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Chronic Pain and Complex Regional Pain Syndrome: A Review of Literature

Steven Barna MD[1] and Virgil R. May III RhD[2]
1University of South Florida College of Medicine, Tampa, FL
and Neurosurgical Partners, Sarasota, FL
2International Commission on Health Care Certification, Midlothian, Virginia

Abstract

Chronic pain can evolve slowly or during the acute phase of injury, only to become a habilitative and quality of life complication beyond the medical and rehabilitative treatments phases of recovery and health maintenance. The seriousness of any pain condition may eclipse the attention of acute health care providers and can evolve into a potential retardant to the injured person for achieving medical and rehabilitative treatment goals. The purpose of this article is to bring to the attention of life care planners and case managers the prevalence of chronic pain among adults in the United States as well as the cost of chronic pain to the U.S. healthcare system. Additionally, we hope to impress upon the reader the significant effect that chronic pain can have in the recovery process of the person for whom a life care plan may be developed. We also present to the reader a review of complex regional pain syndrome Types I and II (formerly reflex sympathetic dystrophy [I] and causalgia [II]). In this article, we will address the complexities of chronic pain, in particular complex regional pain syndrome, the growing prevalence and costs of this disease process, and current diagnosis and treatment strategies applied to resolve pain conditions that may evolve from a primary catastrophic or non-catastrophic injury.

Keywords: pain, complex regional pain syndrome, reflex sympathetic dystrophy, causalgia, chronic, acute

Life care planning service delivery is a transdisciplinary health care delivery system with applications to many catastrophic and non-catastrophic diagnoses (Mauk, 2019; May & Moradi, 2020). In the mid to late 1980s, life care planning training was focused primarily on catastrophic injuries including acquired brain injury, orthopedic and spinal cord injuries, psychological disorders, burns, and amputations. The issue of pain disability appeared in Deutsch and Sawyer's (1996) Volume 2 of their original textbook, placing the concept of pain disability into life care plans. The 120-hour pre-certification training programs recognized by the International Commission on Health Care Certification (ICHCC) for the Certified Life Care Planner (CLCP) credential realized the need for the inclusion of pain disability diagnoses in their curricula. This arose from the prevalence of pain issues appearing in the catastrophic and non-catastrophic diagnoses/injury literature that program educators reviewed for inclusion into their training curricula.

Definitions of Pain

Pain is defined by the International Association for the Study of Pain as "an unpleasant sensory and emotional experience associated with actual or potential damage or described in terms of such damage" (Merskey and Bogduk, 2014, p. 209-214). The IASP administers the biennial meeting titled, The World Congress on Pain. The IASP offers its members and the public two journals; 1) the journal Pain, for members only, which is devoted to the nature, mechanisms, and the treatment of pain; and 2) *Pain Reports*, which is for the public with open access online, and its purpose is to highlight advances in clinical, applied, and basic pain research. The IASP is looked upon as the all-encompassing pain agency to establish the definition of pain for practitioners. However, disparities have evolved among clinical and rehabilitative pain practitioners such that the many practitioners have questioned the validity of what was introduced to the field as the all-encompassing definition of pain. Lester (2019) noted that objective definitions of pain have been unreceptive to pain practitioners over the years, resulting in published suggestions for updating the definition, or discarding the IASP definition altogether and establishing a new definition. The key feature that Gebhart (2000) observed from the definition was that it went further to suggest that pain was always a subjective diagnosis involving subjective symptom response patterns.

Williams and Craig (2016) advocated for the need for a definition to identify a "thing" according to its properties and identifying what it is and what it is not. Both Dr. Williams and Dr. Craig are academic clinical psychologists, who focus on the clinical psychological aspects of pain. They also advocated the need for providing direction for scientific understanding and for clinical interventions, which the IASP definition failed to offer. They felt a strong need to modify the IASP definition because:

1. Acknowledging only sensory and emotional features excludes major and clinically important characteristics; specifically, cognitive and social components.
2. Characterizing pain experience simply as "unpleasant" falls short and such wording trivializes pain that is more than just "unpleasant."

