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Trigeminal Neuralgia In The News

Dr. Knopman Keynotes on Cerebrovascular Surgery

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Trigeminal Neuralgia

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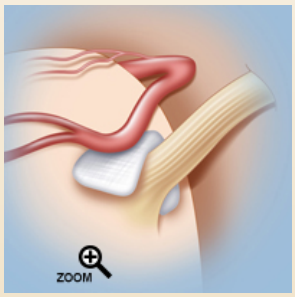
Surgery for Trigeminal Neuralgia

Surgery may be an option for treating trigeminal neuralgia when the diagnosis is confirmed with an MRI scan or other neuro-imaging, and when less invasive options have been exhausted.

The goal of surgery is to either stop a blood vessel from compressing the trigeminal nerve, or to sever the nerve that's causing the pain. There are various types of surgeries — a neurosurgeon will consider the individual case before recommending the approach most likely to provide relief.

The various surgical options include:

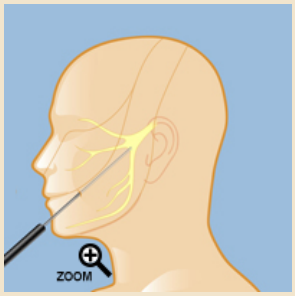
Microvascular Decompression (MVD)



Microvascular decompression surgery for trigeminal neuralgia

Microvascular decompression is an open surgical procedure that involves moving or removing the blood vessels that are creating pressure on the trigeminal nerve. The neurosurgeon will make an incision behind the ear on the side that is causing pain, exposing the trigeminal nerve, then removes or relocates any blood vessels that are compressing the nerve or inserts a small pad to prevent contact with the nerve. If no blood vessels are compressing the nerve, the surgeon will conduct a rhizotomy (see below) to sever the nerve itself.

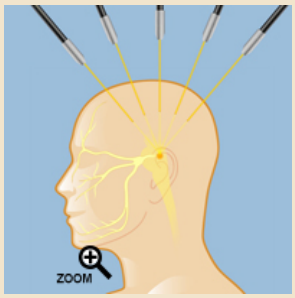
Stereotactic Radiofrequency Lesion (RFL)



RFL for trigeminal neuralgia

Stereotactic radiofrequency lesion (RFL) is a less invasive procedure than microvascular decompression. A radiologist and neurosurgeon collaborate to pinpoint the exact location of the nerve, then use high heat to destroy only the pain portions of the trigeminal nerve, leaving other sensation intact. Pain relief is usually immediate (or within 48 hours); in some patients the procedure may be repeated several times until adequate pain relief is achieved.

Stereotactic Radiosurgery



Stereotactic radiosurgery for trigeminal neuralgia

Stereotactic radiosurgery is not surgery in the conventional sense, but rather a noninvasive specialty that does not involve any cutting at all. It consists of directing beams of highly focused radiation at a specific target — in this case, the trigeminal nerve. The radiation beam damages the trigeminal nerve, but does not destroy it completely. Pain relief occurs gradually, over the course

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Doctors Who Treat Trigeminal Neuralgia

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Patient Resources

- New Patient Questionnaire (Adult)

of a few weeks. The results are
usually long-lasting, and the treatment can be repeated in the case of recurrence. The GammaKnife is one type of stereotactic radiosurgery treatment — it's a completely painless, highly effective treatment that can be performed on an outpatient basis.

Neurostimulation
On occasion, patients with typical trigeminal neuralgia will not respond to any or all of these treatments, or their pain recurs after an initially good response. Some patients may have symptoms similar to trigeminal neuralgia, but rather than short recurring spasms of pain they have more chronic, burning pain, suggesting a problem with the nerve that is different than typical trigeminal neuralgia. Patients can also have facial pain due to injuries or surgery, which does not respond well to medication. For all of these, neurostimulation can be considered.

Neurostimulation is a minimally invasive procedure in which a neurosurgeon places a small wire under the skin touching one or more branches of the nerve in the painful part of the face. The patient controls a device that can turn on a current to the wire. The device is tested for several days; the patient turns the stimulator device on to generate a buzzing or massage-type sensation, which is often pleasant and blocks the pain signal from getting to the brain. If a patient experiences good results from the test, the neurosurgeon can implant a permanent stimulator with a battery pack under the skin. The patient can control the device wirelessly, turning it on or off and changing the intensity of stimulation.

The device is currently FDA-approved for use in the spine, so use for facial pain is considered "off-label." This means that it is permissible to use it for trigeminal neuralgia, but it may not always be covered by all insurance.

The choice of surgical treatment depends on the individual patient — the neurosurgeon will evaluate each case carefully before recommending a treatment option.

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Reviewed by: Jared Knopman, M.D.
Last reviewed/last updated: October 2017
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‹ Diagnosing and Treating Trigeminal Neuralgia

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