Peripheral Nerve Stimulation for the Treatment of Morton’s Neuroma
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Introduction
Interdigital (Morton’s) neuroma is a common cause of forefoot pain. We present the case of a patient who experienced significant relief from a posterior tibial peripheral nerve stimulator implantation for neuropathic pain after Morton’s neuroma removal refractory to surgical, interventional and non-invasive modalities.

Case Report
Presentation:
A 51-year-old female presented to the pain clinic with a several year history of refractory Morton’s neuroma of the right foot resulting in neuropathic pain along the branches of the posterior tibial nerve. The pain began in 2014 and was initially treated with alcohol and cortisone shots followed by surgical excision. These interventions were ineffective and she again had surgery in 2017 which provided no benefit. Since then, she tried physical therapy, orthotics, medications including meloxicam and gabapentin and repeat injections, all of which provided little to no relief of symptoms. Her pain was localized to the plantar aspect of the third and fourth metatarsals and was described as throbbing, shooting and cramping in nature. She reported the pain as a 6/10 in severity and radiated to her toes with numbness and tingling in the third and fourth toes.

Intervention:
After risks and benefits were discussed with the patient she desired to consider peripheral nerve stimulator implantation. First, a diagnostic posterior tibial nerve injection was performed just superior to the medial malleolus with 95% relief in the immediate 24 hour post-procedure period. This was followed by the implantation of a peripheral nerve stimulator under ultrasound guidance.

Follow-up:
At one month follow-up, she reports that when the device is turned on, she has 0-1/10 pain; when the device is not on, her pain returns to baseline. She had traveled abroad in the interim and enjoyed many hours of nearly pain-free hiking. The patient did report a rash over the stimulator skin site due to frequent use which limited her use of the device for a few days. Otherwise there were no other complications.

Discussion
Multiple modalities for treating Morton’s neuroma have been described in literature including interventional techniques such as ultrasound-guided radiofrequency ablation and alcohol injections1-3. Surgical excision is also frequently performed, although patient-reported outcomes may not be as good as previously suggested4. The use and success of peripheral nerve stimulation for the treatment of Morton’s neuroma has not been previously reported. Given the patient’s refractory symptoms before peripheral nerve stimulation and near complete resolution of symptoms afterward, this case demonstrates a novel approach to the management of Morton’s neuroma.

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References