3. Subjectivity and self-report are prioritized at the expense of non-verbal behaviors, prominent sources of information about pain in humans and non-human animals, particularly those whose subjective experience cannot be communicated (p. 2421).

Williams and Craig (2016) suggested their revision of the IASP definition called for the inclusion of cognitive and social components. They suggested that pain experiences depend upon cognitive science methodologies that included attention, memory, and language use. Also, they noted that the human capacity for cognitive elaboration of pain was prominent when considering suffering, pain expression, and social parameters of pain. Regarding social components, Williams and Craig (2000) theorized that social environments determine exposure to pain, thoughts, and feelings when one is in pain, communication of distress to others, and others' experience and responses. Thus, they offered their definition to read, "Pain is a distressing experience associated with actual or potential tissue damage with sensory, emotional, cognitive, and social components" (Williams & Craig, 2000, p. 2421).

The IASP offered the pain practitioner community an opportunity to contribute to an update of its definition of pain (IASP's proposed new definition of pain released for comment, 2019). The agency sought public examination and comment regarding their updated definition of pain, which was updated initially in 2017 to read as, "An aversive sensory and emotional experience typically caused by, or resembling that caused by, actual or potential tissue damage" (Pain Research Forum, 2019).

The IASP updated their pain definition of 2017, which remains current. The IASP has not concluded its field survey at this writing and therefore has not announced the development of a collaborative definition of pain from its membership. However, a more recent suggestion by Bernstein (2020) for the IASP's task force for finalizing a definition for pain is for task force members to consider the concept that "pain corresponds to the sensory, perceptual, and emotional experiences of a physiologically typical individual when sensory innervated tissue of that individual is being damaged, or to similar sensory, perceptual, and emotional experiences when such damage is not actually occurring" (p. e813).

Prevalence

It is noteworthy that there is much discrepancy among the data sources reporting the number of people identified with chronic pain issues as well as the costs of medical care/management and rehabilitative services for long-term pain management. Additionally, literature reviews have found a significant percentage-spread of the U.S. population reporting disability from chronic pain diagnoses. For example, Gaskin and Richard (2012) reported their review of 15 chronic pain studies revealed prevalence estimates for adults (≥18 years) in the United States ranged from 2% to 40% with a median of 15% of the U.S. population for 2009, which was estimated to be 305,529,237. Thus, persons are documented as having a chronic pain disability varying between 6,110,584.7 (2%) to 122,211,694.8 (40%). Gaskin and Richard (2012) categorized their population numbers for chronic pain disorders as follows:

1. Lower Back Pain: 85,548,186.36 (28%)
2. Migraine/severe headache: 48,884,677.92 (16%)
3. Neck pain: 45,829,385.55 (15%)
4. Face/Jaw area: 1,527,646.15 (5%)

Kraus et al. (2018) noted that of the total population in the United States, 41,511,681.408, 12.8% had some form and degree of disability. For the year 2016, the Centers for Disease Control (as cited in Dahlhamer et al., 2018) estimated the prevalence of chronic pain and high-impact chronic pain to be 20.4% (50 million) of U.S. adults for chronic pain and 8.0% of U.S. adults (19.6 million) for high-impact chronic pain (i.e., pain that frequently limits life or work activities). Dahlamer's et al. (2018) numbers suggest an increase in persons with pain disability from 12.8% to 28.4% with approximately nine million persons added to the pain disability caseload for 2016. However, the U.S. Department of Health and Human Services (2019) mirrored Dahlamer's (2018) pain population number of 50 million Americans reporting a primary pain diagnosis and documented 19.9 million adults reported experiencing high-impact chronic pain.

Joy (2017) documented that the number of persons in the United States who experienced chronic pain was estimated to be 100 million. Joy (2017) reported that 36 million persons miss work each year because of chronic pain episodes; three in four patients with chronic pain report depression; and five to eight million individuals with chronic pain rely on opioids for long-term pain management. Joy (2017) documented the following common types of chronic pain and the associated population percentages of reported pain diagnoses.

