Journal of Behavioral Health
www.scopemed.org
DOI: 10.5455/jbh.20170123102818

Case Report

Psychiatric aspects of pain disorder and its management

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Received: November 09, 2016
Accepted: January 15, 2017
Published: Feb 05, 2017

ABSTRACT

Pain is one of the most difficult medical problems to diagnose and treat. It can be a common symptom of several psychiatric disorders. Pain-related issues are heterogeneous and often underestimated or misinterpreted, with the result that psychiatric interventions, which might have been beneficial from the outset, are often delayed or requested only as a last measure. There are several common psychiatric disorders accompanying and complicating the experience of pain that warrant clinical attention and that can be the focus of psychiatric treatment. These include depression, anxiety, sleep disorders, somatoform disorders, substance-related disorders, and personality disorders. Complex and disabling pain conditions often require comprehensive pain treatment programs, involving interdisciplinary and multimodal treatment approaches. The pharmacological treatment of pain is complex and implies a variety of different compounds, from opioids to psychotropic medications like antidepressants and anticonvulsants. This case report explores the mutual and reciprocal influence of psychotropic. There are many roles that the psychiatrist can perform in the assessment and treatment of the patients with pain.

KEY WORDS: Nonpharmacologic approach, pain disorder, psychiatric comorbidity, psychotropic

INTRODUCTION

Pain is a complex experience which includes affective, cognitive and behavioral features, all of which are the result of mental processes and, as such, it represents a psychological condition [1]. In a recent survey, tricyclic antidepressants (TCAs) were used by nonpsychiatric physicians 30% of the time for pain compared with 56% for treating depressions. Chronic pain is a psychosomatic disorder with physical, mental, social, and spiritual components as well as one of the best examples of the interconnectedness of body and mind. In clinical medicine divided into physiological, psychological, and social. The phenomenon of pain, therefore, involves pathophysiological and psychological components that are frequently difficult to interpret. The most comprehensive and exhaustive definition of pain is the one provided by the international association for the study of pain, namely "an unpleasant sensation and an emotional experience associated with a real or potential damage to tissue, or the equivalent of such damage" [2]. When patients suffer from chronic pain-defined as daily pain which has persisted beyond a month or beyond what would normally be considered the appropriate time for recovery from the underlying pathology in question - various specialists are involved in their treatment, but they rarely include a psychiatrist [1]. Pathophysiology of acute pain is fairly clear, but chronic pain is still a great enigma and includes a number of neurotransmitters (gamma-aminobutyric acid, glutamate, noradrenaline, serotonin, neurokinin 1, nitric oxide, substance P, glycine, opioids, etc.).

Chronic lower back pain is one of the common pain disorders. Chronic lower back pain arises from nociceptive and neuropathic mechanisms; therefore it is classified as a mixed pain syndrome. Nociceptive pain arises because of tissue damage or tissue-damaging stimuli, which leads to an inflammatory response. Neuropathic pain, on the other hand, is defined as "pain arising as a direct consequence of a lesion or disease affecting the somatosensory system." Neuropathic pain quality can be paroxysmal (e.g., shooting, stabbing or electrical shock like pain), dysaesthetic (e.g., numbness) or associated with abnormal thermal sensations (e.g., burning or extreme cold). It may occur spontaneously or in response to nonpainful stimuli such as light touch, and moderate heat or cold (allodynia), and or as an exaggerated response to painful stimuli (hyperalgesia) [3].

In clinical practice, there is a significant interconnection of pain and psychiatric disorders, and pain is a possible symptom in almost all psychiatric disorders. A large number of patients with chronic pain have some of the associated psychiatric diagnosis. A significant number of patients with chronic pain also develop a chronic pain syndrome, which is manifested in intense pain, pronounced changes in behavior, decreased activity, sleep disorder, anxiety, depression, suicidal ideas, social withdrawal, irritability, fatigue, cognitive difficulties, impaired sexual activities, hopelessness, helplessness, and avoiding behavior. Pain has an important role in the complex of symptoms known as depression. Depression is much more common in patients with chronic pain than in the general population [4]. On the other hand, among the vegetative and

somatic symptoms of depression, the pain is in second place, and immediately after the insomnia. However, many patients with chronic pain often have episodes of depression for years, before the pain. There is the assumption that the depression in patients with chronic pain is a manifestation of personality, which is the result of early developmental conflicts, guilt, anger, and masochism. From this perspective, chronic pain is a symptom of depression (von Knorring *et al*. 1983). Of the 56 million American adults who report living with chronic pain almost 60% also exhibit psychiatric disorders such as depression or anxiety [5,6].

