

Recovery from Chronic Musculoskeletal Pain with Psychodynamic Consultation and Brief Intervention: A Report of Three Illustrative Cases

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Abstract

Objective. Most physicians are unaware of the potential for complete remission from chronic musculoskeletal pain through a purely psychological approach. We report three cases in which various types of chronic musculoskeletal pain were successfully treated using a small-group psychological workshop combined with a single consultative session.

Design. Case report.

Setting and Patients. Hospital-based clinic; retrospectively selected cases among patients with at least a 4-year history of chronic musculoskeletal pain prior to intervention.

Measures. Structured interview.

Results. Each of three patients discussed reported pain-free status at last follow-up, which was at least 6 months following the intervention.

Conclusion. Certain individuals with chronic musculoskeletal pain may greatly benefit from a primarily psychodynamic approach to treatment, even when standard approaches to pain treatment have failed.

Key Words. Psychosomatic; Chronic Pain; Back Pain; Neck Pain; Fibromyalgia

Introduction

There is widespread recognition among clinicians that many patients with “functional” pain disorders—such as tension headaches and irritable bowel syndrome—carry a strong component of underlying emotional stress [1,2]. Musculoskeletal disorders, such as chronic back pain, are also beginning to be recognized as having a strong psychological component [3]. However, even when emotional stress is identified as a contributing factor, modalities such as cognitive-behavioral therapy seem to impart only modest reductions in chronic musculoskeletal pain [4,5].

Rather than viewing psychological stress as a side effect of the pain condition, another approach—pioneered by John Sarno, MD, at Rusk Institute of Rehabilitation Medicine—is to consider stress as the primary contributor to pain amplification in certain patients [6]. Sarno developed a psychoeducational approach that has resulted in complete remission of symptoms in many patients with chronic musculoskeletal pain, according to anecdotal reports [6–8].

The cases presented here are taken from one of the author’s (HS) experience in using a purely psychodynamic approach in the treatment of selected patients with chronic musculoskeletal pain. The approach (referred to as Mind Body Medicine, or MBM) begins with a 90-minute medical screening and psychological evaluation, during which significant medical pathology is ruled out and a detailed history is conducted to search for correlations between significant stressors and the onset of pain and other potentially psychogenic symptoms. If these correlations are found (and they are typically present), the patient’s pain is reinterpreted as a physiological manifestation of unconscious stress, rather than a consequence of structural pathology. The patient is assigned to read *The Mindbody Prescription* by Dr. Sarno [6], and is enrolled into a workshop consisting of three weekly 2-hour small-group sessions. These sessions are manualized and consist of specific written emotional expression exercises (such as writing about stressors and writing unsent letters), mindfulness meditation exercises provided on an audio CD, and self-affirmations. The participants are asked to perform these (nonphysical) exercises on a daily basis for the

Hsu and Schubiner

duration of the 3-week workshop period. Finally, follow-up is conducted to reinforce the psychophysiological concepts and plan for future symptom management.

Cases¹

Case One: Back Pain and Numbness in the Thigh

Mary, a 65-year-old African-American woman, was self-referred for low back pain of 9 years' duration. She was scheduled for an L4-L5 fusion to occur the following month. Prior to the onset of her pain, Mary worked on the assembly line at an automotive company. One day, while at work, Mary developed sudden onset of back pain so severe that she had to be carried out of the factory. The pain originated in the low back and radiated into the right leg and heel. A magnetic resonance imaging (MRI) revealed moderate-to-severe spinal stenosis due to bulging discs and facet joint arthropathy at multiple levels of the lumbar spine, with compression of the right L4 nerve root. Mary underwent seven courses of physical therapy, as well as massage therapy, acupuncture, transcutaneous electrode nerve stimulation, and specialty care from a pain management clinic. Her pain continued despite these treatments, and she began to develop numbness in the left anterior-lateral thigh. By then, she had been on disability from work for 9 years. Mary eventually consulted a neurosurgeon, who scheduled her for a lumbar decompression and fusion. At this time, her pain level was an "8" out of 10 on average.

With regards to her social history, Mary was the oldest among 10 siblings. Her father had ruled with an "iron hand" (meaning she endured physical punishment on several occasions), and her mother required her to do a great deal of housework and custodial care. She had a difficult adult life, which included three divorces, three children, and an episode of alcohol abuse lasting about 1 year, but has abstained from alcohol for 15 years. She had many financial difficulties and became very unhappy with her job.