1. Back pain: 27% (270,000 individuals)
2. Headache/Migraine: 15% (150,000 individuals)
3. Neck pain: 15% (150,000 individuals)
4. Facial pain: 4% (40,000 individuals)

Regardless of how much the population numbers may vary among the agencies' health and medical care surveys, there is no doubt that pain disability is a significant disease process that deserves attention in life care planning service delivery. With the significant prevalence of individuals experiencing chronic pain sequelae that appears to increase annually, there are concerns about the rising medical care costs for chronic pain management.

Cost of Pain Management

The cost of pain in its chronic phase is staggering to say the least. The annual cost of chronic pain management has been estimated to be between $560 to $635 billion (Dahlhamer, 2018; Joy, 2017; U.S. Department of Health and Human Services, 2019) . Gaskin and Richard (2012) noted

that the range of $560 to $635 billion dollars is more than the yearly costs for cancer ($243 billion), heart disease ($309 billion), and diabetes ($188 billion). Von Korff et al. (2016) analyzed the electronic health records data of 289,464 adult members (≥18 yrs) of the Washington State Group Health Plan and found that pain patients had higher health care costs compared with other diagnoses and that pain services were typically delivered in a primary care setting.

Gaskin and Richard (2012) reviewed the indirect annual costs of pain conditions by sampling 20,214 adult Americans. Differences were found in the types of pain persons reported. Specifically, joint pain was reported as positive $4,048; arthritis at a positive total of $5,838; and functional disability due to pain totaled $9,680 positive when compared to persons without these conditions.

Phases and Types

Pain is described in both phases and types. Phases include the acute phase and the chronic phase of pain. Acute pain is defined as pain that is experienced following some form of noxious stimuli that can become pathologic. It is pain that is experienced suddenly and is time-limited such that symptoms should not exceed a 6-month period (Lester, 2019; The Interagency Pain Research Coordinating Committee, 2016). Chronic pain is defined as pain that maintains symptoms for a minimum of half-days for at least six months or more (The Interagency Pain Research Coordinating Committee, 2016; von Korff et al., 2016) .

For the purposes of this article, types of pain include high-impact chronic pain, intractable pain, and complex regional pain syndrome which encompasses reflex sympathetic dystrophy and causalgia. High-impact pain refers to pain that meets the time frame for chronic pain and is noted to be persistent pain that restricts one's participation in work and social activities, and activities of daily living (The Interagency Pain Research Coordinating Committee, 2016).

Intractable pain is referred to as pain that does not respond to appropriate pain treatment and/or management (The Interagency Pain Research Coordinating Committee, 2016). Intractable pain is found in most chronic pain conditions and is especially applicable to high-impact chronic pain. Overall, persons experiencing high-impact intractable pain present with functional deficits in work (including work around the home or volunteering), social and recreational activities, and self-care (some activities of daily living). Complex regional pain syndrome, in particular, is a seminal example of a high-impact intractable pain syndrome with inherent diagnostic and treatment challenges.

Complex Regional Pain Syndrome

Complex regional pain syndrome (CRPS) has been described as a neuropathic pain syndrome with a characteristic clinical presentation most commonly evolving in an arm or leg that can spread from arm to arm or leg to leg (D'Arcy & Werdell, 2008; Littlejohn, 2014; Shim et al, 2019). Wasner, Backonja, and Baron (1998) note that CRPS is encompassed by a wide range of symptoms and signs with little underlying pathophysiology understanding that evades a clear, single concise diagnosis for the pain disorder. Complicating the diagnosis dilemma further is the fact that the traumatic neuropathic pain and neuralgias encompass more than one disease entity, thus the term syndrome. Wasner et al. (1998) indicated that a clinical definition and scientific understanding of these syndromes were evolving, and a single, concise definition of CRPS remained elusive at the time within the medical community.

