

## Medical Coverage Policy | Surgical Deactivation of Migraine Headache Trigger Sites



**EFFECTIVE DATE:** 10|02|2012  
**POLICY LAST UPDATED:** 12|19|2017

### 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 and Commercial Products

Surgical deactivation of migraine headache trigger sites is considered not medically necessary due to lack of studies demonstrating clinical efficacy.

### 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. According to the International Headache Society, 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 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 (non-steroidal anti-inflammatory drugs (NSAIDs), narcotic analgesics, antiemetics). Prophylactic medication therapy may be appropriate for individuals with migraines that occur more than 2 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 of trigger sites is another proposed treatment of migraine headaches. The procedure was developed by plastic surgeon Dr. Bahman Guyuron, following observations that some patients who had cosmetic forehead lifts often reported improvement or elimination of migraine symptoms post-surgery.<sup>1</sup> The procedure is based on the theory that migraine headaches arise due to inflammation of the 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 individual'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 (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.

Current research evidence is suggestive of a benefit from surgical deactivation, but is not sufficient to form definite conclusions. There is a need for additional sham-controlled (also called placebo controlled) studies by other research groups to confirm the results of the single published trial using sham surgery. In addition, there is a need for further refinement of patient selection criteria and evaluation of any altered selection process e.g., without the use of diagnostic Botox injections in controlled studies. Thus, surgical deactivation of trigger sites to treat migraine headache is considered not medically necessary.

## **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 2018
- Provider Update, June 2016
- Provider Update, January 2016
- Provider Update, June 2014
- Provider Update, August 2013
- Provider Update, December 2012

## REFERENCES

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3. 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
4. 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
5. Guyuron B, Kriegler JS, Davis J, et al. Comprehensive surgical treatment of migraine headaches. *Plast Reconstr Surg.* Jan 2005;115(1):1-9. PMID 15622223
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