacks fulfilling criteria B through D

B. Headache attacks lasting 4 to 72 hours (untreated or successfully treated)
C. At least 2 of the following 4 characteristics: 1. unilateral location; 2. pulsating quality; 3. moderate or severe pain intensity; 4. aggravation by or causing avoidance of routine physical activity (e.g., walking or climbing stairs)
D. During headache, at least 1 of the following: 1. nausea and/or vomiting; 2. photophobia and phonophobia
E. Not better accounted for by another ICHD-3 diagnosis
Migraine with aura
Description
Recurrent attacks, lasting minutes, of unilateral fully reversible visual, sensory or other central nervous system symptoms that usually develop gradually and are usually followed by headache and associated migraine symptoms.
Diagnostic criteria
A. At least two attacks fulfilling criteria B and C
B. One or more of the following fully reversible aura symptoms: 1. visual; 2. sensory; 3. speech and/or language; 4. motor; 5. brainstem; 6. retinal
C. At least 3 of the following 6 characteristics: 1. at least 1 aura symptom spreads gradually over ≥5 minutes; 2. 2 or more aura symptoms occur in succession; 3. each individual aura symptom lasts 5 to 60 minutes;4. At least 1 aura symptom is unilateral; 5. At least 1 aura symptom is positive; 6. the aura is accompanied, or followed within 60 minutes, by headache
D. Not better accounted for by another ICHD-3 diagnosis, and transient ischemic attack has been excluded

Adapted from Headache Classification Committee of the International Headache Society (2018; available at http://www.ihs-headache.org/ichd-guidelines). ICHD-3: International Classification of Headache Disorders, 3rd edition.

Treatment

A variety of medications are used to treat acute migraine episodes. These include medications that are taken at the outset of an attack to abort the attack (triptans, ergotamines), and medications to treat the pain and other symptoms of migraines once they are established

(nonsteroidal anti-inflammatory drugs, narcotic analgesics, antiemetic's). Prophylactic medication therapy may be appropriate for people with migraines that occur more than two days per week. In addition to medication, behavioral treatments such as relaxation and cognitive therapy are used in the management of migraine headache. Moreover, botulinum toxin-A injections are a U.S. Food and Drug Administration (FDA)-approved treatment for chronic migraine (migraines occurring on at least 15 days per month for at least 3 months).

Surgical Deactivation
Surgical deactivation of trigger sites is another proposed treatment of migraine headaches. The procedure was developed by plastic surgeon Bahman Guyuron, MD, following observations that some patients 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 individual patients. 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 patient's migraine trigger site. The surgical procedures are performed under general anesthesia in an ambulatory care setting and take an average of 1 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. Paranasal 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.

Non-Migraine Headache
It has been proposed that other types of headaches, e.g., tension headaches, may also be triggered by irritation of the trigeminal nerve.

Treatment
Although this mechanism of action is less well established for headaches other than migraine, surgical treatment of trigger sites may also be beneficial for some non-migraine headaches.

KEY POINTS:

The policy was created with a search of the peer-reviewed literature available through November 22, 2022.

Summary of Evidence

For individuals who have migraine headaches who receive surgical deactivation of headache trigger sites, the evidence includes randomized controlled trials. Relevant outcomes are symptoms, change in disease status, morbid events, and treatment-related morbidity. Three randomized controlled trials have been published; only one used a sham control and blinded patients to treatment group. All three 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, findings from two trials not blinded or sham-controlled were 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.

The evidence for surgical deactivation of headache trigger sites in individuals who have non-migraine headache 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.

Practice Guidelines and Position Statements

American Headache Society

In 2013, the American Headache Society Board of Directors approved a list of five items that provide low value in headache medicine. This list was produced as part of the American Board of Internal Medicine Foundations Choosing Wisely Initiative. One of the five recommendations was, "Don't recommend surgical deactivation of migraine trigger points outside of a clinical trial." The published document states that the value of this procedure is still a research question and that large, multicenter RCTs with long-term follow-up are needed to provide accurate information on its benefits and harms.

U.S. Preventive Services Task Force Recommendations

Not applicable.

