

Integrative Medicine and Chronic Pain

by Eric Leskowitz, MD

For all the high-tech triumphs of modern medicine—from laser surgery to bioengineering—there is one problem that just won't go away, one clinical area where even allopaths agree that new approaches are needed. That's the realm of chronic pain. Defined by the American Pain Society (APS) as disabling pain that lasts longer than 6 months on a daily basis and is not attributable to cancer, this clinical entity has unwittingly provided an important spur to the development and acceptance of CAM by mainstream clinicians. This essay will provide an overview of that process, as well as a review of some of the most promising clinical and research advances in the field.

The Limits of the Medical Model

It's estimated that over 10 million Americans meet the APS criteria for chronic pain, and of those, only 5 million have such readily diagnosable conditions as osteoarthritis or peripheral neuropathy. The remainder may have gone through a gamut of medical and surgical interventions, and yet are still disabled and dysfunctional. Counting workdays lost and productivity decreases, chronic pain syndrome (CPS) has been estimated to cost the national economy over \$50 billion annually. Western medicine is oriented toward symptom suppression, and so is more effective with acute than with chronic pain. With acute pain, the nociceptive signal from the periphery of the nervous system can usually be blocked by a wide range of medications (from NSAIDs and opiates to tricyclic antidepressants and anticonvulsants) and surgical procedures (from nerve blocks and neural ablations to implanted spinal cord stimulators and decompressive laminectomies).

However, there still remains that large subset of patients who get referred from specialist to specialist, with symptoms that persist despite apparent resolution of radiologic signs of disease or injury. In fact, to illustrate how poor the correlation is between

our standard medical measuring tools and the subjective complaints of CPS, it has been found (Jensen et al) that many patients with chronic lower back pain have normal spine MRIs, and that

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many asymptomatic subjects have significant radiologically detectable spinal abnormalities. This finding highlights the dilemma of relying on a system of diagnosis and treatment that views humans as physical structures only.

The Development of the Multidisciplinary Team Approach

The continued failure of medicine and surgery to adequately treat CPS led a Seattle-based team of clinicians to develop a new perspective on CPS in the late 1960s. Led by anesthesiologist John Bonica and psychologist Wilbert Fordyce, they pioneered the view that CPS is a medical syndrome with a primary behavioral component. By adopting strategies from cognitive and behavioral psychology, they were able to develop a team-oriented treatment approach that made significant inroads into the so-called 'pain behaviors' that contributed to the high levels of disability reported by CPS patients. For example, the commonly used phrase 'secondary gain' refers to the unconscious benefits that accrue to someone in the role of a patient—relief from everyday responsibilities, additional attention from loved ones, and so on. By neglecting (or not rewarding) behaviors that came from this patient role, and by reinforcing behaviors that embodied a sense of autonomy and function, the Seattle program began to demonstrate significant changes in patient function following treatment (Flor et al).

The work in Seattle was occurring at the same time that the field of stress

medicine was emerging. The studies of Walter Cannon, Hans Selye, and Herbert Benson were showing that the sympathetic nervous system and the endocrine system (especially the adre-

nal glands) mediated stress and contributed to illness. Fortunately, a plethora of self-regulation strategies were available to mitigate stress and allow patients to take an active role in shaping their response to symptoms. These same clinical strategies—biofeedback, meditation, cognitive reframing—all became standard elements of the so-called Multidisciplinary Pain Clinic (MPC) approach to CPS.

Even though MPCs developed long before the term 'integrative medicine' was coined, they embody the best elements of the integrative approach to medicine. Typically, an MPC will consist of—and is required to consist of, according to the Joint Commission for the Accreditation of Healthcare Organizations (JCAHO)—a physician team leader (most commonly anesthesiologists or physiatrists-rehabilitation medicine specialists), physical therapists, occupational therapists, psychologists and nurses. In many programs, such as the inpatient program I work with at Spaulding Rehabilitation Hospital in Boston, there is also significant input from psychiatrists such as myself and from social workers, who address the family dynamics that underlie CPS.