The use of psychotropic drugs in the management of chronic pain is extensive also integrate a multimodal, non-pharmacologic approach whenever possible.

Nonpharmacologic Approach

Multidisciplinary treatment of patients with chronic pain is unimaginable without a psychiatrist because that would mean ignoring one dimension of the chronic pain. Liaison psychiatrists have to help other members of the team in understanding the psychological dimensions of pain in each patient and to educate other health professionals about specific therapeutic interventions that they may implement later on their own. In the assessment of patients, it is extremely important to conduct good psychiatric interviews during one or more meetings. Psychodynamic approach to patients with chronic pain emphasizes the importance of individual differences in patients on the basis of their development, intra psychological conflicts, interpersonal differences, and inability to adapt to chronic illness. Cognitive behavioral therapy (CBT) in treating patients with chronic pain either individually or in groups. There are defined protocols for patients with certain types of chronic pain, or to solve a particular problem. There is an increased use of cognitive, behavioral, and cognitive behavioral techniques. Psychoeducation is an extremely important part of treating patients with chronic pain. Biofeedback, relaxation techniques, and medical hypnosis are very common components in the treatment of patients with chronic pain.

In patients with chronic pain, collaboration psychiatrist will apply psychopharmacological treatment. Common pharmacologic therapies used to treat chronic pain include TCAs, serotonin-norepinephrine reuptake inhibitors (SNRIs), antiepileptic drugs (AEDs), nonsteroidal anti-inflammatory drugs and, to a lesser extent, and atypical antipsychotics.

TCAs

Although this class acts primarily by increasing serotonin levels, norepinephrine, and dopamine also are affected depending on the particular medication. Studies have shown that amitriptyline, nortriptyline, and desipramine function well as analgesics independent of their antidepressant effects. TCAs may improve the pain symptoms at lower therapeutic dosages than those used for treating depression [7].

SNRIs

Evidence supports using duloxetine [8], a potent SNRI that mediates pain inhibition in the descending pathways, for four chronic pain conditions: Diabetic peripheral neuropathic pain, fibromyalgia, mechanical low back pain, and pain associated with osteoarthritis. Titrate the dosage to 60 mg/day and maintain the patient at this dose for at least 4 weeks. Thereafter, according to patient response, the dosage may be titrated to 120 mg/day with appropriate vital sign monitoring and routine lab analysis. Venlafaxine also can mediate pain response in a similar manner to duloxetine but is not Food and Drug Administration (FDA)-approved for treating pain.

AEDs

Several AEDs are used for pain management. Gabapentin and pregabalin [9] work by binding to voltage-gated calcium channels and decreasing excitatory neurotransmitter release. Along with TCAs, they are considered a first-line treatment for managing neuropathic pain [10]. Gabapentin is FDA-approved for seizures and postherpetic neuralgia, but evidence supports its use in most types of neuropathic pain. Pregabalin is FDA-approved for treating seizures, diabetic peripheral neuropathy, central neuropathic pain, postherpetic neuralgia, and fibromyalgia.

Atypical Antipsychotics

Although atypical antipsychotics are not often used to treat pain, studies indicate that fibromyalgia patients may benefit from ziprasidone [11] to olanzapine [12], most often as an adjunctive treatment rather than monotherapy.

