Comments on "Sacral Nerve Stimulation in Patients With Refractory Pudendal Neuralgia"

To the Editor:

We read with great interest the article entitled "Sacral Nerve Stimulation in Patients With Refractory Pudendal Neuralgia" by Kai-Kai et al (1) recently published in the July 2022 issue. We commend the authors for addressing the effectiveness of neuromodulation in a disorder with high burden such as pudendal neuralgia. In a population of 56 eligible patients, 33 patients with pudendal neuralgia were treated with sacral nerve stimulation (SNS) and the authors concluded that the treatment improved pain severity and sleep time either in short- and long-term (up to 6 months) with significant reduction of analgesic intake. However, there are several aspects of this study that need to be clarified.

First, neurophysiological tests are useful for assessing the integrity of the neural pathways and in the current study it is not clear how many patients had pathological neurophysiological findings. As stated by the authors, identifying the location and cause of pain symptoms in chronic pelvic pain may be challenging. Because SNS acts "as a neural regulator depriving electrophysiological characteristics of the nerve cells, interfering with abnormal sacral nerve reflex arcs, and mediating effector organ behaviors of sacral innervation" any damage should be investigated with neurophysiological tests and reported whenever possible. The assessment of afferent and efferent branches of the sacral arc as well as the distinction between peripheral and central damage of the nervous system may result in meaningful information about the topology of lesion and better outcomes, as reported in women with urinary retention and abnormal urethral sphincter electromyography findings treated with SNS (2).

Second, the use of sacral neuromodulation has sometimes led to variable results depending on gender and age (3). In the current study, it was not reported in the discussion if the observed female prevalence significantly affected the results and if younger patients had a better outcome.

Third, including only patients with improvement > 50% of pain relief, sleep quality, urination and defecation frequencies, anxiety, and life quality may create a bias due to "pre-selection" of good responders in the short-term that are more likely to maintain pain relief in the long-term outcome. Therefore, the treatment effectiveness might occur under optimal conditions but not be confirmed with more restrictive eligibility criteria. The concomitant inclusion of subjects with < 50% improvement might have provided stronger statistical support to results in the long-term follow up.

Last, few informations about the patients' comorbidities are disclosed. The occurrence of concomitant disorders such as endometriosis, pelvic floor dysfunction or irritable bowel syndrome in chronic pelvic pain that may benefit from neurostimulation has been described in literature (4,5). Due to common neural pathways, pain relief subsequent to SNS may be either due to its effects on pudendal neuralgia or another pelvic concomitant disorder with overlapping pain topography. This possibility should be considered when treating patients with chronic pelvic pain and conveniently reported.

As a final comment, in the study (1) there was a wide variability in intensity, stimulation pulse width and frequency applied. The authors disclosed that high frequency (> 20 Hz) might improve pain relief in pudendal neuralgia but stimulation parameters were not considered in the statistical analysis. Although controversial in previous studies, stimulation parameters might influence the effectiveness of treatment and should therefore be taken into account for future studies with SNS.

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