Her physical examination was noted for exacerbation of lumbar pain with bending in any direction. There were no abnormalities in strength, sensation, or deep tendon reflexes.

After enrolling in the MBM program, Mary noted gradual relief of both pain and numbness over the first 2 weeks. By the third week, she was pain free and canceled her back surgery; however, she had a recurrence of back pain 2 months later. This coincided with news that her daughter was scheduled to depart for Iraq for military duty. When she recognized that this emotional stress was responsible for the recurrence of pain, she used the methods taught in the program to eliminate the pain within minutes. She stated, "In the past, stress would cause pain in my body that would cripple me; but now, I look at it and it goes

away." She has remained pain free for the past 11 months, but has chosen not to re-enter the job market.

Case Two: Post-Surgical Back Pain

Susan, a 47-year-old pharmacy technician, was referred for low back pain of 4 years' duration. Her pain began while working out in a gym and was sciatic in nature. She had a laminectomy 6 months later, which led to partial resolution of the sciatic pain. However, she developed postsurgical low back pain which did not remit despite physical therapy, a medial branch block, and epidural injections. She quit her job and was eventually referred to a pain clinic where she was placed on narcotics, with subsequent dose escalation up to 120 mg of sustained-release morphine a day. She had severe fatigue and was placed on modafinil, as well as escitalopram and bupropion for comorbid mood disorder.

Her MRI showed mild-to-moderate disc bulging at L3-L4, L4-L5, and L5-S1, with mild-to-moderate stenosis of the central canal, an annual tear, and bilateral neural foraminal narrowing at L4-L5.

Susan's psychosocial history consisted of having a caring, anxious father, and a withdrawn and alcoholic mother. She developed tension headaches in her twenties, but these resolved over time. Susan was then married and had three children. Her back pain began around the time that her adolescent son began using illicit drugs, and worsened after her son died from a heroin overdose. Susan's daughter subsequently developed self-mutilating behavior in the form of "cutting," and was later diagnosed with bipolar disorder. By this time, her pain had increased to the point that she was unable to work or do household chores. She described it as constant, and rated it as an "8" on a visual analog pain scale.

During the initial assessment, Susan was clearly able to see connections between her stressors and emotions and her pain. During the 3-week program, her pain dramatically diminished within 2 weeks. By the third week, her back pain had totally resolved. She did develop new neck pain during the course, but this resolved within a few days. She began to reduce the morphine doses with the use of buprenorphine/naloxone over several weeks.

Several months after the program, Susan developed severe midback pain one day. Upon reflecting about the cause, she realized that her remaining son was on a camping trip and had not called in several days. It was apparent to her that this caused her significant worry, in view of the fact that she had lost a son in the past. Once she recognized the cause of this pain (and contacted her son), the pain disappeared. Susan has now remained pain free for the last 3 years and has attended a community college and returned to work.

Case Three: Fibromyalgia

Nancy is a 52-year-old woman who sought treatment for fibromyalgia diagnosed 14 years earlier. Her past medical

¹ Names have been altered to preserve patient confidentiality.

history was noted for eczema as a child, and irritable bowel syndrome as a young adult while working at a stressful job. In 1980, she had a motor vehicle accident and developed neck and back pain, which had persisted to the time of her presentation. In 1993, she was diagnosed with fibromyalgia, having developed gradual onset of muscle tenderness, fatigue, temporomandibular joint disorder, insomnia, and widespread pain. She was initially treated with medications, physical therapy, and massage therapy. Consultations included two rheumatologists and a pain management clinic, without lasting benefit. Three years prior to presentation, she was diagnosed with a cerebral hemangioblastoma that required surgery. Her pain persisted following the surgery, and she was prescribed Paxil (GlaxoSmithKline, London, England, UK) for persistent anxiety.

Nancy stated that she was in pain most of her adult life. As a homemaker, she had great difficulty doing housework or gardening and would have to lie down and rest in the afternoon. She could not participate in recreational activities with her family, including sitting at the movies.

