DEPARTMENTS

*Letters to the Editor***Strax's Zeiter Lecture**

Thomas Strax, MD, is to be commended for his lecture "Moral and ethical decisions."¹ As a physician with a disability, Dr. Strax embodies the value of life in all its imperfections. His lecture is poignant in its candid portrayal of our culture's ongoing disregard of those who are imperfect and its hubris toward those who do not appear as we do.

There is much to learn from Dr. Strax's lecture; perhaps most important is the undeniable value of each human life. He correctly points to the horrors of World War II as well as the eugenics movement that played such a large role in the Holocaust. Dr. Strax boldly points out our own country's forced sterilization practices that were championed by Justice Oliver Wendell Holmes. In modern medicine, I do not think I have ever read or heard such a stinging indictment of the denigration of the disabled; exposing Drs. John Harris and Peter Singer as the enemies of the disabled elevates Dr. Strax as a champion for the cause of life.

It is my hope the American Academy of Physical Medicine and Rehabilitation will adopt a preeminent role on the national stage in the defense of the disabled and, by extension, of all human life. As physiatrists we are uniquely positioned to see beyond the boundaries of the disabled and have helped countless patients achieve more function than ever thought possible. The cause of the rights of the disabled, particularly the undeniable right to life, is our cause and we should be proud to defend it and oppose all forces that seek to treat life in a utilitarian manner.

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Are the Effects of Botulinum Toxin Injection on Myofascial Trigger Points Placebo Effects or Needling Effects?

Lew et al¹ have produced an excellent study. They compare the efficacy of botulinum toxin type A (BTX-A) and saline injection (control) in patients with neck and upper-back myofascial pain syndrome (MPS). Lew concludes that the reduction of pain and neck disability in both groups was possible due to the placebo effect.

Local injection of trigger points with anti-inflammatory drugs, lidocaine (Xylocaine), saline, BTX, and even dry needling in patients with MPS have been examined previously.² However, the results have been controversial. In our experience,³ dry needling with acupuncture needles over the trigger

points had some effects, especially when there was a local twitch response during the needling procedure.

Acupuncture has been used in China for more than 3000 years. Based on the theory of yin and yang, there is an energy circulation called qi through the organs. The qi is essential for general health. Acupuncture can correct the imbalance of energy flow and maintain health.⁴ A recent study shows high density of the neurovascular structure at the acupoints.⁴ However, acupuncture over nonacupoints also shows some clinical effects. The analgesic effects of acupuncture may be mediated by (1) pain perception block by gate control theory (sensory input of pain induced by MPS may be inhibited by another type of input stimulation, eg, needling); (2) elevating opioid peptides such as endorphins and enkephalins, serotonin, and acetylcholine in the central nervous system; and (3) diffuse noxious inhibitory control (noxious stimulation modulates the pain originating area).⁵

Dry needling itself is the same as acupuncture except that it uses a common needle on nonacupoints. Dry needling itself may cause the acupuncture-like effect.⁵ The effect may occur at the needling sites whether or not they are acupoints, nonacupoints, or trigger points. In other words, Lew cannot eliminate the possibility that the effects on both groups are due to the real needling effect rather than the placebo effect. A placebo acupuncture needle has recently been invented. Clinical usage of placebo needles may help us differentiate among the needling effects, the placebo effects, and the sham effects.⁴ If we can understand the real effects of dry needling or acupuncture, then further discussion of the effect of drug injection with Xylocaine, saline, or BTX at the myofascial trigger points will be more meaningful.

Last, Lew's study did not mention who performed the injection procedures and whether a local twitch response occurred during the injection procedure. The technique of trigger point injection will affect the results.⁶ In addition, due to the concurrent treatment of pain medication and physical therapy during the study periods, we cannot exclude the possibility that the improvements in both groups were due to the conventional treatment effects and/or the natural disease process.

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The authors respond

We appreciate the insightful comments by Hsieh and Lee, who also provided an excellent summary of the proposed mechanisms of action for acupuncture and dry needling. Indeed, in the process of delivering medication such as botulinum toxin via needle injection, there could be some effect of dry needling or acupuncture-like effects. In our Discussion section, we wrote: "Some studies have shown that needling per se can be as effective as injection of a pain medication in the treatment of myofascial trigger points causing pain. The effect of saline or needling effect could explain the analgesia that was experienced by the subjects in the control group."^{1(p79)}

As described in the Methods section,¹ botulinum toxin injections were performed at the sites of the trigger points, without electromyography guidance, and without special reference to the acupoints. The injector also did not leave the needle in place for more than 15 seconds per site, as one would in acupuncture. In the Discussion section,¹ we suggested several variables that may have affected the outcomes. One of them is the injection technique. To control for this variable, all the injections were done by the first author, in his weekly injection clinic. The other source of variability is that, ethically, we could not control the concurrent treatments that subjects received during the study period.

We believe that there is a need to conduct large-scale, well-powered multicenter randomized controlled trials on myofascial pain syndrome treatment, including the use of acupuncture and dry needling. Before implementing such a project, it may be worthwhile designing a crossover trial, strictly defining and controlling (1) the inclusion and exclusion criteria, (2) the injection technique, (3) concurrent therapeutic regimen, (4) dosing schedule, and (5) the validity of the placebo.

We thank the critical readers of *Archives*, our colleagues, and especially our patients for inspiring us to do better in this era of evidence-based medicine.

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Rehabilitation Medicine and Medicare Postacute Care Policies

For Gage et al to say that the Continuity Assessment Record and Evaluation (CARE) tool "builds on the scientific advances in measurement"^{1(p1737)} is to diminish the existing accomplishments and potential capabilities of the FIM instrument, which has been used successfully for 20 years by inpatient rehabilitation facilities, skilled nursing facilities, and long-term care hospitals; for follow-up observations and interviews of inpatients or their caregivers; and in selected groups of outpatients and geriatric patients. In addition, the FIM instrument has been used internationally and incorporated into research studies. This is evidenced by the 286 research and clinical application references listed on the Uniform Data System for Medical Rehabilitation (UDSMR) website (at http://udsmr.org/fim2_refer.php). In the last 6 years, use of the FIM instrument facilitated transformation to a prospective payment system for inpatient rehabilitation facilities. The FIM instrument has been thoroughly tested for validity and reliability, takes 15 to 20 minutes to administer, has 18 items, and is useful for rehabilitation clinicians to set treatment goals and manage care. Feasibility has been established, as UDSMR has 15.28 million FIM instrument records in its database. A variety of training protocols have been effective in training 415,000 clinicians to successfully complete mastery tests.

The FIM instrument quantifies independent functioning hence defining need for assistance from another person, in terms of hours, and the latent trait of disablement, sometimes known as the burden of care. Highlights of the FIM instrument include (1) meaningful measurement of clinical outcomes by which results for individual patients may be transformed into a program evaluation methodology; (2) stable interitem structure of cognition and motor components with appropriate differential item functioning depending on the type of impairment being evaluated; (3) severity categories that predict need for inpatient resources in terms of length of stay, FIM rating at time of discharge (functional-related groups), and costs (case-mix groups); and (4) abbreviated forms such as the AlphaFIM instrument for triaging patients being discharged from acute care and the OmegaFIM instrument for ambulatory patients, each having just 6 items to reliably project full FIM motor and cognition ratings.

On the other hand, the proposed CARE tool has not yet undergone scientific tests, has not been tested longitudinally, has questionable feasibility, is overly lengthy at 300 items, is burdensome by taking at least 5 times longer for staff to complete, and captures data of limited utility to clinicians.

The FIM instrument's role in the continuum of care across several postacute care settings has been piloted and merits