Psychiatric Aspects of Pain and HIV Disease

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According to several preliminary clinical reviews, over 50 percent of patients hospitalized with HIV disease require treatment for pain, and in one New York City hospital, pain was second only to fever as the most frequent presenting complaint for people with AIDS. But health care professionals have sometimes neglected pain management among patients with HIV disease, focusing instead on treating opportunistic infections, cancers, and conditions such as AIDS dementia complex. As HIV-related treatments improve and more effectively handle these conditions, both patients and clinicians have an opportunity to address pain management issues and face the challenge of doing so over extended periods of illness.

The International Association for the Study of Pain defines pain as: "An unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage.” Pain is not simply a sensory event involving the pain pathways of the nervous system; it is also a psychological event involving the activation of sensory pain pathways, followed by pain perception, and the expression of pain through pain-related behaviors, such as guarding (muscular tension in anticipation of external force), inactivity, complaining, and dependency.

The current conception of pain is multidimensional, emphasizing the contribution of cognitive, motivational, behavioral, and affective factors as well as sensory phenomena. Psychological variables—such as the amount of control people believe they have over pain; emotional associations and memories of pain; fears of death; depressed mood; and hopelessness—all contribute to the pain experienced by people with HIV disease and increase their suffering. In addition, the cultural context of pain affects the perception of that pain; for example, although both are painful situations, a woman may perceive the pain of childbirth differently from the pain of HIV disease because of the positive connotations associated with one and the negative connotations associated with the other. It is in these areas that psychological interventions can have their greatest impact.

Pain Control and Psychological Distress

The patient with HIV disease faces many stressors during the course of illness including dependency, disability, and fear of pain and painful death. Such concerns are universal; the level of psychological distress, however, is variable and depends on social support, individual coping capacities, personality, and medical factors, such as extent or stage of illness. It is important to remember both that pain has a profound impact on levels of emotional distress and that psychological factors, such as anxiety and depression, intensify pain.

Several studies have shown that cancer patients who believe their pain represents a worsening of their cancer are more likely to report that the pain interferes with their activity and pleasure, while those who attribute pain to an unrelated, benign cause are less affected by their pain. Other studies have found increased frequency of anxiety, depression, and confusion in patients with pain, particularly in the vulnerable late stages of an illness. Uncontrolled pain has also been implicated as a major factor in suicide among cancer and HIV-infected patients.

The effective treatment of pain often decreases psychiatric morbidity and occasionally eliminates a perceived psychiatric disorder. Conversely, interventions that diminish anxiety and mood disturbances also can reduce pain. When treating uncontrolled pain, clinicians should consider that psychological distress may be the consequence of the pain itself and not of other factors, such as an adjustment reaction to life-threatening illness, since personality factors may also be distorted by the presence of pain.

Psychiatric Management of Pain in AIDS

The optimal treatment of pain in people with HIV disease requires pharmacologic, psychic, anesthetic, stimulatory—such as the use of an electrical charge to "distract" the nervous system from pain—and rehabilitative approaches; often these interventions are used in combination. In particular, the psychiatric management of HIV-related pain involves the use of psychotherapeutic, cognitive-behavioral, and psychopharmacologic techniques. Psychotherapists can offer short-term, supportive psychotherapy, based on a crisis-intervention model, and provide emotional support, continuity of care, information about pain management, and assistance to patients in adapting to their crises. This often involves working with “families” that are not typical and that may consist of gay lovers, estranged spouses or parents, and fragmented or extended families. People with HIV disease may also require treatment for substance abuse.

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Cognitive-behavioral techniques for pain control—such as relaxation, imagery, hypnosis, and biofeedback—are effective as part of a comprehensive multimodal approach, particularly among patients with HIV disease who may have an increased sensitivity to the side-effects of medications. Non-pharmacologic interventions, however, must never be used as a substitute for appropriate analgesic management of pain. The mechanisms by which these non-pharmacologic techniques work are not known; however, they all seem to share the elements of relaxation and distraction. Additionally, patients often feel a sense of increased control over their pain and their bodies. Ideal candidates for the application of these techniques are mentally alert and have mild to moderate pain. Confusion interferes significantly with a patient’s ability to focus attention and so limits the usefulness of cognitive-behavioral interventions.

