Psychosocial Interventions for Cancer Pain

Pain is a common and often disabling problem in cancer patients. Estimates indicate that pain is experienced by 25% of newly diagnosed cancer patients and by 60% to 90% of patients with advanced cancer [2]. In the past, it was believed that treatments that cured cancer would eliminate pain. It is now recognized that, even after effective cancer treatment, many patients continue to experience pain [2].

Medical and surgical approaches are considered the mainstay of cancer pain treatment. Although these approaches help many patients, they have limitations [6]. First, some patients experience uncontrollable side effects (e.g., severe constipation or nausea) that limit their ability to take pain medications. Second, even on optimal pain medication regimens, some patients continue to report uncontrolled pain. Finally, newly developed surgical techniques (e.g., implanted nerve stimulators or morphine pumps) can reduce pain, but they are costly and are not widely available to the large population of patients suffering from cancer pain. These limitations and problems have led to interest in alternative approaches to cancer pain control.

There are several reasons why psychological interventions may represent a valuable addition to cancer pain management [6]. First, evidence indicates a strong link between cancer pain and psychological factors such as mood, distress, depression, and anxiety [13]. Second, cancer patients' sense of confidence or self-efficacy about their own abilities to control pain have been related to decreased pain and greater psychological well-being [3]. Third, cancer patients who cope with pain by catastrophizing (i.e., ruminating about pain and feeling helpless) are much more likely to experience higher levels of pain and psychological distress [13]. Finally, psychological interventions have been found to be effective in treating other disease-related pain conditions such as osteoarthritis and rheumatoid arthritis [5].

Cognitive-Behavioral Therapy for Pain Management

Cognitive-behavioral therapy is currently the most widely used psychological treatment for persistent pain. It involves several steps. The first step is pain education. Pain is described as a complex sensory and emotional experience that is influenced by the patient's thoughts, feelings, and behaviors. By discussing this topic, patients understand how their own responses to pain influences their pain experience and start to recognize the role that their own coping efforts can play in pain control. The second step is training in one or more coping skills for managing pain (e.g., relaxation or problem solving). For each skill, a therapist provides an educational rationale, basic instruction, and guided practice and feedback. The third step in training is home practice with learned skills. Patients are initially encouraged to practice in non-demanding situations (e.g., reclining in a quiet room) and then to apply their skills to more challenging tasks (e.g., managing pain that may occur during walking or while transferring from one position to another). The final step in training involves helping patients develop a program for maintaining their skills practice after training is completed and for overcoming setbacks and relapses in their coping efforts.

A recent systematic review of studies testing the efficacy of cognitive-behavioral therapy for cancer pain found that, overall, this treatment significantly reduced pain [1]. The studies reviewed tested a variety of types of cognitive-behavioral therapy, which are described below.

Imagery- and Hypnosis-Based Cognitive-Behavioral Therapy

In *imagery-based cognitive-behavioral therapy,* the primary pain coping skill taught is self-guided imagery. Self-guided imagery involves focusing on a pleasant or distracting scene and attending to the sensations that might occur in this scene (e.g., the sights, sounds, smells, and tastes). As patients practice and develop skill in the use of imagery, they are encouraged to use it to divert attention from pain. In *hypnosis-based cognitive-behavioral therapy,* a therapist provides specific suggestions designed to help the patient relax and control pain. Once patients achieve success in using therapist-guided suggestions for pain control, they are typically taught self-

hypnosis so that they can use hypnosis in a variety of daily pain-related situations. A recent review found that imagery and hypnosis-based cognitive-behavioral therapy significantly decreased pain in 86% of the studies examined. This approach was found to be particularly effective in reducing pain in children undergoing painful procedures such as lumbar puncture and bone marrow biopsy [7,8,12,14]. The method was also effective in managing pain in women with metastatic breast cancer [10] and in adult cancer patients undergoing bone marrow transplant therapy [11].

Pain Education Plus Brief Cognitive-Behavioral Therapy

Educational interventions focus primarily on teaching cancer patients about pain, how to use medications in managing pain, and how to communicate with health care providers. Recently, some educational interventions have begun to include brief training in one or more pain coping skills as a way of enhancing patients' self-care efforts. In a study of 174 cancer patients with pain due to bone metastases, pain education plus brief cognitive-behavioral therapy produced significant reductions in average, worst, and least ratings of pain [9]. A recent review found that slightly over 50% of the studies testing pain education plus brief cognitive-behavioral therapy showed positive results [1]. Studies that included more intensive skills training showed the best results.

Comprehensive Cognitive-Behavioral Therapy

Comprehensive cognitive-behavioral therapy interventions emphasize the importance of learning a variety of pain coping skills (e.g., relaxation, activity pacing, imagery, problem solving, the use of calming self statements, and communication skills). Patients systematically learn and master each skill so that they have a "menu" of coping skills that they can rely on for pain control. Patients are encouraged to "mix and match" these skills in creative ways so as to deal as well as possible with daily challenges (e.g., coping with unexpected flares of pain). A study of patients with advanced cancer found that a comprehensive cognitive-behavioral therapy intervention improved pain control [4]. A recent review of the literature found that comprehensive cognitive-behavioral therapy significantly reduced pain in 46% of the studies reviewed [1].

In summary, recognition is growing that psychosocial interventions can have a role in cancer pain management. At present, cognitive-behavioral therapy approaches to pain management are the most widely used clinically. As a group, these approaches have been found to reduce cancer pain. Imagery- and hypnosis-based cognitive-behavioral approaches appear to be especially promising.

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