

Long-term results of dorsal neuroma/nerve transposition in the surgical management of Morton's neuroma and correlation with intraoperative anatomical variations, Koti et al. *Journal of Orthopaedic Surgery and Research* (2022) 17:22

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Level of Evidence: 3

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Morton's neuroma is a commonly encountered nerve lesion seen in the lower extremity, caused by repetitive trauma and excessive forces to the involved interdigital nerve against its respective deep transverse intermetatarsal ligament. This leads to microdamage causing fibrosis, neural edema, demyelination, scarring and pain.

Outcomes for 48 patients who had surgical treatment of Morton's neuroma from years 2002 to 2016 were reviewed. The authors specifically wanted to track outcomes for a surgical treatment called transposition; this procedure includes dividing the deep transverse intermetatarsal ligament through a dorsal approach and freeing the neuroma from adjacent tight soft tissues. The goal of this procedure is to free the neuroma from pressure of local soft tissues, avoiding the risk of stump neuroma formation and recurring pain.

9 patients of the 48 were removed from the study; 6 patients in the group could not be traced and 3 had additional procedures in the lower extremity (bunionectomy, PIP joint fusions or other) and were not included in the study. 39 patients, and 43 total web spaces were tracked who underwent neuroma transposition, all performed by the same surgeon.

All outcomes, as reported by patients, were measured using the Giannini pain scoring system (range of 0 – 80, higher number = less pain) and Coughlin's criteria of overall patient satisfaction (excellent, good, fair and poor). The mean pre-operative Giannini pain score was 13. Post-op scoring for dorsal nerve transposition surgery produced excellent to fair results in approximately 84% of patients with a score above 50. 15% of patients scored poor result with scoring of less than 50. At long term follow up, approximately 66% of patients had no pain, 20% had mild pain, 15% had severe pain. 19% of patients regretting having undergone surgery. 56% of patients report being able to wear fashionable shoes after surgery (i.e. high heels), 28% wore comfortable shoes, 16% wore modified shoes. 77% of patients had no limitation walking, 23% of patients had some limitation (2-6 blocks).

Authors of this study conclude that their study was marginally inferior to comparable literature with results of 19% of patients regretting surgery. However, the authors of this study conclude no specific prognostic risk factor to predict surgical outcome. The authors conclude that if transposition surgery fails, then a dorsal neurolysis should be considered as primary surgical treatment, followed by neurectomy as a secondary option.



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