



# Radiofrequency thermocoagulation combined with pulsed radiofrequency helps relieve postoperative complications of trigeminal neuralgia

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**ABSTRACT.** Trigeminal neuralgia is a sudden, severe condition characterized by stabbing and recurrent pain. Radiofrequency thermocoagulation (RFT) and pulsed radiofrequency (PRF) are common surgical interventions used to treat trigeminal neuralgia. This study aimed to investigate the therapeutic effects and associated complications of a combination of RFT and PRF in the treatment of trigeminal neuralgia. Computed tomography-guided percutaneous RFT of the Gasserian ganglion was performed on 80 patients with trigeminal neuralgia. Patients were randomly assigned to either group A (RFT at 70°C) or group B (RFT at 75°C). Patients in each group were divided into 2 subgroups, receiving percutaneous RFT (240 s) with or without PRF (42°C, 2 Hz, 240 s). Six months later, pain relief and complication status were evaluated. There was no significant difference in visual analogue scores among groups with RFT at 70° or 75°C, with or without PRF. Data showed that facial numbness and postoperative masticatory muscle weakness recovered more rapidly in patients receiving combined

RFT and PRF treatment. Decreased corneal reflex was relieved to a significantly greater extent in groups receiving PRF than those without. Thus, compared to the use of RFT at 75°C alone, the combination of PRF and RFT helped eliminate postoperative complications, such as facial numbness, masticatory muscle weakness, and decreased corneal reflex, indicating that it could be useful for surgically treating trigeminal neuralgia.

**Key words:** Trigeminal neuralgia; Gasserian ganglion; Complications; Radiofrequency thermocoagulation; Pulsed radiofrequency