Abstract

Chronic pain and substance abuse are common problems. Each entity represents a significant and independent burden to the patients affected by them, the healthcare system caring for them, and society at large supporting them. If the two problems occur together, all of these burdens and their consequences are magnified. Traditional treatments fail a substantial percentage of even the most straightforward cases. Clearly, new approaches are required for the most complex of cases. Success is possible only if multiple disciplines provide integrated care that incorporates all of the principles of substance abuse and chronic pain rehabilitation treatment into one package. While experience provides the foundation for implementing these programs, research that documents the methods behind successful outcomes will be needed to sustain support for them.

Chronic pain and substance abuse are independently recognized as complex problems growing in both scope and severity. Each has its own unique difficulties that contribute to poor outcomes and partial response to treatment. Unfortunately, a substantial number of patients suffer from both of these devastating problems. These patients represent a highly stigmatized and uniquely underserved population that would easily benefit from clinical and research enterprises. Practical and longitudinal expertise is needed for the assessment, formulation and treatment of patients who suffer with chronic pain and substance dependence disorder. Identifying opportunities and directions for translational research are important elements in advancing our understanding of these problems and their critically important interrelationships.

In this volume, we have compiled papers related to the topic of chronic pain and addiction. The epidemic increase in the use of prescription opiates and the increasing use of opiates for the purpose of euphoria has led to great concern. There has been an epidemic increase in prescription opiate addiction as well as a dramatic upsurge in
opiate use by adolescents. The increased appreciation of the large number of patients who suffer from chronic pain that diminishes their function is one of the drivers of the increased use of opiates. Unfortunately, many of the medications that are effective at reducing pain are reinforcing and create the potential for addiction.

**Refractory Chronic Pain Does Not Equal Addiction**

Patients with a poor response to typical treatments for chronic pain are at increased risk of being labeled a ‘drug addict’ when they request more aggressive pain therapy. Whether they specifically ask for opioid analgesics or not, practitioners will often assume the worst. In patients with known substance use disorder, continuing complaints of pain are routinely regarded simply as drug-seeking behavior that is undermining or counterproductive for their ‘recovery’ plan. The usual approach to evaluating this complex set of problems devolves to determining whether the patient has a ‘real pain’ problem or is simply an ‘addict’. This dichotomy ends in unsophisticated diagnoses and cookie-cutter treatments.

In contrast, patients with unquestionable chronic pain can and do develop independent substance use disorders that emerge despite the most sincere efforts to seek understandable relief from their pain. Once again, the rush to judgment reflected in the evaluation phase of this problem can lead to the emphasis on only one dimension of the presentation (e.g. substance abuse or pain), which minimizes the other dimension (pain or substance abuse). An essential element in the successful treatment of these patients that present with features of both problems is tolerating the ambiguity that can dominate the initial evaluation and accepting that the question can be resolved with sufficient time in active treatment.

**Enhancing Treatment with Integrated Approaches**

The common interactions between chronic pain, opioids, and other medical and psychiatric problems including substance use disorders makes treatment-seeking, opioid-dependent patients a critically important subgroup of patients with a compelling need for enhanced evaluation and treatment services [1–3]. Regrettably, patients with chronic pain combined with substance use disorder (especially opioid dependence) remain a stigmatized, maligned and often neglected population [4–6]. Our inability to transmit the public health needs to the individual patient increases the risk for drug-seeking behavior, including self-medication with illicit drugs and the serious hazards associated with this practice.

While the benefits of substance abuse treatment are widely touted, there is little discussion about how routine substance abuse treatment can accommodate the needs of a patient with a comorbid chronic pain syndrome. In addition to patients’
inaccurate and underreported use of prescription medications and illicit drugs, the level of difficulty associated with the management of these patients is increased by the infrequent assessment typical of routine chronic pain and drug abuse treatment programs [7, 8]. These problems would be reduced if routine treatment were modified to: (1) incorporate detailed assessments that begin with an extensive history of both prior pain and drug use problems, (2) provide for testing of weekly urine specimens for opioids (prescribed and illicit) and other drugs, and (3) offer ongoing, appropriate positive reinforcements for reporting the use of opioids prescribed by other practitioners to account for the detection of these potentially illicit substances in the urine specimens.

