Efficacy and safety of microvascular decompression or percutaneus radiofrequency rhizotomy performed at one center for trigeminal neuralgia

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Object: The aim of this study was to compare the efficacy and safety of trigeminal neuralgia treatment (TN) with minimal invasive procedures being either microvascular decompression (MVD) or percutaneus radiofrequency rhizotomy (PRR).
Material: In a five-year period (2008–2013), 110 patients with TN were surgically treated by the same team. Tumor and multiple sclerosis related TN were excluded from the analysis. 31 male and 34 female patients aged 67 ± 16 underwent PRR. 24 male and 21 female patients aged 49 ± 14 underwent MVD. 78 PRR and 49 MVD were performed in this group of patients. TN before surgery lasted from 2 years up to 36 years.
Method: The patients were provided with the risks and benefits of both procedures and then chose which operation they wanted. PRR was performed using fluoroscopic guidance, brief sedation and discharge on the following day. MVD was performed under general anesthesia in the park bench position, by small retrosigmoidal craniectomy. The patients were typically discharged after five days.
Results: 87% of the patients reported instant improvement after PRR. The pain was absent with low doses of medications in another 13%. 75% of the PRR patients noticed persistent numbness in the previously painful area. 78% of the patients with TN were medication and pain free after MVD. 8% of the patients experienced improvement after MVD and TN has been well controlled by medications. Two patients did not improve after MVD. 6% of the patients required more than one MVD. No serious complications were reported in the group.
Conclusions: PRR is a short, minimally invasive procedure requiring short hospitalization, which is recommended to patients with a medical history. MVD with its limitations related to age and general patient condition, typical for elective neurosurgical procedures, gives lower recurrence.
Key words: trigeminal neuralgia, microvascular decompression, percutaneus radiofrequency rhizotomy

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