Perhaps most important of all, this team must coordinate its efforts to avoid recreating the same sense of fragmentation that is so often the bane of CPS patients. Patients typically come to the hospital already on numerous contradictory and overlapping medications prescribed by multiple providers who don't communicate

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with each other. Because of iatrogenic addiction and the lack of efficacy of tranquilizers, mind/body approaches to pain management have become the focus of treatment. And because the focus is on self-management, the philosophy has become one of patient empowerment, encouraging autonomy rather than reliance on medical care providers.

The Spectrum of Clinical Roles

Depending on the background and training of staff members and the particular therapeutic culture in any individual pain program, particular CAM interventions may be practiced by different team members. Some of the key interventions follow, listed with the discipline most likely to practice them.

Occupational therapy—Key strategies include energy conservation and pacing, daily planning, and basic stress management. Specific modalities can range from guided imagery and progressive muscle relaxation to cognitive training and psychoeducation on the stress/pain connection. Hands-on therapies like myofascial release and craniosacral therapy are commonly integrated into these trainings, and are also widely used by physical therapists.

Physical therapy—The traditional focus of physical therapy (PT) is aerobic conditioning as well as strengthening and flexibility with respect to chronic pain. The conditioning not only helps treat the depression that almost universally accompanies chronic pain, but it can be specifically helpful for syndromes like reflex sympathetic dystrophy (RSD) (Sherry et al). Flexibility training must be modified to meet the diminished functional capacity of pain patients, and will often involve yoga-influenced routines as well as other awareness-infused movement therapies like the Feldenkrais Technique.

Psychology/Psychiatry—Many psychotherapeutic interventions affect the stress/pain cycle, such as biofeedback for control of autonomic function (which has a long track record of efficacy for such pain syndromes as

migraine). Meditation has been helpful in preventing excessive reliance on the healthcare system, in particular mindfulness meditation, which cultivates acceptance of thoughts and emotions as they arise. Long-term outcome studies (Kabat-Zinn et al) have shown that results are stable when patients maintain a relatively low level of ongoing practice.

Hypnosis can also be used to diminish subjective distress, and to alleviate the symptoms of post-traumatic stress disorder that often go undiagnosed in patients whose pain condition originated in traumatic event like an automobile accident or a worksite injury.

Nursing/Therapeutic Touch—among alternative therapies, Therapeutic Touch (TT) is most identified with nursing, and has been shown effective in such conditions as osteoarthritis (OA) and phantom limb pain. The OA study (Evanoff and Newton) is noteworthy because of its use of double-blinding (sham TT in which nurse moved their hands in the typical TT pattern, but without the frame of mind necessary to generate healing effects), and of subjective outcome measures like pain level, and of objective outcome measures like functional activity level.

Physiatry—the physical medicine and rehabilitation intervention par excellence for chronic pain is the trigger point injection (TPI), used to treat myofascial pain, a ubiquitous sequelae of injury and poor body mechanics which is characterized by regional points of muscle tautness which twitch when stimulated. Interestingly, these trigger points are often located at classical acupuncture points (Melzack et al), which can be inactivated with a wholly Western procedure using local anesthetics. So-called dry-needling of these points (not injecting anything) is functionally identical to acupuncture, although the needle is much larger and the procedure is fairly painful. TPIs have the advantage of being reimbursable by most insurers.

Anesthesiology/Neurology—These two specialties are most heavily represented among physician leaders of MPCs, and are also well represented among the ranks of physician acupuncturists.

The modality of acupuncture itself has a very wide range of applicability in chronic pain, from musculoskeletal conditions (myofascial pain, chronic low back pain) to autonomic regulation (RSD, migraine) and the emotional and energetic sequelae of this behavioral syndrome. Several studies funded by the NIH's National Center for Complementary and Alternative Medicine (NCCAM) are exploring the uses and mechanisms of action of this technique.

Summary

Given the multidimensional nature of chronic pain, it is crucial that integrative physicians not try to be heroes and manage the patient by themselves. The team setting is ideal, not only for ensuring that all aspects of the syndrome are addressed, but also for helping the physician avoid burnout when dealing with these challenging patients. The scope for CAM interventions is vast, and future prospects are brightened by the wave of new clinical studies that are currently in the NCCAM pipeline.

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