

Percutaneous Trigeminal Rhizotomy

This information pamphlet will give you general information about percutaneous trigeminal rhizotomy and your admission and stay at the hospital. If after reading this information you have any questions, please feel free to call your neurosurgeon's office.

What is a Percutaneous Trigeminal Rhizotomy?

Trigeminal rhizotomy is a surgical procedure which partially or completely damages the branch of the trigeminal nerve that is associated with your pain. Percutaneous means 'through the skin'. The method used to damage the nerve can be heat (radiofrequency), compression (balloon), or chemical (glycerol). Following a rhizotomy, the patient trades their pain for numbness in the corresponding division(s) of the trigeminal nerve.

Benefits

This operation is quick and effective and has minimal anesthetic risks. The patient goes home the same day and their trigeminal neuralgia pain is usually gone or reduced. Most people get used to the numbness and do not notice it after a few months.

Risks

This operation does not fix the cause of trigeminal neuralgia - only the symptoms are blocked. Patients will have numbness in an area of the face. This numbness is rarely annoying but in 1% of patients their symptoms can worsen into a syndrome called anesthesia dolorosa. Infection is rare. There are potential problems when numbness includes the eye (either deliberately or if the numbness spreads too far). A numb eye means a patient would not feel an eyelash or dirt in the eye and this could lead to a corneal ulcer and blindness. There is

mild post-operative discomfort (where the needle was placed) and patients may complain of soreness or weakness when chewing. Chewing may be weak. The area of numbness usually gets smaller with time because the nerve heals. If the nerve heals sufficiently, it will begin to pass the trigeminal neuralgia pain signals again. The operation may then need to be repeated.

Preparing for Surgery

Before Admission to Hospital

Anticoagulants and other medications that thin your blood such as Aspirin, Coumadin (Warfarin), Lovenox (Enoxaparin), Ticlid (Ticlopidine), Plavix (Clopidogrel) and Ginkgo must be discontinued 2 weeks before your surgery. Pradaxa (Dabigatran), Xarelto (Rivaroxaban) and Eliquis (Apixaban) must be discontinued 5 days before your surgery.

Before you come into hospital, consider the following:

- You will be awake for a portion of the operation although some patients do not remember this
- Make arrangements to return home. Most likely, you will be discharged after your operation. On rare occasions, you may need to spend the night in hospital and be discharged at 9:00 am.
- Limit the money you bring into hospital. Only bring enough to cover personal expenses such as a newspaper or a taxi ride home.
- Do not bring valuables (jewelry, lap tops, etc.) into the hospital.

Admission to Hospital

Your surgeon's office will contact you the day before your scheduled surgery to confirm the time to report to the Admitting Department.

The Night Before Surgery

You can eat or drink until midnight on the night before your operation. After midnight you can no longer take solid foods or drink alcohol. You may drink small amounts of clear fluids until 3 hours before your admission. You may take all your medications (except blood thinners) with small sips of water.

Take all your neuralgia medications before surgery so you will not have an attack during surgery.

The Morning of Surgery

You will have an intravenous (IV) line started in your arm. This IV line will provide you with fluids that you would normally get from drinking. You will be given all your other medications (e.g. blood pressure pills and neuralgia medications) with a sip of water the morning of surgery.

The Operating Room

Through your IV the anesthesiologist will give you a medication to make you sleep for a very short time. When you are asleep, your neurosurgeon will insert a fine needle through your cheek into the area of the trigeminal nerve and its branches. After the needle is in place, you will wake up. Your neurosurgeon will use the needle to stimulate the trigeminal nerve and ask you where you feel the stimulation. It will feel like a 'tingle' or 'buzzing' and you must tell the neurosurgeon where you feel this. The needle will be adjusted until the tingling is felt in the area where the neuralgia has been.

You will then be put briefly to sleep while your neurosurgeon makes a permanent lesion in the branch of the trigeminal nerve that was causing your pain. Because of the medications you were given, you may remember very little of the procedure. The operation is usually completed in one hour.

After your operation

You will be taken to the Perioperative Care Centre (PCC) to wake up after the procedure. You may stay an average of 1 to 2 hours in the PCC while you wake up from the anaesthesia. Your family can meet you there and take you home.

What to Expect After Your Operation

- Your recovery will be very rapid. For example, you may be eating within a few hours of surgery and you will be discharged home within an hour two of surgery. You should eat on the other side of your mouth (where there is no numbness).
- You may experience some discomfort in your jaw where we did the surgery. This pain should respond to Tylenol if needed.
- You will experience a feeling of numbness in the area of your face where your pain used to be. This is how the operation works- by blocking the pain in the trigeminal nerve.
- You may or may not have a small band-aid on your cheek. There will be no scars or incisions.
- Rarely is there swelling or bruising in the cheek. If this happens, an ice pack on the cheek can help reduce swelling.

Follow Up Appointment

You should see your neurosurgeon in 6 to 8 weeks in the office. Call immediately if you think your eye is numb. Only reduce your neuralgia medications if you are pain free.

Commonly Asked Questions

1. Do I need to discontinue my medication before the operation?

- a. Anticoagulants and other medications that thin your blood such as Aspirin, Coumadin (Warfarin), Lovenox (Enoxaparin), Ticlid (Ticlopidine), Plavix (Clopidogrel) and Ginkgo must be discontinued 2 weeks before your surgery. Pradaxa (Dabigatran), Xarelto (Rivaroxaban) and Eliquis (Apixaban) must be discontinued 5 days before your surgery.
- b. Anticoagulants and blood thinners can be restarted two weeks after surgery.
- c. Do not stop your anti-neuralgia medications.

2. Will I be awake during the procedure?

You will be awake for a portion of the operation. Your neurosurgeon will ask you questions during the procedure to help localize the brain target.

3. Is this operation a cure for my Trigeminal neuralgia?

Following a rhizotomy, the patient trades their pain for numbness in the corresponding division(s) of the trigeminal nerve. It is not a cure but very good at blocking the pain.

4. How do I reduce my anti-neuralgia medications after surgery?

As long as you are pain-free, reduce your neuralgia medications by one tablet a day each week. If you were taking six tablets a day, it will take six weeks to wean yourself off the medications.

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