Internal Neurolysis

When nerves are stretched, or chronically compressed, internal scarring and swelling may occur. In select patients, the outer sheath of the affected nerve is opened with a microscope. Scar tissue within the nerve may also be removed. This is called an internal neurolysis.

For swollen nerves, opening this outer sheath relieves pressure and promotes blood flow in the nerve. The nerve is left open. Internal neurolysis is also performed after some traumatic injuries, so that select nerve fascicles (not the complete nerve) can be repaired with a graft (i.e., a split nerve repair).

IN is a safe, effective, and durable treatment for trigeminal neuralgia in the absence of neurovascular compression. Pain-free outcomes with IN appeared to be more durable than radiofrequency gangliolysis, and IN appears to be more effective than stereotactic radiosurgery, 2 alternatives to posterior fossa exploration in cases of TN without NVC. Given the younger age distribution of patients in this group, consideration should be given to performing IN as an initial treatment. Accrual of further outcomes data is warranted [1].

1)
Ko AL, Ozpinar A, Lee A, Raslan AM, McCartney S, Burchiel KJ. Long-term efficacy and safety of internal neurolysis for trigeminal neuralgia without neurovascular compression. J Neurosurg. 2015 Feb 13:1-10. [Epub ahead of print] PubMed PMID: 25679283.