

Pudendal neuralgia treated with multiple pulsed radiofrequency: a case report

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Abstract

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Abstract

INTRODUCTION

Pudendal Neuralgia (PN) is a chronic pelvic and perineal pain syndrome originating from damage or inflammation of the pudendal nerve. The pudendal nerve is a somato-sensory nerve that provides sensory innervations to the anal, perineal, and genital area, and motor supplies to the pelvic floor muscles. Pudendal neuralgia is primarily a clinical diagnosis that is suggested by characteristic features, usually referred to the "Nantes" criteria. The condition is significantly underdiagnosed, and the ideal management of pudendal neuralgia has not yet been defined.

CASE PRESENTATION

We present a case of a female with 4 years of severe, sharp, burning pain of the left gluteal and perineal region. She could not sit for longer than 30 minutes. She had tried physical and medical therapy, wireless neuromodulation implant and botulinum injections but the pain persisted. At our first evaluation in august 2023 we performed a diagnostic pudendal nerve block with lidocaine 1% 1 ml that provided 100% pain relief for several hours so this patient was elected to undergo eco-guided trans gluteal pulsed radiofrequency (PRF) of the left pudendal nerve. After the execution of sensitive test at 50Hz, 0.4V and motor test at 2Hz, 1.5V, PRF was carried out at a frequency of 2Hz and a pulse width of 20 milliseconds for a duration of 300 seconds at 42 C°.

RESULTS

After the procedure she reported a decrease of Visual Analogue Scale (VAS) from 8/10 to 3/10, PGI-I 2 and tolerating sitting for several hours. One month later we applied the same technique for a pudendal pain on the right side. Again VAS collapsed from 7 to 3/10, PGI-I 3. Eight month after the procedure the patient still has good sitting tolerance.

CONCLUSION

The exact mechanism of action of PRF is unknown but electroporation has been proposed as a possible mechanism of action. Electroporation is a process induced by transmembrane potentials that creates pores and cause increases in membrane permeability associated with cell stress and death, ultimately mediate the perception of pain. Tissue damage at a microscopic level after PRF needs to be further evaluated.

To our knowledge PRF for the treatment of PN might be an effective, minimally invasive option for those patients that have failed conservative management.

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