COMMENT ON TESFAYE ET AL.

Mechanisms and Management of Diabetic Painful Distal Symmetrical Polyneuropathy. Diabetes Care 2013;36:2456–2465

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The excellent discussion by Tesfaye et al. (1) of management of diabetic sensorimotor polyneuropathy (DSPN) pain fails to include mention of any alternatives for the large minority of cases that do not respond to or cannot tolerate available pharmacological interventions. Riazi et al. (2) and others (3) have pointed out that ultrasonographic nerve enlargement is present in these neuropathy cases and might actually be used as a bedside diagnostic tool. Meta-analyses (4,5) have reviewed the favorable response of DSPN patients to nerve decompression (ND) by surgical external neurolysis at the several fibro-osseous tunnel nerve trunk entrapment sites in the lower extremity. Indications for the procedure are a painful DSPN diagnosis, failure of adequate response to pharmacologic agents, and a positive Tinel's percussion test at a lower-extremity entrapment site. For such cases of pharmacological failure to control pain, decompression provides 80% with immediate and long-term relief of pain, though only 50% find relief if Tinel's sign is absent. Even in Tinel negative cases, this seems a worthwhile option if drug treatments have failed to provide adequate comfort.

A major critique of ND science is that it has been mostly retrospective reporting of clinical cohort studies using subjective outcome measures (i.e., pain and sensibility) and lacking research protocols, which include the blinding and prospective randomization necessary to control for bias. While factually true, this ignores the very promising clinical response to ND in a situation without other available therapeutic alternatives. But objective benefits in balance recovery, relief of perineural tissue pressure, and protection against diabetic foot ulceration have also been described. Zhang et al. (6) has provided us with results of a large experience showing striking objective and subjective outcomes from 1,000 leg experiences of ND in DSPN. He reports that, in addition to pain relief, zero amputations, diabetic foot ulcerations, or recurrent ulcerations occurred by 18 months postoperatively, although three ulcers eventually appeared by 5 years. The Zhang cohort also evidenced an absence of wound infection, recovery of two-point discrimination, improved quantitative sensory testing, postoperative decline of ultrasonographic nerve enlargement, and recovery of nerve conduction velocity deficit. Any wound care center would be ecstatic to reproduce such results. Current ND science is not yet the level 1 evidence sought, but deserves much wider appreciation as an effective and safe treatment option while research proceeds apace. This opportunity beckons to all physicians with DSPN patients in the frustrating situation of intractable pain and misery, and appears to offer protection against the serious ulcer and amputation complications of neuropathy as well. Pain relief with a side dish of complication prevention—what an encouraging prospect!

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