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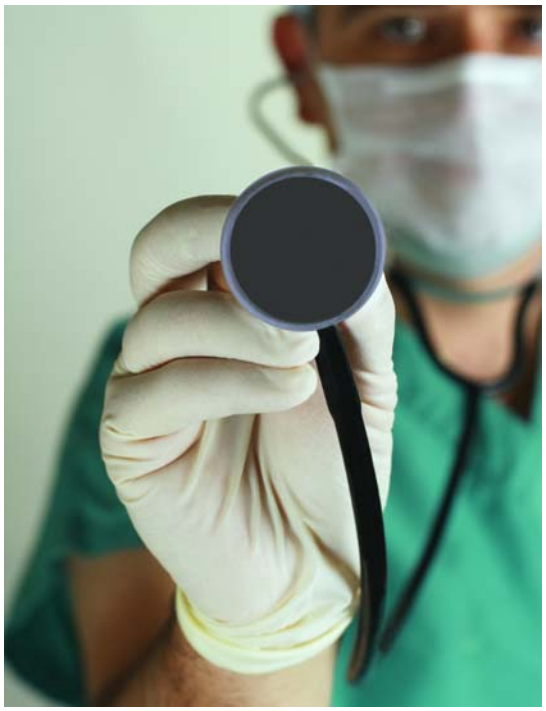
Chronic Pain Treatment

A New Approach



Chronic Pain: Problem Patients, Problem Doctors, or System Failure?

Modern medicine is based on differential diagnosis. The physician uses medical history and examination to compile a list of potential diagnoses. Tests are ordered to rule out such diagnoses, and/or specialists are consulted to do the same. A final diagnosis is made, and treatment begins. In theory, all is quite straightforward, but in practice—and particularly when dealing with chronic pain—the system can fail because there may be multiple conditions that interact in unsuspected ways. In addition, descriptions of symptoms such as "low back pain" and "tension headache" can get confused with diagnoses in a system which is set up to find a label and diagnostic code and not to discover the causes of symptoms.

The irony is that many third party payers balk at even three hours spent on patient evaluation yet pay for unnecessary surgeries and procedures because they are part of the system, easily categorized and understood. This, in the long term, causes increasing stress on the patient, the physician, and the system. Doctors are trained to "meet the patient, greet the patient, treat the patient," often followed by the third party payer attempting to "defeat the patient" or "delete the patient." At present, there is little incentive for the insurance companies to do otherwise. Fortunately, there are changes that can benefit all parties.

Recognizing & Treating Myofascial Pain

While patients with chronic pain are increasingly being diagnosed with fibromyalgia (FM), many are still being told that they will have to learn to live with it. Unfortunately, what frequently goes unnoticed is that FM patients also tend to have significant levels of myofascial pain side-by-side with FM and thus suffer with painful myofascial trigger points (MTrP). These hard knots and ropy bands that weaken the muscle, constrict range of motion, and can cause pain are part of MTrPs, not FM. In fact, most chronic pain patients have a significant MTrP component, (20, p. 268) that often remains undiagnosed and untreated.

Not surprisingly, patients (and doctors) have told me that FM is already overwhelming enough, and they can't deal with MTrPs as well, not realizing that MTrPs may be causing the majority of the symptoms. In addition, there is a great deal of confusion about the difference between myofascial trigger points and the diagnostic tender points of fibromyalgia. ***There is no such thing as a fibromyalgia trigger point.***

It is important to realize that persistent or intense pain messages from MTrPs and other peripheral sources can enhance the sensitivity of the central nervous system and then maintain this hypersensitive state. (22) Once this central sensitization has taken place, it takes minimal pain to sustain it. This means that MTrPs that would not *cause* central sensitization in healthy individuals may be sufficient to *maintain* this state of central sensitization in persons who already have chronic pain conditions like fibromyalgia. Once central sensitization occurs, there is no quick fix.

Doctors who treat chronic pain must be able to diagnose and treat MTrPs, or at minimum, be able to diagnose and refer patients to someone who can treat them. [See Table 1] To do otherwise is doing harm. There are specific treatments for MTrPs that do not work for FM. Failure to distinguish MTrPs from FM can cause diagnostic and treatment confusion, higher costs, and wasted resources. (16)

Doctors and patients also need to learn the concept of perpetuating factors. Perpetuating factors include anything that sustains, aggravates, or predisposes to a given condition. The process developed to control the perpetuating factors associated with individual MTrPs—one of the most common sources of musculoskeletal pain—can work for chronic pain and may prevent chronicity from developing in other predisposed patients. The key to successful treatment of chronic illness is to find all the perpetuating factors and eliminate or control them as much as possible.

