

## Comments on “Long-term Follow-up of Pulsed Radiofrequency Treatment for Trigeminal Neuralgia: Kaplan-Meier Analysis in a Consecutive Series of 149 Patients”

### TO THE EDITOR:

We have read the article entitled “Long-term Follow-up of Pulsed Radiofrequency Treatment for Trigeminal Neuralgia: Kaplan-Meier Analysis in a Consecutive Series of 149 Patients”, for which we congratulate its authors for their results and recommendations (1).

The action mechanism of pulsed radiofrequency is based on short bursts of current at a high frequency at the nervous tissue level, resulting in pain modulation. It is possible to adjust the voltage of the radiofrequency generator manually. According to the results of Fang et al, (corresponding author of this mentioned work) they suggest that PRF at high voltage ( $71.90 \pm 7.39$  V) is more effective than a standard voltage PRF at one year of follow-up and may be a promising tool for patients who do not respond to the conservative treatment of trigeminal neuralgia (1).

Wan et al (2) concluded that long-duration, high-voltage PRF at the trigeminal ganglion can improve trigeminal neuralgia pain relief secondary to herpes zoster, improving quality of life and reducing the dose of anticonvulsants through the 6-month follow-up. These authors mention that the patients safely tolerated a maximum voltage between 60 and 90 V.

Recently, a high voltage bipolar technique has also been described to expand the area of pulsed radiofre-

quency delivered in the trigeminal ganglion, which could be an option between PRF and other neurodestructive techniques or surgical procedures (3).

According to the literature, a high voltage, and the duration time of the PRF are important parts of the procedure, influencing patient outcomes, so in the present study we suggest that it would be convenient to indicate the voltage it was carried out in the patients with recurrence. Also, it would be convenient to clarify if a standard voltage was applied to the patients who underwent to a second attempt of PRF, and if the voltage was gradually increased according to the patient's tolerance.

All of this aimed to possibly add greater value to this important study, correlating the results obtained with the already published in the literature, contributing to the management of trigeminal neuralgia.

Victor Silva, MD

Pain Management Department, Centro Médico Zambrano Hellion, Tecnológico de Monterrey, Escuela de Medicina y Ciencias de la Salud. Monterrey, Nuevo León, México

E-mail: drvictorsilva@gmail.com

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