

Percutaneous balloon compression trigeminal rhizotomy

Percutaneous compression of the [trigeminal ganglion](#) (PCTG) has been used to treat [trigeminal neuralgia](#) since [1983](#).

Kouzounias et al. consider it as the first option for the treatment of trigeminal neuralgia in patients who are not suitable candidates or are not willing to undergo microvascular decompression, while [percutaneous glycerol trigeminal rhizotomy](#), is reserved for patients in whom the effect of percutaneous balloon compression trigeminal rhizotomy has proven to be short or difficult to repeat due to cisternal fibrosis ¹⁾.

Indications

see [Percutaneous balloon compression trigeminal rhizotomy for multiple sclerosis related trigeminal neuralgia](#).

Technique

Guided by fluoroscopy, a 4 French Fogarty catheter is introduced into Meckl's cave, and its balloon is inflated tightly for a few minutes with soluble contrast agent to compress the gasserian ganglion and rootlets, under light endotracheal anesthesia.

All patients experience immediate pain relief, with mild numbness in all three divisions, but with corneal sparing.

Often, weakness of ipsilateral mastication appears transiently. In 33 procedures performed in 25 patients aged 48 to 86, with a follow-up period of 6 months to 7 years, there were 25 long-lasting cures (76%) and 8 recurrences. These results are fully comparable to those of other “destructive” procedures. There was no anesthetic complication and no mortality.

The advantages of this procedure, besides its efficacy and low rate of dysesthesia, include absence of discomfort for the patient, short operative time, technical ease for the neurosurgeon, minimal morbidity, and no risk to corneal sensation ²⁾.

Complications

[Percutaneous balloon compression trigeminal rhizotomy complications](#)

Case series

[Percutaneous balloon compression trigeminal rhizotomy case series.](#)

1)

Kouzounias K, Lind G, Schechtmann G, Winter J, Linderoth B. Comparison of percutaneous balloon compression and glycerol rhizotomy for the treatment of trigeminal neuralgia. J Neurosurg. 2010 Sep;113(3):486-92. doi: 10.3171/2010.1.JNS091106. PubMed PMID: 20187700

2)

Belber CJ, Rak RA. Balloon compression rhizolysis in the surgical management of trigeminal neuralgia. Neurosurgery. 1987 Jun;20(6):908-13. PubMed PMID: 3614571.

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