NEUROSURGERY CLINIC

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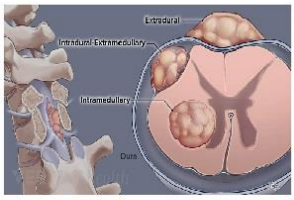
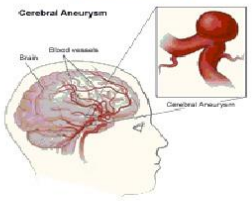
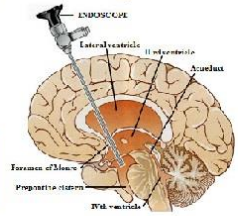








SPECIALITIES: BRAIN TUMOUR SURGERIES, MICROVASCULAR SURGERIES, NEUROENDOSCOPIC SURGERIES, TRANSNASAL ENDOSCOPIC SURGERIES, MINIMALLY INVASIVE SPINE SURGERIES, COMPLEX SPINE SURGERIES, PEDIATRIC NEUROSURGERIES

Facial Pain

(Trigeminal Neuralgia)

What is Trigeminal Neuralgia (Facial Pain)?

Trigeminal neuralgia (facial pain) is characterized by brief episodes of intense, stabbing, electric shock-like pain on the face. These episodes occur spontaneously or can be triggered by light touch, chewing, or changes in temperature (i.e. cold). The pain is so intense as to be completely disabling. In addition, weight loss is common because oral triggers prevent affected individuals from eating enough to maintain adequate nutrition.

A less common form of the disorder, called 'atypical trigeminal neuralgia", may cause less intense, constant, dull burning or aching pain, sometimes with occasional electric shock-like stabs.

Causes of Trigeminal Neuralgia (Facial Pain)

The cause of this condition is irritation of the fifth cranial nerve (the Trigeminal nerve) which is responsible for providing facial sensation. This irritation is occasionally due to benign tumors or multiple sclerosis, either of which can usually be detected by a high quality MRI of the brain.

In the majority of cases, however, imaging of the brain does not reveal a cause of the nerve irritation. In such cases a small vessel (usually an artery but occasionally a vein) is often found during surgery to be compressing the root entry zone of the Trigeminal nerve at the brainstem.

Treatment

Trigeminal neuralgia is a treatable condition.

The first line of therapy consists of medications such as Carbamazapine and Gabapetin. In most cases, medical treatment is effective.

If medical treatment fails or is limited by significant side effects, there are surgical options for patients with trigeminal neuralgia. Surgery is usually ineffective for atypical trigeminal neuralgia.

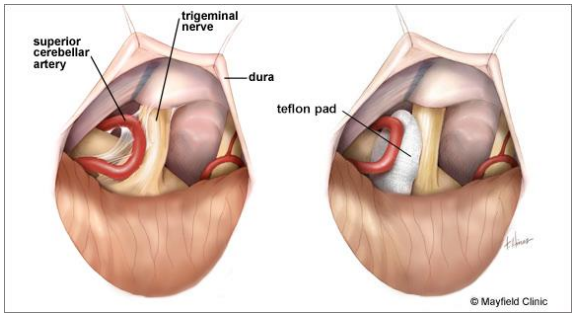
Surgical Options

Microvascular Decompression

This surgery through the skull, which removes or insulates the responsible blood vessel(s) using microsurgery - is an effective method of treating many people with this disorder. This is done under general anesthesia.

After the operation, the majority of patients has no facial numbness and is pain-free, requiring no further medications.

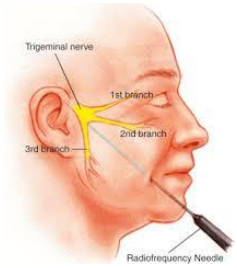
It is a major operation. and is not without danger. Hearing loss can occur on the side of the operation. Most of the serious and life-threatening complications have occurred in patients above 65-70 years of age. It is less effective for patients who have had other operations in the past.



Percutaneous Radiofrequency Gangliotomy

This type of surgery uses a special needle inserted in the face and radiofrequency-generated heat energy to selectively damage the preganglionic trigeminal rootlets in Meckel's cave. It is carried out in the awake patient and requires his co-operation and accurate feedback for proper positioning of the needle.

This procedure causes irreversible facial numbness. Precise control of the extent of the lesion is not always possible. Abnormal, unpleasant sensations of itching, burning or crawling (in 20% of patients) can accompany facial numbness. When severe (0.3%), they are as distressing to the patient as their original pain, since they can be present continuously as a severe burning discomfort (anesthesia dolorosa or analgesia dolorosa) which does not respond to treatment. Loss of feeling in the first trigeminal division makes the cornea insensate, and leaves the patient at risk for corneal ulceration and can lead to loss of vision.

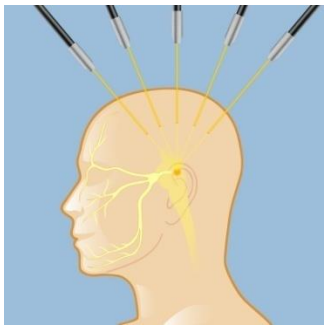


Percutaneous Glycerol Chemoneurolysis

This type of surgery is also carried out using a needle inserted in the face and this can be performed under general anesthesia. There is usually only mild sensory loss and rare oculomotor or dysesthetic squeal. It has the same risks of meningitis and needle misdirection injury as any percutaneous technique. Compared with radiofrequency gangliotomy, the pain recurrence rate is higher, but this is not a signify cant disadvantage, as the procedure can be easily repeated and is well tolerated.

Radiosurgery

Radiosurgery is focused radiation treatment performed without opening the skull,using Radiosurgery directed at the Trigeminal nerve root.



Surgical Choices and Risk Factors

The choice of operation depends on the patient's age, associated illness and assessment of the risks he is willing to assume. For most 'younger' patients, microvascular decompression is the best option. Younger patients have a better chance of tolerating surgery without complications, and a longer future life expectancy in which to deal with problems that can follow percutanous lessoning. They also have a higher risk of pain recurrence following such procedures and will likely more future treatments resulting in increased cumulative side-effects.

Older patients (>65-70 year of age) have increased risks of surgical complications. But because of shorter overall life expectancy, they are likely to require fewer repetitions of percutaneous procedures with less cumulative denervation squeal. Significant associated illness such as chronic obstructive pulmonary disease, coronary artery disease and diabetes mellitus can also increase the risks of such major surgery.