Each chronic MTrP has one or more perpetuating factors. Perpetuating factors of myofascial trigger points may include mechanical factors such as asymmetry, repetitive movements, and/or immobility; metabolic factors such as hypo-metabolism or insulin resistance; and nutritional insufficiencies, infections, or impaired sleep. Other illnesses may have multiple perpetuating factors as well. For example, the treatment of chronic yeast infections may involve change in diet, hygiene, and clothing as well as medication. In addition, perpetuating factors may have perpetuating factors of their own. For example, impaired sleep may be due to environmental factors such as noise or light, fragmented sleep, obstructive sleep apnea, or all of these.

Many primary care physicians, emergency room staff, and other first line care providers have not been trained in the diagnosis and treatment of acute individual MTrPs. When left unidentified, these frequently become chronic. The chronic pain patient is often given a label such as fibromyalgia while myofascial trigger points and other possible co-existing conditions such as osteoarthritis, metabolic syndrome, post-polio syndrome, interstitial cystitis, or celiac disease go unrecognized and untreated. The result has been a disaster for patients and the health care system. If standard test results are normal, symptoms may be dismissed. In some cases, intensive psychiatric treatment may even be instituted. Patients may grow more frustrated and depressed.

Due to the lack of recognition of co-existing conditions like myofascial pain syndrome and their interactions, patients may be subjected to unnecessary, expensive, and sometimes painful procedures, including surgeries. They may be treated for conditions they do not have or not treated for those that they do. Sadly, these patients are often physically, mentally, emotionally, spiritually, and financially exhausted, and many of their support networks may be exhausted as well. There is no way to estimate the cost to the economy, the stress on the health care system, and the impact on the lives of patients that the lack of training in myofascial medicine has caused. This is totally preventable especially considering the large percentage of patients who have MTrPs, and it is a deplorable indicator of the state of medical care. We must also provide care for patients who already have developed chronic pain.

Chronic pain patients often look fine and are expected to act accordingly. This can cause a heavy burden, especially if the patient has suffered in silence or has had symptoms dismissed. Some of these patients are not well enough to be employed but need their health benefits and their income to survive, so they do their best to keep their jobs as long as possible. They try to perform at work or school but frequently end up missing time due to their invisible, misunderstood symptoms. Chronic pain often carries with it memory problems (19), inability to concentrate, and specific mental dysfunctions (2) that can complicate self-advocacy.

Table 1

Specific treatment of myofascial trigger points includes :

galvanic stimulation

microstimulation

specific frequency microcurrent

myofascial trigger point therapy

spray and stretch therapy with vapocoolants or ice stroking

myofascial trigger point injections with stretching

Note: Galvanic stimulation, microstimulation, and some types of massage such as strumming may aggravate co-existing fibromyalgia.

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To locate someone who can treat myofascial trigger points, contact:

National Association of Myofascial Trigger Point Therapists
P.O. Box 42446
Pittsburgh PA 15213 USA
Website: www.myofascialtherapy.org

"Due to the lack of recognition of co-existing conditions like myofascial pain syndrome, patients may be subjected to unnecessary, expensive, and sometimes painful procedures, including surgeries."

Interactive Diagnoses

It's not only important to identify perpetuating factors and co-existing conditions in each case but also to understand how they interact with each other. It's time to learn the skill of interactive diagnosis. Taking a patient's history and doing an examination will be lengthy, but a thorough job will prevent wasted resources. Careful documentation and clear explanation is necessary, as most third party payers do not understand this process but need to do so for reimbursement to occur. It may not be possible to diagnose all conditions present during the first visit. There are many potential interactive diagnoses and perpetuating factors. A few examples follow.

Myofascial trigger points and joint dysfunctions such as arthritis or disc problems and their treatments may often be interactive. If one or more muscles attached to a joint are unevenly tightened by MTrPs, the functional biodynamics of the joint can be altered to the extent that the bones are misaligned. Mechanical stress in the joint area can initiate osteoarthritis (OA). (21) "The stiffness and the relatively painless but progressive restriction of movement that characterize decrepitude of advancing age are often due largely to latent TrPs." (20, p. 113) This could mean that OA may be prevented or slowed by improving neuromuscular function (12), including the identification and prompt treatment of MTrPs. Some rheumatoid arthritis (RA) patients have co-existing FM, and these patients tend to have more severe prognoses. (26) Much of the pain attributed to RA of the temporomandibular joint (TMJ) is actually due to myofascial pain. (3) TMJ dysfunction is common in fibromyalgia patients, but it is uncommon for FM patients to be evaluated for MTrPs. Myofascial TrPs may cause contraction of muscles, joints and ligaments in irregular patterns, stressing attachment areas and interfering with normal joint function. If you try to minimize arthritis pain by immobilizing the joint, you may end up using your muscles in unfamiliar and unhealthy ways that can activate MTrPs.