The International Association for the Study of Pain (IASP) offered the medical community its attempt at developing a consensus definition for CRPS in 1993. The IASP concluded that any pain condition that evolves following a noxious event resulting in changes that consist of abnormal skin color, temperature changes, abnormal sudomotor activity, edema, and often significant impairment of motor function satisfies the diagnosis of complex regional pain syndrome (Vacariu, 2002). Therefore, in 1993 the IASP established the following as its definition of CRPS:

> Complex regional pain syndrome is a collection of locally appearing painful conditions following a trauma, which chiefly occur distally and exceed in intensity and duration, the expected clinical course of the original trauma, often resulting in considerably restricted motor function, and is characterized by a variable progression over time (van Eijis et al., 2011, p. 71).

The IASP divided CRPS into two categories, or Types. Complex regional pain syndrome Type I replaced the term *reflex sympathetic dystrophy*, and CRPS Type II replaced the term causalgia. (Tinastepe & Oral, 2015). These authors noted that persons experiencing minor to severe trauma that leads to sensory, autonomic, motor, and trophic changes are more likely to experience one of the CRPS Types. The difference between CRPS Type I and CRPS Type II is that the pain condition in Type I evolves without the presence of obvious nerve lesions while Type II is classified under neuropathic pain. Complex Regional Pain Syndrome as a pain diagnosis is more common in women and the incidence of CRPS Type I is more common than CRPS Type II (Tinastepe & Oral, 2015). A systematic review of articles published between 2001 and 2013 reported that 79% of all articles published on the topic since 2001 were using the new name of complex regional pain syndrome or CRPS, and 13% were using reflex sympathetic dystrophy (Todorova et al, 2013).

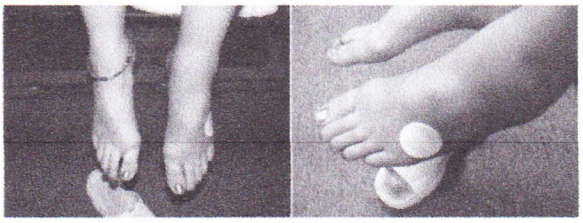
Complex Regional Pain Syndrome Type I

Complex Regional Pain Syndrome Type I is a unique pain condition because it can evolve from minor trauma (i.e., sprains, bruising, or skin lesions) or major trauma (i.e., bone fractures, surgeries, and other medical conditions) that may include but not be limited to shoulder trauma, myocardial

infarction, or a contralateral cerebrovascular lesion (Wasner et al., 1998). Complex Regional Pain Syndrome Type I is characterized by sensory symptoms and autonomic and motor abnormalities, as well as by inflammatory symptoms. A good example of inflammation of symptoms is illustrated in Figure 1.

Figure 1

CRPS Type I Reflex Sympathetic Dystrophy



In CRPS, the severity of symptoms is sometimes disproportionate to the severity of the injury. Regarding the injury illustrated above, this individual tripped over the foot of one of the volleyball players she was coaching and what was a simple ankle strain evolved into CRPS Type I. Symptoms included traditional lower extremity flushed skin and edema, reduced range of motion and weightbearing, and severe pain without activity. Her treatment regimen included surgery as well as months of ankle/foot stabilization, pharmacotherapy, and physiotherapy.

Complex Regional Pain Syndrome Type II

Complex Regional Pain Syndrome Type II is defined as a pain condition that is present continuously which may involve pain caused by a stimulus that does not normally elicit pain (allodynia) or an abnormally heightened sensitivity to pain (hyperalgesia) that involves peripheral nerve injuries, unlike CRPS Type I (Ormond, et al., 2012). Due to its peripheral nerve site of injury, CRPS Type II is usually found in the arms, legs, hands, and feet. Complex Regional Pain Syndrome Type II has a physiological presence with edema, typical of which is revealed in the following MRI scan illustration in Figure 2 of a patient's affected right lower extremity.

