Deep Peroneal Neurectomy for Painful Midfoot Arthritis

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Abstract

Arthrosis is the gold standard for surgical treatment of midfoot arthritis. Not all patients are good candidates for arthrosis and associated postoperative immobility. A Deep Peroneal Neurectomy (DPN) is a less demanding and viable option for patients with naviculocuneiform joint (NCJ) and/or tarsometatarsal joints (TMTJs) arthritis. In a preliminary study, Dr. Blacklidge and colleagues described DPN technique for the treatment TMTJ osteoarthritis for patients who were poor candidates for arthrodesis (1). In a similar manner, this study looks at a larger cohort with an average follow up of 33 months to determine patient satisfaction and functional outcomes utilizing a satisfaction survey and modified AOFAS score.

Methods

• Retrospectively, 26 patients and 24 feet with midfoot arthritis at the TMT and/or NC joints that received a DPN procedure at a minimum follow-up time of 12 months were identified.

• DPN procedures were discussed with patients who were of advanced age, poor bone quality, obese, smokers or who had numerous joints affected by arthritis.

• Each patient received an ultrasound guided diagnostic block prior to the surgical procedure to determine the level of symptom relief over the next 24 hours.

• Surgical Procedure: The deep peroneal nerve was transected distal to the TMTJ and/or NC joint that received a DPN procedure at a minimum follow-up time of 12 months were identified.

• Functional outcomes were measured using a Modified midfoot AOFAS score (foot and ankle: anatomic study. Foot Ankle Int 28(4):482). Functional outcomes were measured using a Modified midfoot AOFAS score (foot and ankle: anatomic study. Foot Ankle Int 28(4):482).

• Patient satisfaction was measured with two questions: 1. Would you have the procedure again knowing what you know now about the relief? 2. Are you satisfied with the outcome?

Demographics

N=26 (32 Feet)

Age

Mean 61.9
Range 43-81

Sex

Female 18

Follow Up

Mean 33.1 Months
Range 12-95 Months

Results

• 84% of patients had excellent to satisfactory modified midfoot scores.

• 81% of the patients at the final follow up said they would have the procedure again.

• 90.6% of patients said they were satisfied with the outcome of the procedure.

• Mean modified midfoot AOFAS score was 49.5 out of 75.

Conclusion

• DPN has shown to have high patient satisfaction and good AOFAS for patients with 1-TMT joint pain due to OA.

• Patients who were not satisfied, had any temporary relief due to advancing OA in surrounding joints or because of continued osteoarthritis.

• Extreme medial or lateral midfoot pain persisted despite neurolysis.

• DPN worked well in younger patients with post traumatic arthritis. If a patient is young and has a deformity/instability that will cause advancing OA in surrounding joints, an arthrodesis is recommended.

Statement of Purpose

The aim of the study is to show that a DPN is a good option for patients with midfoot arthritis, that are poor candidates of unwilling to undergo an arthrodesis procedure.

Level of Evidence

Level IV, Retrospective Therapeutic Case Series

References


