

# Management of chronic pain nursing essay



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This project is a complete illustration of pain and how treated by understanding how its work, references can be visited for more detailed information or contact me.

Chronic pain is defined as a painful condition that lasts longer than 3 months. Chronic pain can also be defined as pain that persists beyond the reasonable time for an injury to heal or a month beyond the usual course of an acute disease. There are four basic types of chronic pain: (1) pain persisting beyond the normal healing time for a disease or injury, (2) pain related to a chronic degenerative disease or persistent neurologic condition, (3) cancer-related pain, (4) pain that emerges or persists without an identifiable cause. Chronic pain differs from acute pain in its function. Acute pain is an essential biologic signal to warn the individual to stop a potentially injurious activity or to prompt one to seek medical care. Chronic pain serves no obvious biologic function. Chronic pain patients presenting to the emergency department (ED) have not been well studied, despite their apparent numbers.

Complete eradication of pain is not a reasonable end point in most cases. Rather, the goal of therapy is pain reduction and return to functional status. Chronic pain syndromes discussed in this paper include myofascial headaches, “transformed” migraine headaches, fibromyalgia, myofascial chest pain, back pain, complex regional pain types I and II, post-therapeutic neuralgia, and phantom limb pain. Drug-seeking patients are also covered.

## **EPIDEMIOLOGY**

Chronic pain affects about a third of the population at least once during a patient's lifetime, at a cost of 80 to 90 billion dollars in health care payments and lawsuit settlements annually. Chronic pain is also common in those who do not seek medical attention. Despite similar subjective pain, those who seek medical attention are less physically active, experience more social alienation and more psychological distress than those who do not seek medical attention.

The causes of chronic pain are more complex than the causes of acute pain. Chronic pain may be caused by (1) a chronic pathologic process in the musculoskeletal or vascular system, (2) a chronic pathologic process in one of the organ systems, (3) a prolonged dysfunction in the peripheral or central nervous system, or (4) a psychological or environmental disorder. In contrast, acute pain may be influenced by, but is not primarily caused by, a psychological or continuous environmental disorder. A detailed listing of all the epidemiologic factors of the various chronic pain syndromes is beyond the scope of this paper. However, in general, patients who attribute their pain to a specific traumatic event experience more emotional distress, more life interference, and more severe pain than those with other causes.

## **PATHOPHYSIOLOGY**

The pathophysiology of chronic pain can be divided into three basic types. Nociceptive pain is associated with ongoing tissue damage. Neuropathic pain is associated with nervous system dysfunction in the absence of ongoing tissue damage. Finally, psychogenic pain has no identifiable cause. 3 Many chronic pain states begin with an episode of nociceptive pain and then

continue with neuropathic or psychogenic pain. For example, an acute injury with fracture involves nociceptive pain, but an associated nerve injury may lead to neuropathic pain. Chronic disability may lead to psychogenic pain. Nociceptive pain results from the stimulation of nociceptive receptors in tissues or organs by noxious mechanical, thermal, or chemical stimuli. Chemical mediators of inflammation such as bradykinins and prostaglandins are essential elements in the pathophysiology of nociceptive pain. Examples of chronic nociceptive pain include cancer pain and pain due to chronic pancreatitis. Patients with nociceptive pain usually respond well to centrally acting analgesics. Neuropathic pain is caused by disease of the central or peripheral nervous system. Examples of neuropathic pain include complex regional pain type II (causalgia), post-therapeutic neuralgia, and phantom limb pain. Neuropathic pain responds poorly to common analgesics, including narcotics. Psychogenic pain is a diagnosis of exclusion and can be difficult to establish in the ED. Patients with psychogenic pain believe their pain is physical and tend to strongly reject the concept that it is psychological.

## **CLINICAL FEATURES**

To better define the psychology of chronic pain, psychiatrists have divided patients' characteristics into two groups. 4 The first group has normal psychological function at baseline. However, continued pain and its effects, such as inability to work or altered body image, result in psychological dysfunction. The second group has primary psychopathology that predates the onset of chronic pain. Hypochondriacally, hysterical, pain-prone, and depressive personalities are included in this group.

The following set of historical inquiries may prove helpful in the ED. The patients should be asked to describe the nature of the current pain, initiating and exacerbating or relieving factors. Other useful information includes determination of the chronic nature of their pain, quantification of similar episodes, and sources and modes of treatment, including medications and dosages for physician-prescribed, over-the-counter, or alternative medications. Outcomes of previous therapeutic efforts and the effect of the condition on the patient's functional status are also important. Addiction to drugs or alcohol or experience with detoxification programs should also be noted. Finally, a review of systems should be done to rule out any other conditions.