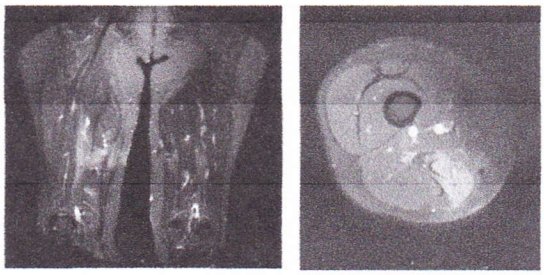
This MRI of the lower extremities demonstrates edema in the right semimembranosus and semitendinosus muscles with abnormal enhancement in the distal sciatic and common peroneal nerves.

Background and Clinical Characteristics of Complex Regional Pain Syndromes

Complex regional pain syndrome is estimated to occur in 7% of patients who have limb fracture, limb surgery, or limb injury (Bruehl, 2015). The majority of these cases resolve within the first year, with only a small group progressing to a chronic form. Bruehl subdivides CRPS into "warm complex regional pain syndrome" with inflammatory characteristics,

Figure 2

MRI Scan of Lower Extremities Exposing CRPS Type II Causalgia



Note: MRI of the lower extremities demonstrating edema in the right semimembranosus and semitendinosus muscles (arrows) with abnormal enhancement in the distal sciatic and common peroneal nerves. From Ormond, R., Moscatello, A., & Murali, R. (2012). MRI Findings of causalgia of the lower extremity following transsphenoidal resection of pituitary tumor. *Case Reports in Neurological Medicine*, 2012(ID 598048), 1-3. https://doi.org/10.1155/2012/598048. Copyright 2012 by Case Reports in Neurological Medicine. Reprinted with permission.

and "cold complex regional pain syndrome" with autonomic characteristics. An international consensus group was gathered in 2003 in Budapest, Hungary to update the IASP diagnostic criteria for CRPS, which was first published in an IASP monograph in 1994. Harden et al. (2007) further analyzed the statistical validity of the Budapest criteria. While IASP/CRPS criteria are deemed to be sensitive, they have low specificity, which may result in an over-diagnosis of CRPS. Bass and Yates (2018) reviewed demographic and clinical characteristics of patients with CRPS Type 1 in a United Kingdom medico-legal setting. They found that for patients diagnosed with CRPS Type 1 in a litigation setting, there was a high rate of somatoform disorder, pain related disability, and opiate use. As a result, they concluded that the CRPS diagnosis lacked reliability in medico-legal settings.

The prognosis for CRPS is quite variable, from symptom free to long-term significant disability. Bean et al. (2016) followed a cohort of recently or new onset CRPS Type 1 patients for one year. They found that only five percent were symptom-free at one year, but one-fourth still met Budapest criteria for CRPS at one year. They also observed that most of the improvement occurred in the first six months and plateaued after that.

Diagnosis Strategies

The diagnosis of CRPS largely remains a clinical diagnosis, based on the IASP Budapest criteria. These criteria comprise subjective and objective clinical observations and rely on exclusion of an alternative diagnosis. To date, there is no single diagnostic test with adequate sensitivity or specificity to independently rule in or rule out the diagnosis of CRPS. The Budapest clinical criteria for diagnosing CRPS are detailed in Table 1.

Table 1

IASP Clinical Budapest Criteria in Diagnosing CRPS

1. Continuing pain that is disproportionate to any inciting event

2. At least one symptom reported in at least three of the following categories

Sensory	Hyperesthesia or allodynia
Sudomotor	Edema, sweating changes, sweating asymmetry
Motor/Trophic	Decreased range of motion, motor dysfunction (weakness, tremor, dystonia) trophic changes (hair, nail, skin)

3. At least one sign at time of evaluation in at least two of the following categories:

Sensory	Evidence of hyperalgesia (pin prick); Allodynia (light touch or temperature sensation), deep somatic pressure or joint movement
Vasomotor	Skin temperature asymmetry ($\mu\ 1^0$ c); skin color changes or asymmetry
Sudomotor	Evidence of edema, sweating changes or sweating asymmetry
Motor/Trophic	Evidence of decreased range of motion, motor dysfunction (weakness, tremor, dystonia), trophic changes (hair, nails, skin)