Substance abuse treatment programs should expand their services to address any and all of the comorbidities posing barriers to successful drug rehabilitation. Given the high prevalence and negative impact of chronic pain, new pain management services should be integrated with the drug treatment program and adapted to the patients’ need for more intensive treatment. If applied to the problem of chronic pain, a model substance abuse treatment program of integrated stepped care would improve outcomes for patients with both of these devastating types of disorders.

Interdisciplinary Treatment Plans

Interestingly, the treatment of chronic pain in people with substance use disorders remains focused on how to use opioids. There is comparatively little discussion about whether other modalities of therapy might be more effective, safe and appropriate. The assumption that opioids are the first-line therapy for this population further stigmatizes these patients. This position implies that a comprehensive evaluation and treatment plan usually provided to patients without substance use disorders should only be implemented as a last resort in patients with both drug abuse and chronic pain. This recommendation simply accepts that patients with substance use disorder do not have access to high-quality medical care and reinforces the belief that they do not deserve it or that they would reject a priori any alternative to opioid-based treatments.

For example, in the care of this population, there is little discussion of nonopioid medications for the treatment of neuropathic pain problems, interventional approaches to reducing musculoskeletal pain, and active physical therapies to enhance efforts of rehabilitation. Multidisciplinary pain treatment programs have not been incorporated into substance abuse treatment programs, which are not staffed to provide pain evaluation and management. Multidisciplinary pain treatment programs usually seek to avoid patients with clear opioid dependence disorder. The ‘hot potato’ patients with both problems receive inadequate or no treatment, thereby reinforcing the prophecy that these are ‘ refractory’ cases to be weaned off.
As a rule, an active substance use disorder is a relative contraindication to chronic opioid therapy. However, opiate therapy can be used successfully if the clinical benefits are deemed to outweigh the risks. A strict treatment structure with therapeutic goals, landmarks to document progress, and contingency plans for noncompliance should be made explicit and agreed upon by the patient and all the providers of healthcare. The first step for the patient is to acknowledge that a problem with medication use exists. The first step for the clinician is to stop the patient’s behavior of misusing medications. Then, sustaining factors must be assessed and addressed. These interventions include treating other medical diseases and psychiatric disorders, managing personality vulnerabilities, meeting situational challenges and life stressors, and providing support and understanding. Finally, the habit of taking a medication inappropriately must be extinguished and replaced by more productive, goal-directed activities.

The patient should be engaged in an addiction treatment program that reinforces taking the medication as prescribed and examines the possible reasons for any inappropriate use. Relapse is common and patients with addiction require ongoing monitoring even after the prescription of opioids has ceased. Group therapy is the backbone of treatment for these patients and traditional outpatient drug treatment or 12-step programs can provide a supportive structure for recovery. Relapse prevention should rely on family members or sponsors to assist the patient in getting prompt attention before further deterioration occurs. If relapse is detected, the precipitating incident should be examined and strategies to avoid another relapse should be implemented. Although the misuse of medications is unacceptable, neither total abstinence nor complete compliance is always possible. Restoration of function should be the primary treatment goal and may improve with adequate, judicious and appropriate use of medications, even if setbacks occur [9].

A comprehensive formulation is necessary for the determination of why long-term opioid therapy is not working to control a patient’s pain and causing deterioration in function. Approaching patients by investigating the different perspectives of acquired diseases, inherent vulnerabilities, disruptive choices and unfulfilling encounters focuses the physician on treatable causes of disability instead of blaming the patients or their opioids for a lack of rehabilitative progress.

**Future Research**

There is a growing consensus that the prevalence of cooccurring chronic pain and substance use disorders is high and presents a significant burden to the healthcare system and society. Treatment approaches that target either one of these problems run the risk of ignoring the other and compromising the overall care and prognosis of these patients. Cartesian dualism in any form is an inadequate model for the assessment, formulation and treatment of patients. These patients cannot be clearly
understood from an ‘either/or’ perspective. Attributions of all of the patient’s symptoms to either chronic pain or substance use disorder often fail to appreciate the complex relationships between these problems and other relevant factors. In combination with limited access to integrated treatment programs and settings, the outcome for many of these patients remains grim. Future research is necessary to help guide progress. Studies that provide a more comprehensive evaluation of both problems and prospective characterization of chronic pain problems in opioid-dependent patients seeking outpatient methadone treatment would be most helpful. Just as important, interventions for chronic pain to improve the response to drug abuse treatment are needed.