Psychiatric disorders, in particular organic mental disorders such as AIDS dementia complex, can occasionally interfere with adequate pain management in patients with HIV disease. Opiate analgesics, the mainstay of treatment for moderate to severe pain, may worsen dementia or cause treatment-limiting sedation, confusion, or hallucinations in patients with neurologic complications of AIDS. The judicious use of psychostimulants to diminish sedation, and neuroleptics to clear confusion can be quite helpful.
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Psychotropic drugs, particularly the tricyclic antidepressants and the psychostimulants, are useful in enhancing the pain-blocking properties of analgesics in pharmacologic management of HIV-related pain. The tricyclic antidepressants—amitriptyline, nortriptyline, imipramine, desipramine, doxepin—and some of the newer noncyclic antidepressants—trazodone and fluoxetine—have potent analgesic properties and are widely used to treat a variety of chronic pain syndromes. They may have their most beneficial effect in the treatment of neuropathic pain, that is, pain due to nerve damage, such as the peripheral neuropathies seen commonly in people with HIV infection. Antidepressants have direct analgesic effects and the capacity to enhance the analgesic effects of morphine. Psychostimulants such as dextroamphetamine or methylphenidate are useful antidepressants in people with HIV disease who are cognitively impaired, and are also helpful in diminishing sedation secondary to narcotic analgesics. Psychostimulants also enhance the analgesic effects of opiate analgesics. Inadequate management of pain is often due to the inability to properly assess pain in all its dimensions. All too frequently, physicians presume that psychological variables are the cause of continued pain or lack of response to medical treatment, when in fact they have not adequately appreciated the role of medical factors. Other causes of inadequate pain management include: lack of knowledge of current pharmaco- or psycho-therapeutic approaches; a focus on prolonging life rather than alleviating suffering; lack of communication or unsuccessful communication between doctors and patients; limited expectations of patients to achieve pain relief; limited capacity of patients, impaired by organic mental disorders, to communicate; unavailability of narcotics; doctors’ fear of causing respiratory depression; and, most importantly, doctors’ fear of amplifying addiction and drug abuse.

Concerns about Narcotic Abuse among Patients

Fears of addiction and concerns regarding drug abuse affect both patient compliance and physician management of narcotic analgesics and often lead to the undermedication of HIV-infected patients with pain. Studies of patterns of chronic narcotic analgesic use in patients with cancer, however, have demonstrated that although tolerance and physical dependence commonly occur, addiction, that is, psychological dependence, and drug abuse are rare and almost never occur in individuals who do not have histories of drug abuse.

Instead, among cancer patients, escalation of narcotic analgesic use is usually due to the progression of cancer or the development of tolerance. Tolerance, the need for larger doses of a narcotic to maintain an analgesic effect, usually occurs in association with physical dependence, as indicated by the onset of signs and symptoms of withdrawal when narcotic use is suddenly stopped. Physical tolerance, however, does not imply psychological dependence. Psychological dependence or addiction, is not equivalent to physical dependence or tolerance, and is a behavioral pattern of compulsive drug use characterized by a craving for the drug and overwhelming involvement in obtaining and using it for effects other than pain relief.

The patient with a history of intravenous (I.V.) opiate use often presents an unnecessarily difficult pain management problem. The Pain Service at Memorial Hospital in New York reported on their experience in managing cancer pain in such a population. Of 468 inpatient cancer pain consultations, only eight (1.7 percent) had a history of I.V. drug use, but none had been actively using drugs in the previous year. All eight of these patients had inadequate pain control and more than half were intentionally undermedicated because of concern by staff that drug abuse was active or would occur. Adequate pain control was ultimately achieved in these patients by educating staff to use appropriate analgesic dosages.

