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Myofascial pain syndrome often leaves doctors baffled and patients untreated

By Amy Mathews Amos June 17, 2013

My symptoms started in January 2008, with deep pain in my bladder and the sense that I had to urinate constantly. I was given a diagnosis of interstitial cystitis, a chronic bladder condition with no known cure. But in the following months, pain spread to my thighs, knees, hips, buttocks, abdomen and back. By the time my condition was properly diagnosed three years later, I had seen two urogynecologists, three orthopedists, six physical therapists, two manual therapists, a rheumatologist, a neurologist, a chiropractor and a homeopath.

What was wrong? Something completely unexpected, given my symptoms: myofascial pain syndrome, a condition caused by muscle fibers that contract but don't release. That constant contraction creates knots of taut muscle, or trigger points, that send pain throughout the body, even to parts that are perfectly healthy. Most doctors have never heard of myofascial pain syndrome and few know how to treat it.

In my case, trigger points in my pelvic floor — the bowl of muscle on the bottom of the pelvis — referred pain to my bladder. Points along my thighs pulled on my knee joints, creating sharp pain when I walked. Points in my hips, buttocks and abdomen threw my pelvis and lower spine out of alignment, pushing even more pain up my back. The pain was so severe at times that I could sit for only brief periods.

"Why didn't anybody know this?" I asked my doctor, Timothy Taylor, soon after he correctly diagnosed the reason for my pain. "Because doctors don't specialize in muscles," he said. "It's the forgotten organ."

'There's no wire'

Most medical schools and physical therapy programs lack instruction in myofascial pain, in part because it involves referred pain, according to Robert Gerwin, an associate professor of neurology at Johns Hopkins University. Gerwin, who is also president of Pain and Rehabilitation Medicine in Bethesda, says that medicine has only recently come to understand this type of pain.

"I remember a long conversation with a neurosurgeon saying that [referred] pain is impossible because there's no connection, there's no wire, no string, no blood vessel, there's no nerve, there's no nothing connecting these two places," Gerwin said. Of course, the surgeon was "not realizing that the mechanism of spread is through the spinal cord."

Pain signals from taut muscle fibers travel to specific locations on the spinal cord that also receive signals from other parts of the body. Referred pain occurs when pain signals from muscles register in the nervous system as if they came from elsewhere.

Although physicians increasingly recognize referred pain today, diagnosis and treatment of myofascial pain often takes more time than most physicians can provide, according to Taylor. Practitioners need specific training to recognize trigger points. And they must examine and palpate patients carefully to identify and locate these taut bands of muscle fiber.

In a 2000 survey, more than 88 percent of pain specialists agreed that myofascial pain syndrome was a legitimate diagnosis, but they differed over the criteria for diagnosing it.

Norman Harden, the medical director of the Center for Pain Studies at the Rehabilitation Institute of Chicago, conducted that survey. He believes that practitioners need clear, validated criteria for diagnosing myofascial pain and identifying effective treatments. He recently conducted another survey to determine if the level of recognition among pain specialists has changed. Preliminary results suggest it has not.

According to Gerwin, myofascial trigger points often cause or contribute to problems such as chronic back pain, headaches and pelvic pain. Trigger points can form anywhere in the body after an injury or if muscles brace against pain or trauma for a long period. They also can result from chronic overuse of muscles due to stress or to poor posture that puts constant pressure on muscles not designed to withstand it.

Taylor understands this as both a physician and a patient. His myofascial pain started in 2003 during his daily run. “I felt a sharp pain in my rear that felt just like when my brothers used to shoot me with our BB gun,” he recalled. He checked himself for signs of injury but found none, then limped home, assuming it was a strained muscle that would heal after a few days. It didn’t.

He sought treatment first from his general practitioner. He then went to a battery of specialists: neurologists, rheumatologists, orthopedic surgeons, osteopathic physicians, physical medicine and rehabilitation specialists, and physical therapists.

Found it on the Internet

After three years, a physical medicine and rehabilitation specialist told him the source of his pain was his piriformis muscle, a pear-shaped muscle that runs diagonally across the buttocks. The doctor prescribed stretching and strengthening exercises to resolve it, but they only made things worse. Eventually, the pain reached down to Taylor’s knees, up to his head and out to his fingers on both sides of his body.

But he finally had a useful piece of information. He did an Internet search for “piriformis muscle” — a common spot for trigger points — and “myofascial pain syndrome” popped up. “I had been to the bone doctor and the joint doctor and the nerve doctor and the rehab doctor, and none of them had really examined my muscles in great detail,” he said. And none of them identified trigger points. Taylor has since changed his focus from radiology to working toward understanding, diagnosing and treating the condition. When I met him in 2011 he had established a practice that specializes in pain syndromes.

A popular treatment is dry needling, which sounds like exactly what it is: Tiny needles are inserted into the skin to stimulate a twitch response in the heart of a trigger point, releasing it. Although similar to acupuncture, dry needling focuses directly on trigger points rather than on the meridians, or energy fields, recognized by Chinese medicine. Usually, each trigger point requires several treatments before it relaxes substantially. Between sessions, patients treat themselves each day by pressing the points against a hard surface with simple tools such as tennis balls and holding for a minute or two. Treatment also addresses posture-related strains on muscles and metabolic factors such as vitamin and mineral deficiencies, low thyroid and hormonal imbalances that can contribute to trigger points.

Though a few studies have been done, they have not adequately demonstrated the effectiveness of treatments for trigger points, according to a 2009 review published in the European Journal of Pain. Researchers at the Universities of Exeter and Plymouth and the British Medical Acupuncture Society reported that only one of the seven studies they reviewed found dry needling to be effective in reducing pain. Four other studies found no difference between dry needling and placebo treatment, and the two remaining studies had contradictory results.

The American Academy of Orthopaedic Manual Physical Therapists recognizes dry needling as a legitimate treatment. The group maintains that research shows that dry needling reduces pain and muscle tension and helps muscles with trigger points return to normal. Other studies are underway. Jay Shah of the National Institutes of Health and Lynn Gerber and Siddartha Sikdar of George Mason University are using ultrasound imaging to examine how dry needling changes the physiology of trigger points after treatment.

Diagnostic guidance

Gerwin says that proper training in finding the trigger points can lead to consistency in diagnosing them. He and physical therapist Jan Dommerholt of Bethesda Physiocare run Myopain Seminars, which help physicians and physical therapists learn how to diagnose and treat trigger points.

According to Harden at the Rehabilitation Institute of Chicago, without clearer diagnostic criteria accessible to general practitioners, experiences like mine will continue. “As awareness grows and doctors feel empowered to understand and make this diagnosis, then that endless and frustrating round of trying to find what I’ve got and what the answer is will stop,” he said.

Gerwin agrees that more research will help, but already he sees greater acceptance of trigger points in the medical community.

“I think the bottom line is simply that the underlying pain physiology is understood now to explain why referred pain occurs, to understand why tenderness occurs,” he said. “And that explains a lot of what muscle pain is all about.”

In my case, through a combination of therapies, including dry needling, compression, stretching, postural changes and relaxation techniques, I feel much better. I no longer need dry needling, but I do need to practice the other techniques myself, regularly, to prevent trigger points from reforming or to release them myself when they do form.

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25 Comments