4. No other diagnosis can better explain the symptoms and signs

Goebel et al. (2019, p. 645) cite possible differential diagnoses to CRPS including:

1. Local pathology: fracture, pseudoarthrosis, arthrosis, inflammation (cellulitis, myositis, vasculitis, arthritis, osteomyelitis and fasciitis), compartment syndrome and immobilization-induced symptoms. Persistent defects after limb injury: osteoarthritis developing after joint fractures; myofascial pain due to changed (protective) movement patterns
2. Arteries, veins, or lymphatics, for example traumatic vasospasm, vasculitis, arterial insufficiency, thrombosis, Raynaud's syndrome, thromboangiitis obliterans (Buerger's syndrome), lymphedema, and secondary erythromelalgia.
3. Connective tissue disorder
4. Central lesion, brain or spinal tumor
5. Peripheral nervous system lesion (nerve compression, cervico-brachial or lumbo-sacral plexus acute sensory polyneuropathy, (poly-)neuritis, autoimmune (e.g., posttraumatic vasculitis) and infectious (e.g., borreliosis)
6. Malignancy (Pancoast tumor/paraneoplastic syndrome/occult malignancy)
7. Factitious disorder

Borchers and Gershwin (2017) highlight the difficulties in diagnosing CRPS. They point out four core issues with the diagnosis of CRPS. First, the underlying pathophysiology of the signs and symptoms are not definitively substantiated. Second, there are no consistent and highly reliable laboratory or imaging tests. Third, the signs and symptoms can vary over time without a clear medical explanation. Fourth, most studies have low sample size resulting in low statistical power. Fifth, interobserver reliability of signs and symptoms for diagnosis is low, which can lead to over-diagnosis. Sixth, the vast heterogeneity of signs and symptom profiles point away from a single unifying diagnosis.

Diagnostic Tools

While the Budapest criteria remains the gold standard for the diagnosis and exclusion of CRPS, there are diagnostic tools that may also aid with the diagnosis of CRPS. Caution should be exercised that none of these diagnostic tools possess adequate sensitivity or specificity to independently confirm or exclude the diagnosis of CRPS. Specifically, imaging and laboratory diagnostic options have been researched. To date, imaging shows the most promise.

Imaging

Cappello et al. (2012) conducted a meta-analysis to compare the efficacy of triple-

phase bone scan, magnetic resonance imaging, and plain film radiography in the diagnosis of CRPS Type I. They found that triple-phase bone scan was overall superior to the other two imaging modalities due to a significantly better sensitivity and negative predictive values. However, there was no difference between the three imaging modalities with regards to specificity and positive predictive value.

Laboratory

Bharwani et al. (2019) looked at biomarkers for inflammation to help determine the diagnosis of CRPS. They concluded that there is no single biomarker, nor group of biomarkers that can currently be used to diagnose CRPS.

Medical Treatment Strategies

Some particularly promising treatments include ketamine and bisphosphonates. Misidou and Papagores (2019) reviewed other therapies such as glucocorticoids, non-steroidal anti-inflammatory drugs, calcitonin, opioids, and anti-convulsants, and found no conclusive evidence of benefit.

Ketamine

Zhao e. al. (2018) performed a meta-analysis of available studies through 2017 that evaluated ketamine, an N-Methyl-d-aspartate (NMDA) receptor antagonist, in the treatment of CRPS. They found that for the short-term (less than three months), there was a statistically significant reduction in pain of at least 30% in the majority of subjects. However, there was no conclusion regarding long-term efficacy over three months.

Bisphosphonates

Magnetic resonance imaging (MRI) and bone scan, can be used in the diagnosis of CRPS, by demonstrating bone mineralization disturbance. Varenna and Crotti (2018) reviewed bisphosphonates in the treatment of CRPS Type 1, with a focus on bone having a central role in the early process of the disease. Much like bisphosphonates' proven success in treating osteoporosis, they theorize that bone involvement, via a release of inflammatory cytokines upon injury, explains why this medication also successfully treats CRPS. Varenna et al. (2017) further delineated that predictors of successful treatment with bisphosphonates include fracture as a precipitating event and early initiating treatment early in the disease process. Gatti et al., (2016) reviewed treatment options for CRPS Type 1 and concluded that short courses of high dose bisphosphonates should be used early in the disease process in order to reduce initial bone loss.

