

[IMAGE]

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Thenar Eminence Pain

By Silvio Nixon, DC

About 10 years ago, I examined a patient who complained of neck pain, burning and tingling in her right hand. I checked her cervical spine using the standard orthopedic and neurological tests and palpation, then examined her right hand; the thenar eminence was tight. I compared the right hand with the left, which seemed fine. I squeezed the left thenar eminence with my thumb and index finger, and the patient reported a slight amount of pain.

When I squeezed the right thenar eminence, the patient hollered, pulled her hand away and began rubbing it with her other hand. At the same time, she gave me a pained look and demanded, "What was that?" I told her I wasn't exactly sure. I palpated her neck and found that C5 was subluxated to the right. I followed this with spinous percussion and found the T4/5 area positive. I then adjusted C5 and re-tested the thenar eminence - it was fine, elicited no pain, and her hand stopped tingling. I finished treating her and told her to return in two days.

At the second visit, I tested the thenar eminence). It was again positive, but according to the patient, the pain wasn't as sharp; however, she said it still hurt more than her left hand. Adjusting her relieved the pain in her right thenar eminence; she has remained pain-free ever since, except for a few relapses over the years. When those relapses occurred, she received immediate relief with an adjustment to C5.

I have been able to duplicate the above results with over 100 patients, and have made a thenar eminence pressure test a routine part of any examination. This test only requires a slight amount of pressure (no more than about five pounds), and it is normal for the patient to experience a slight amount of pain. When this test is positive, you will usually see a sharp, quick response from the patient. I palpate first, and if the thenar eminence feels tight, I warn the patient the test will probably hurt. Since the pain can be quite sharp, and almost always startling, I have had some patients pull their hands back and make fists; in fact, one young lady dug the fingernails of the opposite hand into my arm. So, if you do this test, please proceed with caution!

The high degree of sensitivity of this test might be explained by the work of Sterling, et al., from the department of physiotherapy, University of Queensland, in their study, "Pressure Pain Thresholds of Upper Limb Peripheral Nerve Trunks in Asymptomatic Subjects." They found that "pressure pain thresholds were shown to be lowest in the median nerve ... and lower in female subjects."

I have found this test to be positive in patients from age 8 to 82. The 8-year-old, who presented for an athletic physical, also had diminished deep tendon reflexes in the affected hand. After the adjustment, the thenar eminence pain stopped, and deep-tendon reflexes were normal. The frequency of positive tests mimics my practice population: approximately 45 percent male and 55 percent female.

Adjusting C5 alone does not always provide complete treatment; others require treating anywhere from C5 to C7. In about 25 percent of the cases, I also had to adjust T4. This was necessary for patients who did not receive immediate or any partial relief. I don't know what the exact connection between C5-C7 and T4 is, and I haven't been able to find one in any anatomy book. I have heard other DCs refer to a "T4 syndrome," and note that adjustments to the area may give relief in the area supplied by the brachial plexus.

In reviewing the literature on the median nerve catalogued at the National Library of Medicine, I found a synopsis of work done by Dr David Rosenberg, et al., at Johns Hopkins University School of Medicine, titled, "Thenar Eminence Quantitative Sensory Testing in the Diagnosis of Proximal Median Nerve Compression (PMNC)." The study involved 14 patients with carpal tunnel syndrome; 35 patients with PMNC; and 33 healthy volunteers. Cutaneous pressure thresholds for one- and two-point static touch were measured. The authors concluded, "For the diagnosis of PMNC, quantitative sensory testing of the thenar eminence has a sensitivity of 90.3%, a specificity of 83.3%, and a predictive value of 87.5%." I have never seen any other test that can almost immediately demonstrate the efficacy of a spinal adjustment; show the patient what I am trying to accomplish; and demonstrate, rather dramatically, the influence spinal nerves can have on the entire body. Moreover, many patients check themselves and end up coming in immediately for treatment.

In all of these cases, I believe the test helps confirm the existence of radicular neuropathy from the 6th cervical nerve (via the brachial plexus) along the course of the median nerve.

I have checked the thenar eminence test in conjunction with the percussion test for Tinel's sign; the Phalen wrist-flexion test; and the carpal tunnel compression test to see if this positive result could, in fact, be a form of carpal tunnel syndrome. I have observed that if both tests are positive, both are affected by spinal

adjustment. If my observations are correct, this thenar eminence pressure test could be useful in differentiating between carpal tunnel syndrome and brachial radiculopathy. Also, in classic carpal tunnel syndrome, the symptoms include numbness and paraesthesia along the distribution of the median nerve, with thenar muscle weakness being a late manifestation. Since some patients require treatment of the thoracic spine, thoracic outlet syndrome also should be considered. There are a number of questions that need answering regarding the above test, concerning reproducibility. Can other practitioners achieve the same results, not only with the exam, but with the same treatment type?

I use different techniques depending on the patient, and they have all been successful. I would like to see others try this test when appropriate, then treat accordingly, then send me the results of your trials (preferably via e-mail) so I can publish the results; this would be rather like a national clinical trial. Also, if you should decide to participate, don't just document your success stories; if this test doesn't work, that information is just as important, if not more important. Try not to influence the outcome; stay neutral. Many patients report false information, in a sincere desire to please their doctors. They will tell you what they think you want to hear, not what they really feel - so hide your enthusiasm.

I approached one of our colleges about conducting a trial of this test, perhaps using students, but officials declined, citing cost factors. However, even if the college had agreed to participate in such a trial, the size of the study and the closeness of ages of the participants would be limited in its results. Once reproducibility has been established, a more rigorous trial and study can be developed to fully explain the test. What I believe will be found is a test that shows the need for and efficacy of the spinal adjustment, and serves as a new, powerful tool to educate our patients as to what we can do for them.

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