AIDS 103
Manual Therapy Interventions for People Living with HIV Disease

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Various pain syndromes and musculoskeletal alterations may occur throughout the spectrum of HIV disease. To minimize the use of pharmacological agents for pain management, manual therapies can be employed. These include (1) soft tissue mobilization, (2) muscle energy techniques, (3) strain/counterstrain, (4) myofascial release (MFR), (5) CranioSacral Therapy (CST), (6) visceral manipulation, and (7) lymph drainage techniques. Energy-based interventions include therapeutic touch (TT), Reiki, and healing touch. These complementary manual therapy techniques are multifaceted and originate from various philosophies. This chapter reviews aspects of HIV-related pain syndromes, a brief overview of various manual therapies, and existing research on their effects on pain modulation. Various practitioners are trained in one or more of these various techniques, and the reader is advised to inquire about the approach used in a manual therapy session.

Advances in the medical management of HIV disease have increased life expectancy. Quality of life (QOL) is becoming increasingly important to address in all dimensions of work and activities of daily living (ADLs). Therefore pain management must be integrated into the total care of patients with HIV disease. 1 The prevalence of pain in HIV-infected individuals varies according to the stage of disease and generally ranges from 25% to 80%, with the prevalence of pain increasing as the disease progresses. 2 Studies suggest that approximately 25% to 30% of ambulatory HIV-infected patients in early stages of the disease experience clinically significant pain. 3 People with AIDS who experience pain, like their counterparts with cancer pain, typically describe an average of two to three concurrent pains at a time. 4

The opportunistic infections (OIs) and drug side effects that result from the treatment of HIV disease can have a direct effect on daily functional activities. Examples include peripheral neuropathy (PN) syndrome, rheumatological complications, Kaposi’s sarcoma (KS), and various musculoskeletal alterations. The weakness, pain, and loss of range of motion (ROM) caused by these conditions can lead to changes in gait pattern, loss of function, and decreased QOL. 5 The
role of pain management in treating these HIV complications requires various pharmacological and nonpharmacological approaches.

Federal guidelines developed by the Agency for Health Care Policy and Research (AHCPR) for the management of cancer pain also address pain management in the treatment of HIV/AIDS. A multidimensional model acknowledges the interaction of emotional, cognitive, cultural, and environmental aspects of pain. An individual may experience various types of pain: (1) physical pain, (2) painful losses, (3) the pain of not knowing, and (4) social pain. Optimal management of the person experiencing HIV-related pain may require a combination of pharmacological, cognitive-behavioral, psychological, psychotherapeutic, anesthetic, neurosurgical, and rehabilitative approaches. This chapter focuses on the manual therapy approaches of this multimodal intervention.

Various clinical problems that are often presented to the health care professional include the following:

1. Neurological deficits secondary to central nervous system (CNS) involvement with resultant neurocognitive and functional changes.
2. PN secondary to drug toxicity and progression of HIV disease.
3. Myopathies secondary to medication and direct HIV involvement.
4. Arthrosis secondary to side effects of medication.
5. Postural dynamics secondary to weight loss from protein-calorie malnutrition (PCM).
6. Past medical history of previous injuries that may be exacerbated during HIV disease.

The typical description of a pain syndrome associated with HIV portrays a disorder producing a multitude of pathological changes and deficiencies of the immune system. The possible causes of most of the pain syndromes or sites are complex. Pain symptoms may be overshadowed by a constellation of other overwhelming problems, which may include OIs, diarrhea, dyspnea, anorexia, weight loss, and neuropsychological symptoms.

FEATURES OF HIV-RELATED PAIN SYNDROMES.

Taking a careful patient history and giving the patient a physical and a differential diagnosis are important first steps. The pain etiology may stem from multiple sources, and the mechanism of pain must be determined before treatment is rendered. Medications, diagnostic procedures, and other interventions may cause pain. Patients may have a preexisting pain syndrome unrelated to the course of HIV disease. Pain is also the most common reason for hospitalization of people with HIV/AIDS.

Abdominal pain can have many causes: (1) lymph-adenopathy from HIV infection or lymphoma, (2) KS, (3) infectious diarrhea, (4) organomegaly, and (5) nonspecific gastritis. Patients frequently experience pain of somatic and visceral origin.

Neuropathic pain syndromes occur in up to 40% of HIV patients who report pain. Neuropathic pain is often overlooked because the cause is often unknown in individuals with HIV/AIDS. Various PNs are described with HIV disease. These PNs include both acute and chronic inflammatory demyelinating neuropathies (IDPs). The most common PN is distal
symmetrical PN (DSPN), which affects as many as 30% of HIV-infected persons. Lane et al suggest that AZT only causes a myopathy when underlying HIV-related IDP is present. Wulff et al describe six patterns of HIV-associated PN: (1) DSPN, (2) IDP, (3) progressive polyradiculopathy, (4) mononeuropathy multiplex, (5) autonomic neuropathy (AN), and (6) diffuse infiltrative lymphocytosis syndrome (DILS). Unfortunately, patients with PN are often misdiagnosed or overlooked.

Patients with HIV disease frequently report having headaches. A differential diagnosis is necessary to rule out toxoplasmosis, CNS lymphoma, and cryptococcal meningitis. Nonspecific headaches may be caused by postural changes and muscular imbalances that can occur over the course of HIV disease.

Musculoskeletal changes and pain associated with HIV-related arthritis conditions may result in significant gait deviations. Studies have demonstrated a predilection to primary involvement of the knees, ankles, and feet in HIV-positive individuals. The proper implementation of orthotics and optimal footwear helps prevent further postural deficits. Modalities and manual therapy to modulate pain are incorporated into the rehabilitation approach.

HIV infection and fibromyalgia were studied by Simms. The prevalence of fibromyalgia in this population is significant, since an estimated 5% of patients visit a general medical clinic, and 12% of patients visit a rheumatologist. The treatment for fibromyalgia includes physical modalities, such as heat, ice, spray and stretch techniques, biofeedback, and manual therapy.

Patients with HIV-related arthritis can be treated with a combination of appropriate medication and rehabilitation that focuses on enhancing functional outcomes. If fatigue becomes an issue because of OIs, energy conservation techniques may be incorporated into the treatment plan. Since a rheumatological diagnosis represents one of many complications of HIV disease, practitioners should coordinate treatment with all the members of the health care team.

Using exercise intervention in combination with manual therapy techniques should be designed specifically to the patient’s diagnosis, tolerance, and particular endurance needs. When prescribing an exercise program for patients with concomitant HIV disease, other neurological, cardiorespiratory (CR), gastrointestinal (GI), and musculoskeletal concerns should be considered. Self-mobilization techniques and gentle home exercises are also presented to the patient, and medication and patient counseling are recommended. Treatment should be individualized and should address both pain and functional issues of the HIV-infected population.

Musculoskeletal concerns for people living with HIV disease can be orthopedic. Patients with associated PN may often incur low back pain. Instead of being directly related to HIV disease, the pain may be the aftermath of an OI, which results in muscle spasms and postural changes. A constellation of problems may manifest in altered gait and difficulty with transitional positions. This leads to neuromusculoskeletal dysfunction, and traction produced by postural dysfunction on the sensory nerve elements within the connective tissue system may produce pain.

References
11. Reference deleted in proofs.

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