More problematic, however, is managing pain in the growing segment of HIV-infected people who are actively using I.V. drugs. Such use, specifically of I.V. opiates, raises several pain treatment questions including: how to treat pain in people who have a high tolerance to narcotic analgesics; how to mitigate this population’s drug-seeking and potentially manipulative behavior; how to deal with patients who may offer unreliable medical histories or who may not comply with treatment recommendations; and how to counter the risk of patients spreading HIV while high and disinhibited. In addition, clinicians must rely on a patient’s subjective report, which is often the best or only indication of the presence and intensity of pain, as well as the degree of pain relief achieved by an intervention. Physicians who believe they are being manipulated by drug-seeking patients often hesitate to use appropriately high doses of narcotic analgesics to control pain.

Most clinicians experienced in working with this population of patients recommend that practitioners set clear and direct limits. While this is an important aspect of the care of I.V. drug users, it is by no means the whole answer. As much as possible, clinicians should attempt to eliminate the issue of drug abuse as an obstacle to pain management by dealing directly with the problems of opiate withdrawal and drug treatment. Clinicians should err on the side of believing patients when they complain of pain, and should utilize knowledge of specific HIV-related pain syndromes to corroborate the report of a patient perceived as being unreliable.

Conclusion

The increasing ability of science to alleviate pain and suffering, using both psychological and medical techniques, offers health professionals one of their greatest opportunities to be truly helpful in the face of life-threatening, and often fatal, illness. As with pain management among cancer patients, treatment of HIV-related pain requires a multidisciplinary approach that recognizes the importance of the psychological and psychiatric aspects of the pain experience, and includes patients and mental health practitioners in the process of identifying and treating pain. Using cancer pain research as a model, future studies should further define HIV-related pain syndromes, identify the prevalence of pain depending upon stage of illness and source of HIV transmission, and determine differences in the management of specific types of pain among people with HIV disease.

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References

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Pain Management in People with HIV Disease

Allen H. Lebovits, PhD and Mathew Lefkowitz, MD

Managing pain competently requires skill in both the art and science of medicine; practitioners must be able to communicate effectively with patients to diagnose and monitor pain, and they must be aware of proper treatments and treatment interactions. Among people with HIV disease, pain control can be particularly difficult. This brief review reports common pain syndromes in people with HIV disease and offers general suggestions for approaching pain management for these patients.

The only systematic investigation of the prevalence and types of pain syndromes and treatments among patients with AIDS, demonstrated that 54 percent of a hospitalized AIDS population experienced pain. The study found that the chest was the most common pain location, presumably because of the high incidence of Pneumocystis carinii pneumonia, but also confirmed the existence of other painful HIV-related conditions, including peripheral neuropathy and thrombophlebitis. Finally, intravenous (I.V.) drug users did not complain more of pain, nor did they require more analgesics, than other patients.

Common Pain Syndromes

While systematic evaluations of pain in AIDS patients are rare, there are several commonly-reported, painful clinical conditions among which are peripheral neuropathies. Separate reviews focusing only on the neurological manifestations of AIDS have found that 5 percent of AIDS patients have peripheral neuropathy (distal symmetrical neuropathy or chronic inflammatory polyneuropathy) characterized by painful sensory impairment and other neurological deficits.1,2 Additionally, herpes zoster radiculitis, a painful inflammation of the intercostal nerve roots (between ribs), was found in 2 percent of AIDS patients.

Pseudothrombophlebitis, described as a painful swelling of the calf, has been reported in people with HIV disease. This condition partially mimics deep vein thrombophlebitis, in which a blood clot forms in a vein; however, in pseudothrombophlebitis, the vein is open and blood flow is not impaired. The syndrome is characterized by inflammation, swelling, and severe pain that may result in patients becoming bedridden. Venography will distinguish the condition from true thrombophlebitis and avoid the administration of unnecessary anti-coagulation.

Barone et al reviewed the charts of 235 patients with AIDS to evaluate the presence of abdominal pain.4 The study found abdominal pain was present in 12 percent of the cases and was usually associated with conditions such as gastrointestinal infection, intestinal obstruction, and enlargement of the liver or spleen.