Active myofascial trigger points may also be associated with vertebral disc dysfunction in the neck. (Hsueh et al., 1998) Area attachment ligaments attempt to compensate, changing the angular movement of the body. This compensation can put further stress on the discs above and below the original dysfunction. (Kumaresan et al., 1998) Disc deterioration may lead to changes of motion and muscle compensation that can contribute to further pathologies in the facet joints, muscles, and ligaments that may result in chronic pain.

(Brisby 2006) Spinal pain from TrPs may be erroneously assumed to be caused by a co-existing disc deformity that shows up on an X-ray.

Patients with pain and dysfunction at muscle insertion sites, bone-tendon or bone-ligament junctions are often considered as surgical candidates. Surgery is frequently performed without soft tissue evaluations, often resulting in "failed" surgery. (6) The surgical scars and resultant tightening of soft tissue from fused vertebrae can then promote additional stress on nearby vertebrae, leading to a cascade of surgeries. Research is needed in interactive articular and soft tissue conditions and their role in the development of chronic pain.

Another example: Fatigue is common in chronic pain and may have multiple causes. One cause is lack of restorative sleep. (13) Lack of restorative sleep can have a profound influence on the endocrine glands of the body by altering the hypothalamic-pituitary-adrenal balance (HPA-axis). A dysfunctional HPA-axis is common in FM (23) and can cause hyperalgesia (magnified response to pain stimuli). It has also been associated with abdominal obesity and insulin resistance—IR (24) which is quite common and implicated in other conditions like obstructive sleep apnea (OSA), obesity, and Type 2 diabetes. (10) There is a significant association among obesity, diabetes and FM. (15) Quality and quantity of sleep must be assessed in chronic pain patients, and a sleep study is often necessary. (18)

Multiple perpetuating factors may be uncovered in a sleep study. For example, obstructive sleep apnea (when present) can cause gastroesophageal reflux disease (GERD), a condition which occurs when fluids from the stomach (acid, digestive enzymes, and other substances) sneak back up into the esophagus causing heartburn-like symptoms and damage to its lining. (9) GERD, in turn, can cause sleep disruption and respiratory dysfunctions. (14) Bruxism (grinding of the teeth) can be caused by micro-arousals, sleep disturbance, or GERD, and yet it is often treated as a psychological problem. Chronic sinusitis and GERD may also interact. (25) Chronic rhinitis—inflammation of the mucus membranes of the nose—is already associated with FM. (5) All of these conditions can perpetuate MTrPs, which can maintain central sensitization, and round and round we go.

We need to search for the causes of symptoms. During the course of life individual threads may combine to form massive knots of perpetuating factors and interactive conditions including MTrPs. It's time we started to unravel them. For example, congestion may be a common perpetuating factor for sleep disturbance and obstructive sleep apnea, and sleep disturbance is a recognized perpetuating factor for both FM and MTrPs. If there is chronic pain, sleep dysfunction and congestion, the hidden causes of congestion such as GERD must be identified and brought under control as part of standard adequate medical care.

The Solution: Break the Cycle

The principle of identification and remediation/control of perpetuating factors is as valid for other chronic pain conditions as it is for individual trigger points. This process takes time and perseverance. Individual MTrPs by themselves can cause a daunting list of symptoms. The condition of chronic myofascial pain (CMP) involves active MTrPs that persist despite normally adequate and appropriate treatment and control of known perpetuating factors. In CMP, MTrPs may occur in many places in many muscles and in many layers of each involved muscle, with multiple enhanced receptor fields. In fact, MTrPs existing in three or four quadrants of the body are often misdiagnosed as FM. (7)

The pain from even one MTrP can be significant. When chronic myofascial pain, which could involve 50 or more MTrPs, is amplified by central sensitization, doctors tend to underestimate and under-treat the pain. A specific symptom diary may be helpful to assess the extent of the problem. There is a difference between pain, ache, and discomfort. Some sensations are troublesome or annoying, while others may be mind-numbing in severity. There are also the symptoms that pain can cause, such as vomiting, nausea, shaking, or inability to concentrate.

"For over 20 years the medical literature has carefully documented the under-treatment of all types of pain by physicians." (17) It is impossible to concentrate on good biomechanics, diet, exercise, and other healthy lifestyle changes when a monster with a million fangs is gnawing on your cells. The pain *must* be brought under control. Inadequately treated pain, in itself, is a major perpetuating factor of central sensitization. (27)

Pain management includes both medicinal and non-medicinal methods. For patients who have not been able to get adequate pain control with other medications and non-medication pain control methods even after gaining control of perpetuating factors, or for those who have uncontrollable perpetuating factors or co-existing conditions, the cheapest and most

effective medication with the least side-effects may be an opioid. (1) Opioids should not be a first-line medication and should not be used instead of control of perpetuating factors and co-existing conditions, but all options should be considered as part of a complete pain management plan.