These new efforts should expand existing expertise in the assessment of psychiatric comorbidity and integrated treatment delivery models to the domain of chronic pain, which is clearly an underdiagnosed and poorly treated medical and psychiatric problem in patients with substance use disorders. Increasing the utilization of non-opioid medications typically used to treat chronic neuropathic pain conditions, such as antidepressants and anticonvulsants, which are underutilized in general medical care and rarely prescribed to patients with substance use disorders, should become a priority [5]. Improving access to comprehensive pain treatment programs would offer more hope to patients with chronic pain and substance abuse than continuing to advocate the use of unimodal therapies like long-term opioid agonists [10, 11].

Implementing and evaluating the principles of rehabilitation utilized by multidisciplinary pain centers and selected substance abuse treatment programs would deepen our understanding of the associations between chronic pain and response to highly structured adaptive drug abuse treatment settings. These data would improve outcomes and provide a strengthened empirical foundation for the design and implementation of clinical trials to reduce the suffering and impairment associated with chronic pain in people with chronic and severe opioid dependence disorder. The results would likely generalize to other populations of patients with chronic pain to improve our understanding of the risks of treatment with opioids and, hopefully, prevent the development of opioid dependence disorders in at least some of these high-risk individuals.

Conclusions

The topic of chronic pain and addiction is divisive, with proponents of aggressive opiate use arguing that addiction in patients with chronic pain syndromes is relatively rare, while those who push for more conservative use argue that opiates cause disorder in many patients and are relatively ineffective against chronic pain over time. There is some discord among the authors in this volume, in part driven by the focus of their work, but several points of agreement come through. From the consensus here, several points of agreement emerge.
First, the simplistic concept of addiction as physical dependence and that addiction is mostly a matter of withdrawal is inadequate. A clearer definition of what addiction is comprised of and a better understanding of the factors that lead to disordering use of pain medications is crucial. The behavioral perspective as well as a basic physiological understanding of addition is critical for developing better models.

Second, chronic pain is physiologically diverse and complicated. The extreme capacity for adaptation of pain systems including integration, regulation and crosstalk at nearly every level of the nervous system argues for the importance of nociceptive senses for survival and function. The development of better models for understanding and preventing chronic pain is crucial for understanding treatment alternatives for patients suffering from chronic pain. Chronic pain syndromes caused by nerve dysfunction such as neuropathy overlap with those caused by denervation, central upregulation syndromes and sympathetic pain syndromes. Clearer models are needed to help determine effective treatment alternatives.

Third, the development of more selective pain therapies is of utmost importance. Diverse circuitry and neurotransmitter systems are involved in chronic pain, and the work on ketamine, cannabinoids, selective opiates and other novel targets such as N-methyl-d-aspartic acid receptors is very exciting. How these alternatives will impact potential addictive behavior is a key area of investigation.

Fourth, better tools for clinicians to predict and prevent the development of addictive and disordering drug use are needed. The development of addictive and disordering behaviors does not mitigate the ongoing pain that patients experience. Effective ways to treat chronic pain in patients with addictions, and to improve function and restore quality of life for patients requires an interdisciplinary understanding and treatment. The contributions of medical pathology, physical limitations, depression, personality, family dynamics, patients’ self-concept, and social and cultural factors must be assessed and included when trying to treat comorbid pain and addiction.

Lastly, the high prevalence of chronic pain syndromes has been explored in patients seeking treatment for drug abuse only recently. The presence of chronic pain increases the risk of poor response to substance abuse treatment along with an increased likelihood of multiple comorbidities that further add to the negative impact experienced by patients with substance dependence disorders. Substance abuse treatment programs that offer integrated medical and psychiatric care for these comorbidities would improve outcomes. Stepped-care treatment approaches offer the best substance abuse treatment by tailoring the level of care to the needs of the individual patient.

In summary, this volume was developed to review the fundamental issues that underlie this complex and contentious area. We wish to thank the authors for their contributions, hard work, patience and collegiality. We feel privileged that our friends and colleagues were willing to contribute their work to our efforts. We sincerely hope the readers of this volume will find it valuable for their understanding of these patients and for their own work on helping their patients back to functional and healthy lives.
References


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