Her social history was pertinent for being raised by a kind, loving father, and an uninvolved, nonsupportive mother. She became a legal assistant, married, then had two children. At the time of the development of her fibromyalgia and other symptoms, she was raising her children while building a new home. She was determined to be a “perfect” mother and wife, and endorsed being very stressed during this time. When asked what her mother was doing at the time, she started to cry, explaining that her mother was doing what she always did, i.e., taking care of herself and not meeting the needs of her daughter and now also her grandchildren. Nancy endorsed having very high expectations for herself and feeling overly responsible for things not in her control.

On examination, she met the criteria for fibromyalgia with many tender points. The rest of the exam was normal. Her average pain was a “6” out of 10 at the beginning of the MBM program; afterwards, it had decreased to a “1” and remained at that level by her 6-month follow-up appointment. She had no further interventions and was able to discontinue her Paxil. Nancy now reports that she is able to enjoy aquatic exercise and Hatha Yoga workouts, gardening, keeping up with her children and attending events with her family. She currently considers herself to be “cured”, with only an occasional stiff neck that she can easily dismiss.

Discussion

As illustrated in the cases above, the remarkable recovery to a pain-free or minimal-pain state without pharmacologic or physical intervention, after years of suffering from musculoskeletal pain and disability, strongly suggests that substantial pain amplification had occurred via one or more psychophysiological pathways. Models for this syndrome have been proposed by Rome and Rome, Yunus, and van Houdenhove [9–11]. In these models, the medial pain system—including limbic structures such as the amygdala,

insula, and cingulate gyrus—is altered through conditioning and neuroplastic reorganization, leading to “corticolimbic sensitization” and pain-related affect even in the absence of nociceptive afferent stimuli. Potential mechanisms behind this corticolimbic sensitization include the balance between pain-affect regions such as the rostral anterior cingulate cortex [12], and descending antinociceptive regions such as the dorsolateral prefrontal cortex [13]. Interestingly, activity in both of these regions can be consciously manipulated by trained subjects [13,14].

Recent studies have demonstrated the benefits of a psychodynamic approach in reducing the severity of chronic pain. For example, randomized-controlled trials on “trauma writing” in fibromyalgia have shown reductions in pain comparable to standard pharmacological therapy [15,16]. We believe that an essential ingredient in any psychodynamic approach is to educate the patient on the primacy of psychological factors in the pathogenesis of the painful condition, starting with a detailed and combined psychosocial and symptom history. While validating the patient’s pain as “real” and not imagined, we explain that pain can occur in the absence of peripheral pathology, such as in many cases of phantom limb syndrome. We then outline the neural connections in the brain that either augment or inhibit pain, and show how these pathways can develop due to stress and can be altered by psychological interventions. We provide hope that the pain can be alleviated and offer a relatively simple approach to accomplishing that goal. When the patient understands and accepts that their pain is perpetuated by underlying stress, rather than physical pathology, they then learn to relieve the pain by dealing with the relevant psychological issues. In addition, the psychodynamic approach not only focuses on current life stressors, but also guides the patient to explore unconscious sources of stress, such as personality traits and relevant childhood traumatic events.

There are several limitations to any interpretation of these cases. First of all, our purpose was to illustrate the potential benefit of a primarily psychological approach in patients with various pain diagnoses, and so these cases are not generalizable to all patients with chronic musculoskeletal pain. Secondly, we did not determine *a priori* the inclusion and exclusion criteria, and there is significant selection bias in those who seek treatment in the MBM program. Finally, we have only reported qualitative results without using standard outcome measures. Nevertheless, the dramatic recovery to a virtually pain-free state after months to years of pain and disability is clearly remarkable. To test the efficacy of this approach, we have conducted a randomized-controlled trial comparing the MBM program to usual care using standard outcome measures, and will be publishing our results in the near future.

Conclusion

While any conclusions drawn from these case reports must be guarded, the cases presented do illustrate that certain individuals with chronic musculoskeletal pain may greatly benefit from a primarily psychodynamic approach

Hsu and Schubiner

to treatment, even when standard approaches to pain treatment have failed. In our experience, the greatest benefit from this approach is achieved when the patient understands his or her symptoms as arising from stress and both conscious and unconscious emotions, and embraces the potential for full recovery using simple psychological exercises. Further research will be needed to establish which patients would be ideal candidates for such an approach, and to determine its mechanisms of action. It is our hope that such investigations will eventually lead to a reduction in the health care burden and suffering for a significant portion of the chronic pain population.

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