CASE REPORT

A 45-year-old, good body built, an accountant, socially active male patient with no prior history of psychiatric illness. The patient was referred by orthopedic surgeon for psychiatric evaluation. He is having a history of lower back pain since the age of 40 years. As he is an accountant, so he has to spend more time to work on the computer, gradually he started complaining lower back pain for which he used to take pain killer to relieve his pain without a prescription. When his back pain was not controlled with pain killer he decided to visit an orthopedic surgeon, where magnetic resonance imaging (MRI) of lumbar region was done, it showed no significant changes. Figure 1 depicted normal lumbar MRI scan and other routine laboratory findings, including a complete blood cell count, serum electrolyte, and liver, and renal function test were all within normal range. An orthopedic surgeon gave him an analgesic, muscle relaxant, and taught him some exercises to relieve his back pain. But on follow-up he did not improve, so he was referred to psychiatric emergency department for evaluation.

On psychiatric examination, he had depressive and anxiety symptoms along with back pain. He belongs to a lower middle cast family with low socioeconomic status. After death of his

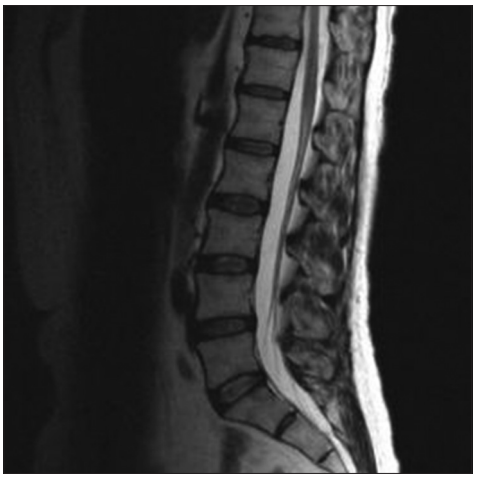

Figure 1: Normal lumbar magnetic resonance imaging scan

father, he was the only earning member of his family and was stressed due to new responsibility of his family, which unable him to concentrate on his work. He is feeling sad and is always preoccupied in with his back pain. He was given antidepressant serotonin-norepinephrine reuptake inhibitor such as duloxetine 60 mg once daily and later it was increased 60 mg twice per day, and antiepileptic gabapentin 400 mg twice per day. We have referred him to our clinical psychologist for his behavioral therapy such as CBT and relaxation techniques. He was advised to follow-up psychiatric outpatient department, on follow-up after 1 month; there was some improvement in his psychiatric symptoms and relief of his back pain.

DISCUSSION

This case report has a number of interesting findings that warrant further exploration and discussion. First, the patient's depression symptoms were timely and closely related to physical symptoms such as pain from the back. Second, the combination of SNRIs antidepressants duloxetine and antiepileptic gabapentin lifted the patient's depression and physical symptoms. There was also evidence that chronic pain was associated with mental disorders although the nature of the relation, especially in terms of cause and effect, was often unclear. Chronic pain patients may be more amenable to "supportive" psychotherapies, which encourage patients to use their previous coping strategies and defenses against feelings of inadequacy and vulnerability and that enable patients to re-establish a stable sense of self-esteem and to recognize and tolerate conflicts around dependency, and aggression. Most of the cognitive and behavioral approaches to treatment may be facilitated in the context of a supportive psychotherapy. These techniques may be particularly helpful in breaking the cycle and relieving the symptoms. Psychoeducation is an extremely important part of treating patients with chronic pain. Biofeedback, relaxation techniques, and medical hypnosis are very common components in the treatment of patients with chronic pain. In this report, we discussed psychotropic drugs for treating pain. The use of psychotropic drugs in the management of chronic pain is widespread. It also incorporates a multimodal, nonpharmacologic approach whenever possible.

CONCLUSION

Psychotropic medications have had significant roles in the management of a variety of symptoms in patients living with chronic medical and psychiatric illness; these are associated with chronic pain disorder. In the treatment of patients with chronic pain psychological or psychiatric aspects have an important place in all phases of treatment, with an important role in research and education. The psychological aspects of pain are evident; nevertheless, these are rarely assessed or managed as they should be. Pain and its subjective experience play a central role in psychiatric disorders, and it is a great burden for patients and caregivers. Clinicians should pay more attention to recognize and adequately treat painful symptoms in patients with anxiety and depressive disorder [13].

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Source of Support: Nil, Conflict of Interest: None declared.