Substance abuse is a frequent problem in chronic pain patients. Patients referred to chronic pain clinics meet Diagnostic and Statistical Manual of Mental Disorders, third revised edition (DSM III-R) criteria for active substance abuse disorders in 12 to 24 percent of cases, while 9 percent meet criteria for remission diagnosis. Drug detoxification is often the first step of the therapeutic plan for new patients referred to a pain clinic.

Objective findings of acute pain include tachycardia, hypertension, diaphoresis, and muscle spasms on stimulation. Objective evidence of chronic pain includes muscle atrophy in the distribution of pain due to disuse, skin temperature changes due to the effects of the sympathetic nervous system after disuse or secondary to nerve injury, and trigger points, which are focal points of muscle tenderness and tension. However, these findings do not have to be present for the pain to be factual.

## **BACK PAIN**

Risk factors for chronic back pain following an acute episode include male gender, advanced age, evidence of nonorganic disease, leg pain, prolonged initial episode, and significant disability at onset. Chronic back pain symptoms and causes can be divided into myofascial or muscular, articular, and neurogenic types. Myofascial back pain is characterized by constant dull and occasional shooting pain that does not follow a classic nerve distribution. Pain may or may not be exacerbated by movement. Usually trigger points can be found at the site of greatest pain, and muscle atrophy is not found. Range of motion of the involved muscle is reduced, but there is no actual muscle weakness. Previous recommendations for bed rest in the treatment of back pain have proven counterproductive. Exercise programs have been found to be helpful in chronic low back pain. Articular back pain is characterized by constant or sharp pain that is exacerbated by movement and associated with local muscle spasm. Myofascial and articular back pain may be indistinguishable from each other except by advanced imaging techniques beyond the usual scope of practice in the ED. Neurogenic back pain is classically characterized by constant or intermittent pain that is burning, shooting, or aching. The pain is usually more severe in the leg than in the back and follows a dermatome. Muscle atrophy as well as reflex changes can be seen over time.

## **DIAGNOSIS**

The most important task of the emergency physician is to distinguish chronic pain from an exacerbation that heralds a life- or limb-threatening condition. A complete history and physical examination should either confirm the

chronic condition or point to the need for further evaluation when unexpected signs or symptoms are elicited. An electrocardiogram (ECG) may be needed in some cases of chronic myofascial chest pain to help differentiate it from acute ischemic chest pain. Because chronic pain patients may be frequent visitors to the ED, the entire staff may prejudge their complaint as chronic or factitious. Physicians should insist that routine procedures be followed, including a full triage assessment and a complete set of vital signs.

Rarely is a provisional diagnosis of a chronic pain condition made for the first time in the ED. The exception is a form of post-nerve-injury pain, complex regional pain. The sharp pain from acute injuries, including fractures, rarely continues beyond 2 weeks' duration. Pain in an injured body part beyond this period should alert the clinician to the possibility of nerve injury, and proper treatment, discussed below, should be instituted.

Definitive diagnostic testing of chronic pain conditions is difficult, requires expert opinion, and often expensive procedures such as magnetic resonance imaging (MRI), computed tomography (CT), and thermography. Therefore, referral back to the primary source of care and eventual specialist referral are warranted to confirm the diagnosis.

## **TREATMENT**

Emergency physicians must avoid labeling patients with pain as either drug seekers or legitimate patients deserving narcotics for pain relief. With these labels, emergency physicians may exacerbate the problem and promote the learned pain response, where patients believe that they must come to the

ED for pain relief. Chronic pain patients often request narcotics, although the lure of going to the ED can be just as strong without receiving narcotics. Any drug that alters sensorium can exacerbate the learned pain response. The external rewards of visiting the ED for medication or evaluation are many: attention and comforting from family and nursing staff, status as a special patient who must go the ED for pain control, avoiding responsibilities at work and at home, potential money if litigation is involved, and potential income if a disability claim is pending.

Treatment with opiates frequently contributes to the psychopathologic aspects of the disease. Chronic pain and disability lead to distress and increased stress in the life of the patient. The potentiated psychological stress heightens physiologic arousal, which increases pain sensations. Elevated pain sensations exacerbate the patient's disability. Opiate use only temporarily relieves the pain sensations, but the side effects frequently increase the disability associated with chronic pain, therefore exacerbating the psychological stress and the syndrome. Furthermore, a new problem is created as the patient becomes preoccupied with seeking pain relief from opiates. Another essential consideration is that many types of chronic pain are poorly controlled by opiates, and yet the side effects remain. It is interesting to note that the presence of objective evidence of pain does little to influence a physician's administration of narcotics. Physicians' opiate-prescribing habits are most commonly prompted by observed pain behaviors, such as facial grimacing, audible expressions of distress, or patients' avoidance of activity regardless of the physical findings.



