Outcomes of Surgical Treatment for Sural Neuritis
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INTRODUCTION: Somatic nerve pain is one of the most common complications following surgery of the foot and ankle, but may also arise following traumatic injury or chronic nerve compression. Symptoms can be intense and debilitating. One of the most commonly affected nerves in the foot and ankle is the sural nerve, which is at risk given the proximity to frequently used surgical approaches. The purpose of this study is to investigate the outcomes of sural nerve neurolysis and neurectomy for sural neuritis.

METHODS: IRB approval was obtained, and patients were identified who underwent operative treatment by two foot and ankle specialists for sural nerve related pain. Exclusion criteria included patients under the age of 18, prisoners, those who underwent concomitant osseous procedures, and less than 6-week follow up. Demographic data, baseline outcomes including FFI, SF-36, FAAM, and VAS were recorded. Final follow-up questionnaires using PROMIS measures and FAAM were administered.

RESULTS: The 25 patients meeting inclusion criteria for this study had a median age of 47 (interquartile range [IQR], 43 to 49) and had median follow up of 33.7 months (IQR, 4.5 -73.2). Median FAAM ADL improved from 40.8 (IQR 38.1-51.3) preoperatively to 59.5 (IQR 47.6-76.2) postoperatively, p=0.032. FAAM Sports scores improved from 15.6 (IQR 9.4-21.9) to 31.3 (IQR 25.0-56.3) postoperatively, p=0.002. VAS scores improved from a median of 9.0 (IQR 7.0-9.0) to 4.5 (3.0-6.0), p<0.0001. At final follow up, patients reported PROMIS lower extremity function score median of 46.7 (IQR 36.7-51.2), PROMIS neuropathic pain quality score of 51.5 (IQR 45.5-60.2), and PROMIS pain interference of 55.7 (IQR 41.1-63.7). Patients with current or recent nicotine use, depression, or anxiety reported poorer outcomes following surgery.

DISCUSSION AND CONCLUSION: Neurectomy or neurolysis has potential to significantly improve symptoms for sural neuritis secondary to neuroma or nerve entrapment. Tobacco use, depression, and anxiety are associated with poorer outcomes following surgery. Further research is needed to identify the ideal surgical candidates and perioperative factors to optimize patient outcomes.