Most of what has been written about myofascial trigger points concerns single muscle groups. Unfortunately, the same corrective factors may not work in chronic myofascial pain. A telephone headset used to prevent arm stress may activate MTrPs in the headset area. A computer voice-activated system to ease arm, hand and finger MTrPs may not work if there are multiple throat MTrPs, perhaps perpetuated by GERD, and the voice keeps changing. A cane to avoid falling due to ankle and knee MTrPs may not be useful for someone who also has finger, hand, and wrist MTrPs. Also, treatments for one condition may be perpetuating factors of another. For example, a CPAP mask and chin strap needed to treat obstructive sleep apnea may contribute to head and facial MTrPs. The term "chronic" means just that. It isn't curable at this time.

Many third party payers are placing arbitrary limits on therapies that help reduce pain and improve function. If there are incurable perpetuating factors such as occur in fibromyalgia, the best you can do is to try to bring them under control and minimize symptoms. MTrPs will recur. Insurance companies must understand this, and they must also understand that if the MTrPs aren't treated, they can develop satellite MTrPs which cause even more pain and symptoms, requiring more extensive and expensive therapies. An arbitrary cutoff limiting the amount of reimbursement in a chronic pain condition has no logic and no reason. When adequate measures are available to relieve pain and improve function but insurance companies refuse to cover them because they don't understand them and have no incentive to do so, something must change.

It may only be possible to gain limited control over some symptoms and regain some functions. There may be times of symptom remission if all perpetuating factors can be brought under control, but symptoms can return quickly and in force if anything happens to upset that balance. Treatment goals are to optimize function with minimized pain and intervention, with the patient as self-reliant as possible. Symptoms will vary. The patient, care providers, the legal system, and the insurance companies need to understand this.

Multiple perpetuating factors and interactive conditions should not be met with discouragement. Every perpetuating factor and condition uncovered gives one more chance to gain control over symptoms. Treatment goals should be realistic, with short-term and long-term goals. Part of the diagnostic process may include treatment trials. Some may work and some not. Symptoms that may have taken a lifetime to develop need time to ease. Each patient is different and must be assessed as an individual. The body is an ecosystem, but it is not a closed ecosystem. There are sensory impacts, environmental impacts, medicinal impacts, and psychological impacts.

It is paramount that any new therapy or new area of body work should be introduced with caution. Many traditional MTrP therapies may need to be modified due to fibromyalgia's tendency to amplify sensory inputs. Alternatively, pain which occurs as a result of therapy could itself cause sensory overload and could induce a FM flare. At times, therapies that might prove beneficial in the long-term may cause extra symptoms in the short-term. When a combination of medications and therapies is found that optimizes function while minimizing pain and side-effects, and a good self-therapy program is developed, care providers should not seek to "wean" the patient off of the very medications and therapies that are working. This should be self-evident, but it happens all too often. As the body and mind regain some balance, therapy and medication needs may change, but such changes must be done slowly and carefully, respecting interactions.

The patient is not a passive recipient of care. Chronic pain is a high-maintenance condition, and it will take a combination of lifestyle changes, therapies, medications, and support to optimize health. The combination of symptoms, co-existing conditions and perpetuating factors may seem overwhelming and out of control, so take it a step at a time. Work on what you can control. Patient empowerment often includes a gradually increasing role in self-maintenance and requires enlightened and educated positive feedback from the patient vs. complaints. Patient and care providers must work as a team.

Many cases of chronic pain can be prevented. It is vital that acute pain be treated aggressively and followed up so that central sensitization does not occur. That form of preventive medicine is an efficient way to practice medicine. The system in place often prevents this. We now have a generation or more of patients who have developed chronic pain, often because early symptoms were not recognized and treated aggressively. This has strained the health care

system to the breaking point, not to mention the stress it has caused to the patients and their families. Chronic pain patients are not going away. They deserve adequate care and support, and many have not been getting it. We need to do what we can to prevent more patients from joining their ranks.

About the Author: In the field of chronic myofascial pain and fibromyalgia, Devin J. Starlanyl has authored and co-authored books including *Fibromyalgia and Chronic Myofascial Pain: A Survival Manual* and *The Fibromyalgia Advocate*, numerous medical journal articles, and an extensive informational website for patients, supporters and medical professionals at www.sover.net/~devstar.

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