Sympathetic Blocks

O'Connell et al. (2016) determined no statistical clinical significance could be found after conducting a Cochrane database review when performing stellate ganglion or lumbar sympathetic blocks for those with complex regional pain syndrome.

Spinal Cord Stimulation

Risson et al. (2018) and Visnjevac et al. (2017) provide strong support for the role of spinal cord stimulation for improving pain, function, and disability associated with complex regional pain syndrome. Risson's study involved 160 patients who had spinal cord stimulator implantation, of whom 33 were diagnosed with CRPS Type I. These 33 patients were followed post-implantation. The authors observed an average reduction of 70% of painful symptoms and 65% improvement in disability. Visnjevac performed a literature search and selected 19 out of 30 eligible manuscript regarding the role of spinal cord stimulation for CRPS. Pain score improvement, perceived pain relief, satisfaction, and quality of life were rated 1B+, which reflects positive high-level randomized control evidence in support of spinal cord stimulation for treatment of CRPS.

Psychological Therapy

Cognitive behavioral therapy and treatment of any underlying anxiety or depression is warranted (Goh et al., 2017). Goh specifically describes cognitive behavioral therapy, biofeedback, and acquisition of relaxation skills to reduce pain and provide more control over the patient's pain. Treatment of generalized anxiety disorder, major depression, and post-traumatic stress disorder is also important because failure to do so could complicate the rehabilitation process.

Rehabilitation Strategies

Strength and Proprioceptive exercises

Mouraux et. al (2019) studied the long-term effects of those with lower-limb CRPS, with a focus on functional and proprioceptive aspects and quality of life. These patients have significant strength and proprioceptive impairments of the leg. Rehabilitation therefore should focus on strength and proprioceptive exercises of both the affected and contralateral limbs, in order to reduce disability, pain, and improve quality of life.

Reactivation

Friedman (2015) asserted that debilitation by CRPS can be prevented in its earliest stages by utilizing aggressive rehabilitation based on reactivation, using a phased approach by moving non-responders quickly to more integrated levels of care.

Graded Motor Imagery and Mirror Therapy

Smart et. al (2016) concluded that Graded Motor Imagery and mirror therapy provided the most clinically meaningful improvements in pain and function in those with CRPS Type 1. They reported that multimodal physical

therapy, electrotherapy, and manual lymphatic drainage demonstrated unclear efficacy.

Vocational Rehabilitation and Occupational Therapy

Goebel et al. (2019) asserted that a patient's limb function, activity participation, and overall function (which includes the setting of home, work, or school) should be assessed early, and regularly. Patients with CRPS should have access to vocational rehabilitation.

Conclusion

There is no doubt that chronic pain is highly prevalent in the United States and one condition that is significantly costly when compared to the more common diagnoses of cancer, heart disease, and diabetes. Chronic pain is one of the most common reasons adults seek medical care and the condition itself has been linked to mobility restrictions, restrictions in activities of daily living, medication dependency (including opioids), anxiety and depression, poor perceived health and reduced quality of life. It is important in the life care planning process to address the role of pain in the evaluee's life. In doing so, it is important that the life care planner understands the latest evidence-based treatment strategies that are supported by high quality published studies and treatment guidelines. This article provides a review of multiple modalities to be considered in the development of a life care plan for an individual diagnosed with pain.

Author note: We have no conflict of interest to disclose. Virgil R. May III https://orcd.org/0000-0002-3018-2736. Correspondence concerning this article should be addressed to Steven Barna, MD, CLCP, Assistant Professor at University of South Florida College of Medicine, % Neurosurgical Partners, 3044 University Parkway, Sarasota, FL 34243. Email: barna@lcpmd.com

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