

Percutaneous Radiofrequency Rhizotomy for Trigeminal Neuralgia

University Neurosurgery Information Sheet

General indications for the procedure:

Percutaneous radiofrequency rhizotomy for trigeminal neuralgia is indicated in cases of medically uncontrolled trigeminal neuralgia. The treatment may lessen the severity or, in some cases, fully control the pain related to trigeminal neuralgia.

Description of the procedure:

The procedure can be done in the special radiology area of the hospital or in the operating room. Under deep sedation, the introducer needle is passed into the nerve at the base of the skull. Once the needle is inserted and confirmed on x-ray views, the patient is usually awoken from sedation and stimulation through the needle allows further localization of the needle within the nerve in order to fine tune the treatment. In some cases this is not possible due to medical, neurological or anesthetic consideration. Once the localization is confirmed, either with stimulation or x-ray findings, the patient is then heavily sedated and the needle tip is then warmed to lessen the pain signals coming through the nerve. This may be done once or in several steps throughout the procedure. A surgical team monitors the patient's general condition and neurologic condition during this procedure. The needle is then withdrawn and the patient is evaluated and usually discharged the same day to home.

Risks of the procedure:

Risks of the procedure include the risks of all surgery which would include infection, bleeding or anesthesia. Specific risks to this procedure include persistence of pain or no benefit. Numbness of the face would be an expected result, either temporarily or permanently. Numbness of the eye may lead to a condition called keratitis with loss of vision. Other risks include weakness of the jaw with shifting of the jaw line, pain recurrence, painful numbness, need for further procedures, intracranial bleeding, stroke with numbness or weakness, coma or death.

Procedure alternatives if any:

The alternatives to having percutaneous rhizotomy for trigeminal neuralgia include continued medical therapy, microvascular decompression and/or radiosurgery. Specific circumstances of each case dictate the appropriateness of each procedure.

Probable Consequences of Refusing the Procedure:

Current symptoms will persist and/or worsen.

Persons performing the procedure:

The surgical team for this procedure is large. This involves, but is not limited to, the attending surgeons, resident surgeons, surgical nurses, physician assistants, surgical technologists and anesthesiologists. Everyone involved will be performing important tasks related to the surgery in accordance with the hospital policies, and based on their skill set and under the supervision of the responsible practitioners.