Medical Coverage Policy | Surgical Deactivation of Migraine Headache Trigger Sites

EFFECTIVE DATE: 10|02|2012
POLICY LAST UPDATED: 10|16|2018

OVERVIEW
Surgical deactivation of trigger sites is a proposed treatment of migraine headaches. The procedure involves identifying a patient's predominant migraine trigger site and transecting the branches of the trigeminal nerve supplying that area of 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.

MEDICAL CRITERIA
Not applicable

PRIOR AUTHORIZATION
Not applicable

POLICY STATEMENT
BlueCHiP for Medicare
Surgical deactivation of migraine headache trigger sites is not covered as the evidence is insufficient to determine the effects of the technology on health outcomes

Commercial Products
Surgical deactivation of migraine headache trigger sites is considered not medically necessary The evidence is insufficient to determine the effects of the technology on health outcomes

COVERAGE
Benefits may vary between groups/contracts. Please refer to the appropriate Evidence of Coverage, Subscriber Agreement, or Benefit booklet applicable "not medically necessary" benefits/coverage.

BACKGROUND
Migraine is a common headache disorder with a prevalence in the United States of approximately 18% in women and 6% in men.1 According to the International Headache Society (2013), migraine headache is a recurrent disorder with attacks lasting 4 to 72 hours.2 Typical features of migraine headaches include unilateral location, pulsating quality, moderate or severe intensity, and associated symptoms such as nausea, photophobia, and/or phonophobia. Treatment A variety of medications are used to treat acute migraine episodes. They include medications taken at the onset 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, antiemetics). Prophylactic medication therapy may be appropriate for people with migraines that occur more than 2 days per week. In addition to medication, behavioral treatments such as relaxation and cognitive therapy are used to manage migraine headache. Moreover, botulinum toxin type A injections are a U.S. Food and Drug Administration (FDA)–approved treatment for chronic migraine (migraines occurring on at least 15 days a 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 reported improvement or elimination of migraine symptoms

postsurgery.3,4 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 sites can be located in individual patients.

In studies conducted by 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 4 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 (≈2.5 cm) of the zygomatico-temporal branch of the trigeminal nerve is removed endoscopically. Rhinogenic headaches may involve intranasal abnormalities (eg, 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 caused 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.

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 (eg, unclear and variable patient selection processes, variability in surgical procedures depending on trigger site). In addition, findings from 2 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 the effects of the technology on health outcomes.

For individuals who have non–migraine headaches 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 the effects of the technology on health outcomes

CODING

BlueCHiP for Medicare and Commercial Products

There is no specific CPT or HCPCS for surgical deactivation of migraine headache trigger sites, therefore providers should report this service with an unlisted procedure code.

If any of the following CPT codes are reported and a diagnosis of migraine (ICD-10 G43.001-G43.919), the service will be considered not medically necessary:

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)
67900	Repair of brow ptosis (supraciliary, mid-forehead or coronal approach)

RELATED POLICIES

None

PUBLISHED

Provider Update, January 2019
Provider Update, January 2018
Provider Update, June 2016
Provider Update, January 2016
Provider Update, June 2014
Provider Update, August 2013
Provider Update, December 2012

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