Other factors add to the pain management challenge. Underreporting of pain in people with HIV disease may be common: studies have found that disorders of the peripheral nervous system, such as peripheral neuropathy, are often overlooked when they coexist with overwhelming and life-threatening systemic illness.5 As new treatments emerge, painful side effects may develop and must be carefully evaluated. Nearly half of AIDS patients treated with zidovudine (ZDV; AZT) developed headaches, though most were classified as "slight." Treatment of inflammatory neuropathies may call for immunosuppressive treatment that could further compromise the health of people with HIV disease.

Pharmacologic Treatments

When analgesic medication is appropriate to treat pain, principles of pain management require that it be prescribed on a fixed-dose, fixed-time schedule. When physicians prescribe pain medication on an "as needed" schedule, patients must experience pain before receiving medication and so they are never completely pain-free. Giving medication on a fixed-dose, fixed-time schedule establishes a steady level of a drug in the blood and helps diminish the memory and expectation of pain, thereby raising the pain threshold. Practitioners may prescribe additional, "as needed," medication if the fixed dose does not provide relief, and the fixed dose may then be increased accordingly.

Among pharmacologic treatments, practitioners should first consider non-steroidal anti-inflammatory drugs (NSAID) to be administered on a fixed-dose, fixed-time schedule, since recent evidence indicates that the earliest symptoms of HIV disease may be neuropsychological in nature and cognitive functioning may be impaired, and since narcotic analgesics may also hamper cognitive abilities. Effective NSAIDs include: 600 or 800 milligrams of ibuprofen every six hours, 50 to 100 milligrams of flurbiprofen (Ansaid) orally two or three times a day, or a longer acting NSAID, such as 20 milligrams piroxicam (Feldene) once a day. Keterolac tromethamine (Toradol), an injectable NSAID administered in 15 to 60 milligram doses, can be used when patients can no longer tolerate oral medications.

If the NSAIDs provide no relief, however, practitioners should administer narcotics on a fixed-dose, fixed-time schedule. Further, practitioners can use longer-acting narcotics, such as 5 to 10 milligrams of methadone four times a day, 30 to 60 milligrams of MS Contin two times a day, or 3 to 4 milligrams of levo-dromoran four times a day, in place of shorter-acting ones, such as oxycodone or codeine. Again, longer-acting narcotics achieve constant blood levels and avoid the peaks of overdosage and the troughs of underdosage often associated with shorter-acting drugs.

Finally, the tricyclic antidepressants, commonly used to treat chronic pain, have intrinsic analgesic properties in addition to their antidepressant qualities. Specifically, 25 to 50 milligrams of amitriptyline or 10 to 75 milligrams of nortriptyline at bedtime can relieve the pain of HIV-related peripheral neuropathies.

Interacting with Patients

Perhaps the most overlooked, yet central, pain management principle is to review treatment options with patients. Since pain is essentially a subjective phenomenon—only the patient can accurately describe it—a practitioner should discuss a problem fully with a patient, and review potential strategies to resolve it.

Bringing patients into the process—helping them feel that practitioners are listening and willing to negotiate treatment—can itself be a potent analgesic. Patients in pain who feel their caregivers do not value or believe their complaints may experience increased anxiety and pain, while studies have shown that patients benefit when they participate in their pain management.

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References

Recent Reports


In a survey of 421 Finnish physicians, 76 percent reported difficulties treating cancer pain, primarily because of concerns about the effectiveness of drugs and their potential side effects. Of physicians who treated cancer pain patients daily, 97 percent were concerned about the side effects of analgesics.

Researchers sent surveys to 783 physicians and received responses from 648. Of these, 421 physicians had treated cancer pain; the study was based on the answers of these subjects.

Twenty percent of the physicians reported that drug dependence—often defined in terms of tolerance and the existence of withdrawal symptoms—was a problem among patients in their practice. Six percent reported that drug doses tended to rise with time, and 3 percent reported that patients requested medication only for pleasure and not to relieve pain.

Physicians most often cited their personal experience as the factor having the greatest influence on their treatment of cancer pain. This result was compared to a study in New York in which medical and surgical staff most often reported “bedside experience” as their source of knowledge about pain management. Among other factors having the greatest influence on treatment of cancer pain in the Finnish survey were postgraduate education, including information from scientific journals and medical conferences, and the examples of their colleagues. Sixty-eight percent of the physicians said their education on the subject of pain treatment was insufficient.


