

Why Imaging May Be Keeping Us In Pain



Blogpost by Kelly Clancy, OTR/L, CHT

In most parts of the western world, traditional allopathic medicine focuses on the treatment of specific sites of pain symptoms. The goal for the healthcare provider is to resolve this localized or regional pain or dysfunction based on the complaints and felt symptoms.

Depending upon this reductionistic approach, the diagnostic studies of specific parts of the body are ordered and examined. If an artifact is discovered on imaging, such as a bulging disc, torn rotator cuff, or frayed tendon it is deduced that it most likely must be the source of pain generation.

In many cases, localized interventions based on these radiologic or interventional test findings are executed, and the result is less than desired. In more cases than we want to admit, especially in cases of chronic pain, the intervention does not produce the hoped upon resolution of symptoms or if it does, it lasts only for a brief reprieve with symptoms ultimately returning..

In this case, the patient is oftentimes hurried from healthcare provider to healthcare provider in pursuit to uncover other reductionistic answers or solutions to their complex and unique presentations.

Unfortunately these visits to multiple subspecialists often results in negative secondary effects of more invasive diagnostics or procedures such as surgery which inadvertently create limiting scar tissue adherence, alteration of connective tissue balance, and further dysregulation of ANS functioning. These interventional strategies end up creating further longer term negative effects on the stability and the balance of the individual's structure and psyche.

In physical medicine and rehabilitation for example, when a common conservative treatment regime is implemented such as localized injections, ultrasound, massage, stretching, or strengthening to localized areas of pain, these reductionistic attempts to remedy the pain often leads to temporary relief of symptoms but unfortunately, do not address the root cause of the symptoms. If this conservative management protocol is not satisfactory, often surgical interventions are implemented to the specific dysfunctional region. It is not infrequent that a patient may undergo multiple surgeries, especially in areas like the upper extremity or the low back in the pursuit to "put out the fires" of complex multi-system symptoms.

Unfortunately, this approach is often met with limited success or in some cases a worsening of function.

Recent research on interventional treatments for low back pain, shoulder dysfunction, knee pain and other orthopaedic and neurologic conditions has increasingly demonstrated the ineffectiveness of these interventional approaches.

One example of this can be found in the work of Dr. Janna Friedly, a back specialist and assistant professor of rehabilitation medicine at the University of Washington, where she has demonstrated that injection therapy does not provide a long-term solution for low back pain:

‘But the benefits do not last, the latest science shows. In a commentary published in May in The Journal of the American Medical Association (JAMA), researchers from the Netherlands point out that there is almost no evidence that the shots ease most people’s pain long term, even after multiple injections. Other recent studies have concluded that injections also do not significantly reduce the likelihood of back surgery later. And in a particularly sobering study published in February, researchers found, to their surprise, that a small group of subjects with pinched nerves in their backs showed less improvement after injection therapy than a control group during a four-year follow-up period. Based on the available data, the JAMA authors conclude, doctors “should not” recommend injection therapy to their patients with chronic low back pain.

The lack of alternative options that can be administered in a doctor’s office, however, is frustrating to physicians and their patients, says Dr. Friedly. Doctors “want to be able to do something,” she says. (1)

A 2015 study from the British Medical Journal examined the effectiveness of arthroscopic knee surgery for middle aged subjects with knee pain and or degenerative findings. They concluded that arthroscopy for the degenerative knee is limited in time and absent at one to two years after surgery. Knee arthroscopy is associated with harms. Taken together, these findings do not support the practise of arthroscopic surgery for middle aged or older patients with knee pain with or without signs of osteoarthritis.(2)

Another more recent study in 2017 published in Bone and Joint followed 90 subjects over a 10 year period and found that the patients who underwent operative treatment had a stronger belief in recovery, however their outcomes were no better than received with an exercise program. (3)

Fortunately pain science is rapidly helping us understand pain and the brain and it is changing our focus on structural artifacts as a determinant for invasive care. According to Howard Schubiner, the director of the Mind Body Medicine Center at Providence Hospital in Southfield, Michigan and a Clinical Professor at Wayne State University and Michigan State University School of Medicine, there are different types of pain related to chronic symptoms. Inflammatory pain which can also be classified with and as nociceptive pain, neuropathic pain due to nerve damage and brain-induced pain, centralized, psychophysiologic, or psychosomatic pain.

According to Schribener in his article entitled “Neural Pathway Pain, published in Practical Pain Management in volume 17, issue 10, a call for a more accurate diagnosis is warranted in these cases. He reports studies on imaging that can lead the healthcare provide and patient astray. “MRIs of pain-free 30-year-olds show degenerative disc disease in 50% of patients, and bulging discs in 40% of patients. These statistics reach levels of 80% and 60%, respectively, in pain-free 50-year-olds, and are even higher in older patients. In the same article he goes onto to say that Imaging from MRI and functional MRI studies (fMRI) identify clear changes in the brains of individuals with chronic pain.

Children who suffer from the consequences of parental divorce, drug abuse, neglect, or outright abuse have much higher rates of chronic pain (and other difficulties) later in life. The experience of growing up feeling “unsafe” sensitizes the danger/alarm mechanism that may then be triggered later in life through stressful life events or physical injuries, such as a car accident or a surgical procedure. In these situations, the brain may construct pain as a protective mechanism. Specifically, the brain activates neural circuits or pathways of pain that create real pain in the

absence of tissue damage. These pathways are, however, reversible due to the brain's neuroplasticity". (5)

I would argue that our 'maps' need to be questioned. The biomechanical reductionist roadmap that leads us on a pain symptom chase is outdated and leads us down this path of overspending and prolonged suffering of both the patient and the healthcare system as a whole.

Our roadmaps need to be updated to include the latest research around connective tissue and the nervous system. It needs to be modified to include the psychoneuroimmunological in conjunction with the biotensegrity model in our attempts to treat the whole person.

Clinically we are seeing that approaches like Tensegrity Medicine that use these complex relational biology systems as roadmaps for both evaluation and treatment, are then able to implement treatment strategies that incorporate interoceptive awareness, somatic practices, dialogueing, and other bodymind approaches to the whole person.

When the whole person is examined and treated in this way, the root cause of the majority of chronic pain symptoms most often can be reversible.

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Volume 17, Issue #10 ... A Model to Incorporate Functional Medicine into Chronic Pain Care ... **Neural Pathway Pain** — A Call for More Accurate Diagnoses.

(5) **Clin J Pain.** 2018 May;34(5):402-408. doi: 10.1097/AJP.0000000000000549. The Incidence of Adverse Childhood Experiences (ACEs) and Their Association With Pain-related and Psychosocial Impairment in Youth With Chronic Pain. [Nelson S1,2, Simons LE3, Logan D1,2.](#)