With the exception of cancer-related pain, the use of opioids in the treatment of chronic pain is controversial. Many pain specialists feel that they should not be used. There are two essential points that affect the use of opioids in the ED on which there is agreement: (1) opioids should only be used in chronic pain if they enhance function at home and at work, and (2) a single practitioner should be the sole prescriber of narcotics or should be aware of their administration by others. Finally, a previous narcotic addiction is a relative contraindication to the use of opioids in chronic pain. In contrast to the concerns listed above, narcotics are both recommended and effective treatment for cancer pain. Long-acting narcotics such as methadone or transdermal fentanyl may be more effective than the short-acting agents.

. The medications listed under “ Primary ED Treatment” are familiar to emergency physicians. While NSAIDs are most helpful in conditions where there is ongoing tissue injury, such as chronic inflammatory arthritis or cancer-related nerve or bone damage, they are also helpful in many cases of chronic pain where no evidence of tissue damage or inflammation is evident. Non-steroidal anti-inflammatory drugs have been shown to be more helpful in acute than in chronic pain. However, the need for long-standing treatment of chronic pain conditions may limit the safety of the NSAIDs. Standard dosing procedures may be followed except in the elderly:

Antidepressants and, most commonly, the tricyclic antidepressant drugs, are the most frequently used drugs for the management of chronic pain. Often, effective pain control can be achieved at doses lower than typically required for relief of depression. Tricyclic antidepressants appears to enhance endogenous pain inhibitory mechanisms. When antidepressants are

prescribed in the ED, a follow-up plan should be in place. Discussion with a pain specialist is often beneficial. The most common drug and dose is amitriptyline 10 to 25 mg, 2 h prior to bedtime.

Anticonvulsants are used for several pain disorders, especially neuropathic pain. Anticonvulsants prevent bursts of action potentials, which may prevent the severe lancinating pain of certain neuropathic syndromes.

Carbamazepine (start 100 to 200 mg/d), valproic acid (start 15 mg/kg/d divided), and clonazepam (start 0.5 mg/d) are the most frequently used.

Muscle relaxants, such as cyclobenzaprine 10 mg every 8 h, have been useful for chronic pain patients. Their sedating effects may limit their success.

Tramadol is an atypical centrally active analgesic. It has less respiratory depression, less tolerance, and less abuse potential than do opiates.

Tramadol has been used with success in patients with fibromyalgia, migraine headaches, low back pain, and neuropathic pain. The dose of tramadol is 50 to 100 mg every 4 to 6 h by mouth.

## **Chronic Pain in the Elderly**

Elderly patients frequently complain of chronic pain. Unfortunately, many of the commonly used medications for pain have higher complication rates in the elderly. In particular, the non-steroidal anti-inflammatory drugs (NSAIDs) are associated with higher rates of gastrointestinal bleeding and renal disease in the elderly. Opioids also may cause debilitating sedation and/or constipation in the elderly; however, opioids may have less debilitating side effects than NSAIDs. Doses of many agents should be reduced when treating

the elderly, to avoid side effects, and it is essential that a follow-up plan be in place at the time of discharge. There is a perception that the elderly are under medicated for pain control. While this may be true, the elderly do not seem to be under medicated more than other age groups.

## **Conclusion**

In the end you can notice that pain can affect any one at any age, and its management is not easy as anyone think, especially in chronic moderate to severe pain. The variety of drugs that synthesized for this purpose are too much now, but no class of these drugs can cure the different causes of pain, and scientists now a days improving the activity of these drugs. In fact the now by the end of 2009 working on new formulation that is said to cure pain caused by inflammation. Thus aspirin will only be used for its anticoagulant and antipyretic activities, but not for anti-inflammatory action, this will reduce the toxicity cases caused by the aspirin over doses if it is used as anti-inflammatory or pain relief agent.

Most important is that people with pain must ask doctor to find the cause of pain, so he/she can give the right medication and cure any type of inflammation or cancer if there is any early before the exacerbating of the current case, then it will be too late to try to cure the advanced disease and death may occur in most of the cases, so be careful any small pain can be the start for any kind of disease starting from stress ending with fatal cancer.