KEY WORDS:

Migraine headache, trigger site deactivation, surgical deactivation of migraine headache trigger sites, surgical deactivation

APPROVED BY GOVERNING BODIES:

Surgical deactivation of headache triggers is a surgical procedure and, as such, is not subject to regulation by FDA.

BENEFIT APPLICATION:
Coverage is subject to member's specific benefits. Group specific policy will supersede this policy when applicable.

CURRENT CODING:
There is not a specific CPT code for this procedure but it might be reported using any of the following codes. The procedure should be reported using the appropriate NOC code for the trigger site area.

CPT Codes:

15824	Rhytidectomy; forehead
15826	Rhytidectomy; glabellar frown lines
30130	Excision inferior turbinate, partial or complete, any method
30140	Submucous resection inferior turbinate, partial or complete, any method
30520	Septoplasty or submucous resection, with or without cartilage scoring, contouring or replacement with graft
64716	Neuroplasty and/or transposition; cranial nerve (specify)
64722	Decompression, unspecified nerve (specify)
64771	Transection or avulsion of other cranial nerve, extradural
64772	Transection or avulsion of other spinal nerve, extradural
67900	Repair of brow ptosis (supraciliary, mid-forehead or coronal approach)

REFERENCES:

1. 2nd Edition of the International Headache Classification (ICHD-2)2nd Edition of the International Headache Classification (ICHD-2). Available online at: //ihs-classification.org/en/.
2. Bigal ME, Lipton RB. The epidemiology, burden, and comorbidities of migraine. Neurol Clin 2009; 27(2):321-34.

3. Ducic I, Felder JM, 3rd, Khan N, et al. Greater occipital nerve excision for occipital neuralgia refractory to nerve decompression. Ann Plast Surg. Feb 2014; 72(2):184-187.
4. Guyuron B, Kriegler JS, Davis J et al. Comprehensive surgical treatment of migraine headaches. Plast Reconstr Surg 2005; 115(1):1-9.
5. Guyuron B, Kriegler JS, Davis J et al. Five-year outcome of surgical treatment of migraine headaches. Plast Reconstr Surg 2011; 127(2):603-8.
6. Guyuron B, Reed D, Kriegler JS et al. A placebo-controlled surgical trial of the treatment of migraine headaches. Plast Reconstr Surg 2009; 124(2):461-8.
7. Headache Classification Committee of the International Headache Society (IHS) The International Classification of Headache Disorders, 3rd edition. Cephalalgia. Jan 2018; 38(1): 1-211.
8. Headache Classification Committee of the International Headache Society (IHS). The International Classification of Headache Disorders, 3rd edition (beta version). Cephalalgia. Jul 2013; 33(9): 629-808.
9. Kurlander DE, Punjabi A, Liu MT, et al. In-depth review of symptoms, triggers, and treatment of temporal migraine headaches (Site II). Plast Reconstr Surg. Apr 2014; 133(4):897-903.
10. 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 2012; 129(2):413-9.
11. Loder E, Weizenbaum E, Frishberg B, et al. Choosing wisely in headache medicine: the American Headache Society's list of five things physicians and patients should question. Headache. Nov-Dec 2013; 53(10):1651-1659.
12. Mathew PG. A critical evaluation of migraine trigger site deactivation surgery. Headache. Jan 2014; 54(1):142-152.
13. Omranifard M, Abdali H, Ardakani MR, et al. A comparison of outcome of medical and surgical treatment of migraine headache: In 1 year follow-up. Adv Biomed Res. 2016; 5:121.

POLICY HISTORY:

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Medical Policy Group, February 2022

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Medical Policy Group, November 2023: Archived effective 11/1/2023.

This medical policy is not an authorization, certification, explanation of benefits, or a contract. Eligibility and benefits are determined on a case-by-case basis according to the terms of the member's plan in effect as of the date services are rendered. All medical policies are based on (i) research of current medical literature and (ii) review of common medical practices in the treatment and diagnosis of disease as of the date hereof. Physicians and other providers are solely responsible for all aspects of medical care and treatment, including the type, quality, and levels of care and treatment.

This policy is intended to be used for adjudication of claims (including pre-admission certification, pre-determinations, and pre-procedure review) in Blue Cross and Blue Shield's administration of plan contracts.