Patients using pleasant imagery—a technique through which they recalled enjoyable, relaxing experiences to decrease pain intensity or substitute a painless sensation for pain—perceived much less postsurgical pain and consumed significantly less pain medication than did other patients undergoing elective surgery.

Before surgery, 32 subjects were offered information about their operations; 16 of the 32 were also instructed about the use of pleasant imagery. Almost all of the participants were women, and most were Black, unmarried, and had less than a 12th-grade education. The mean age of the sample was 38 years.

Researchers offered subjects in the study group 20 minutes of instruction on using pleasant imagery to control pain. On the day before surgery, they distributed to patients tape recordings of three sensory scenes, involving a beach, a mountain cabin, and an autumn scene. Subjects were also encouraged to use their own pleasant experiences to form images and were told to use imaging techniques after surgery for about 15 minutes three times a day.

On average, members of the study group consumed 4.9 doses of pain medication per day, most often orally, compared to control group subjects, who used 7.7 doses of predominantly parenteral analgesics per day. Study group subjects reported levels of pain that were less than half those of control group subjects.

The researchers emphasize that these results may not be generalized to all pain patients and suggest that this technique may be particularly well-suited to the specific population involved in the study: women, with less than a 12th-grade education, who underwent gynecological surgery.

Quality of Life for Individuals with Pain. University of California, Los Angeles and City of Hope National Medical Center (Cancer Nursing, February 1990).

In a study designed to define the characteristics of “quality of life” among cancer patients with chronic pain, researchers found that pain was the most frequently cited negative influence. Forty-one subjects responded to questions about the meaning of quality of life, what contributes to a good or poor quality of life, and how pain influences quality of life. Among the most frequently cited influences on physical well-being were whether a person was feeling healthy, feeling physically independent, and feeling pain, and believed he or she was living a normal life.


The discovery of a network of nerves in the brain that facilitates the transmission of pain messages may explain individual differences in pain perception. This pain-enhancing system may offer insights into chronic pain and drug tolerance, the pain and hypersensitivity experienced during withdrawal from narcotics, and the efficacy of behavioral models of pain relief, such as biofeedback and hypnosis, according to a summary of the research.

The pain-enhancing system was studied in laboratory morphine-addicted rats after withdrawal from the drug and is believed to have implications for understanding pain caused in a variety of situations.

The existence of a pain-enhancing network means that neither tissue damage nor painful stimulus is necessary to produce a sensation of pain. Instead, a harmless stimulus to the pain facilitating pathway—such as withdrawal from narcotics—may cause pain. Pain pathways may become more sensitized as the effects of a narcotic or pain-killing drug wear off, and this may explain why people feel the need to continue taking drugs. Also, people may develop tolerance to pain-killing drugs after their pain-enhancing systems have been strengthened, for example, after the chronic use of other drugs, which act to deaden pain.

Next Month

The challenges of HIV disease have encouraged people seeking treatment and practitioners offering care to explore alternatives to standard Western medical care. Among the most effective and popular alternative is Traditional Chinese Medicine (TCM). In the September issue of FOCUS, Qingcai Zhang, MD, and Heidi Ziolkowski, both at the Oriental Healing Arts Institute (OHAI) in Long Beach, California, define TCM and its application to HIV disease, and discuss alternatives to standard Western medical care. Among the most effective and popular alternative is Traditional Chinese Medicine (TCM). In the September issue of FOCUS, Qingcai Zhang, MD, and Heidi Ziolkowski, both at the Oriental Healing Arts Institute (OHAI) in Long Beach, California, define TCM and its application to HIV disease, and discuss specifically the use of herbal formulas to inhibit viral replication, and to treat opportunistic conditions and non-specific constitutional symptoms.

TCM practices may seem unorthodox to health professionals trained in the Western scientific method. Also in September, Gifford S. Leong, MD, Assistant Clinical Professor of Medicine at the University of California San Francisco, reviews the concerns of these health professionals.