Q/What is the best way to treat Morton’s neuroma?

EVIDENCE-BASED ANSWER

No single treatment has been identified in the literature. That said, a protocol of stepped care that showed good results in an uncontrolled trial seems reasonable: patient education and foot-wear or insole changes, followed by corticosteroid injections and, finally, surgery (strength of recommendation [SOR]: C, case series).

Injecting sclerosing alcohol depends on the provider’s access to and comfort with ultrasound, but the evidence is insuffi cient to recommend it routinely (SOR: C, case series).

Evidence summary

Options for treating Morton’s neuroma include changing shoe type, using insoles or metatarsal pads, taking nonsteroidal anti-infl ammatory drugs (NSAIDs), giving corticosteroid or sclerosing alcohol injections, and surgically excising or transposing the offending nerve.1-3

Different conservative measures produce similar results

A small randomized prospective study of 23 patients compared reduction in neuroma pain using supinatory or pronatory insoles.4 No explicit inclusion or exclusion criteria other than clinical diagnosis were mentioned. Neither participants nor evaluators were blind to intervention allocations.

Two patients (13%) dropped out at 1 month. At 12 months, pain reduction in the supination and pronation insole groups was 50% and 45%, respectively (not signifi cant).

Injections improve symptoms with minimal adverse effects

A prospective randomized study of 82 patients compared steroid injections alone with shoe modifications alone at 1 and 6 months. Twenty-three percent of shoe-modification patients achieved complete satisfaction at 1 month, compared with 50% of injection patients (P<.01; number needed to treat [NNT]=3.7). At 6 months, the results were 28.6% satisfaction with shoe modifi cation and 73.5% satisfaction with injection (P<.001; NNT=2.3).

The diff erence disappeared at 1 year (63% satisfaction with shoe modifi cation compared with 82% satisfaction with injection; P>.05), although patients were allowed to cross over at 6 months. No complications occurred. The study was limited by a high rate of crossover from the shoe modifi cation to the injection group at 6 months, elimina-
tion of dropouts from the fi nal analysis, and lack of intent-to-treat analysis.

Another technique uses the scleros-
ing eff ects of alcohol6 delivered by multiple ultrasound-guided injections over time.7,8 Improvement of symptoms with no long-
term adverse events were reported in several case series, although in each study a small number of patients reported localized pain at the site of injection.6-10 The table summarizes injection studies.5-11

Steroid injections yielded better patient satisfaction compared with shoe modifications alone at 1 and 6 months. The diff erence disappeared at 1 year (63% satisfaction with shoe modification compared with 82% satisfaction with injection; P>.05), although patients were allowed to cross over at 6 months. No complications occurred. The study was limited by a high rate of crossover from the shoe modification to the injection group at 6 months, elimination of dropouts from the fi nal analysis, and lack of intent-to-treat analysis.

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Surgery: Consider cost and risk of complications
Most surgical studies enrolled patients who had initially failed conservative treatments. Costs and risks of complications must be weighed, including infection, scar sensitivity, residual pain, sensory deficits, and other wound-related morbidities.

Technique varies considerably among surgeons. A Cochrane systematic review of 3 randomized controlled trials comprising 121 patients concluded that, at most, very limited evidence exists that transposition of the transected plantar digital nerve may yield better long-term results than standard resection.

In a retrospective case series, 82 patients with primary Morton’s neuroma were treated by a single surgeon and a single technique (dorsal incision and nerve transection). All patients had failed conservative management with orthotics, shoe modification, and NSAIDs (lidocaine injections were used only to pinpoint neuroma location). Sixty-six (81%) returned for follow-up. Average follow-up evaluation was 5.8 years. Of the patients who were followed, 85% rated overall satisfaction as excellent or good.

Stepped care gets results
A prospective case series enrolled 115 subjects out of 340 consecutive patients who presented to a private orthopedic clinic with a diagnosis of Morton’s neuroma. The authors assessed a 3-stage protocol of stepped care, progressing to the next stage if improvement was inadequate after 3 months: Stage I comprised patient education, footwear modifications, and a metatarsal pad placed proximal to the involved nerve; stage II, injection of...
steroids with local anesthetic or local anesthetic alone; and stage III, surgery.

Of 57 patients treated only with footwear modifications, 47 (41%) improved and required no further treatment. Twenty-seven (47%) of the 58 patients who received injections improved and required no further treatment. Of the 24 patients who advanced to stage III, 96% improved with surgery.

**Recommendations**

No consensus exists regarding definitive treatment of Morton’s neuroma. The American College of Occupational and Environmental Medicine recommends excision of the neuroma if nonsurgical treatment fails.14

A 2003 Cochrane systematic review of 107 studies found insufficient evidence to assess efficacy of surgical and nonsurgical interventions.3 Stepped care has been adopted by many third-party payers who require conservative care before reimbursing for injections, and treatment with injections before reimbursing for surgery.

**References**


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