



Global Year Against Cancer Pain

OCTOBER 2008 – OCTOBER 2009

Cancer Pain Treatment

Very often, pain relief measures are required at various stages of cancer. Although less than 15% of patients with nonmetastatic disease report pain, 80% or more of terminally ill patients with widely disseminated cancer experience pain that requires treatment [7]. Most patients referred for cancer-related symptom management have at least two anatomically distinct pain sites, and more than 40% have four or more sites [11].

The pain may be caused by several mechanisms. Pain associated with direct tumor involvement occurs in 65–85% of patients with advanced cancer [6]. Cancer therapy accounts for pain in approximately 15–25% of patients receiving chemotherapy, surgery, or radiation therapy [8]. Pain caused by noncancer-related problems such as pre-existing disease affects 3–10% of patients.

The management of pain and other symptoms has become the main aim of treatment in many patients, and this goal is encompassed in the philosophy of palliative care. Palliative care involves a variety of health care professionals and provides continuing management of symptoms, maintenance of function, psychosocial and spiritual support for the patient and family, and comprehensive care at the end of life [4]. The aim of treatment is to provide effective pain relief so that the patient can enjoy improved quality of life and die free from pain.

Pain Management Approaches

Cancer pain treatment should begin by explaining the causes of pain to the patient, followed by careful clinical assessment and multimodal treatment options.

Most cancer patients have fear and anxiety from the time of diagnosis, and some may become depressed. In many developing countries, the diagnosis of cancer is often viewed as a “death sentence” because management options are severely limited by the time the patients come to the hospital.

Evaluation of the patient should be comprehensive and encompass all aspects of the patient's problems—physical, psychological, social, and spiritual. Since pain is a subjective experience, only the patient can say how much it hurts, and the health practitioner must believe the patient's report of pain. Each type of pain must be assessed.

Patient Evaluation

Comprehensive evaluation of cancer pain requires an accurate history, a full physical examination of the patient, and a review of laboratory, radiographic, and other investigations. Observation of the patient during clinical assessment can provide useful information.

Pain Assessment

A detailed history will reveal the location and distribution of the pain, its severity and quality, whether it is present all the time or intermittent, what factors make it worse or better, and whether it limits the patient's activity or disturbs his or her sleep. Pain severity can be measured simply by using a visual analogue scale, verbal scale, numerical scale, or more complex questionnaires [1]. It is helpful for patients to describe types of pain in their own words, such as aching, burning, or stabbing. Such words may indicate the type of pain, including whether the pain is nociceptive or neuropathic. Young children may be able to convey pain intensity by selecting from a set of drawings of faces, ranging from neutral or smiling to crying. Observation by caregivers is particularly helpful in children and in the cognitively impaired. Information about functional incapacity, level of anxiety, depression, and suicidal thoughts is valuable in the evaluation of the patient's psychological state.

A detailed history and careful examination may be all that is required to determine the type and cause of the pain. Specific investigations, such as computed tomography (CT) or magnetic resonance imaging (MRI), may be necessary to give more information in some cases. An increase in pain intensity following a stable period necessitates re-evaluation of the underlying etiology and re-assessment of each type of pain. Prompt evaluation and treatment is called for in emergencies involving pain (e.g., pathological fractures, back pain due to spinal cord compression, or headache due to raised intracranial pressure).

Pain Relief Methods

Cancer pain is very treatable, and drug treatment is the mainstay of pain management. Between 70% and 90% of all cancer pain can be controlled with oral medication [14]. Adequate pain relief can be achieved in more than 75% of patients who receive optimal analgesic management using simple techniques such as opioids, non-opioid analgesics, and adjuvant medications, as suggested by the World Health Organization's analgesic ladder [12,13]. It is recommended that drugs should be given by mouth, by the clock, tailored to the individual patient with attention to details.

Acetaminophen (paracetamol) or nonsteroidal anti-inflammatory drugs (NSAIDs) are effective analgesics for patients with mild cancer pain and can be combined with opioids in patients with moderate to severe pain. Experience with the use of the WHO ladder has shown that the simple principle of escalating from non-opioid to strong opioid analgesics is safe and effective. In most patients, side effects associated with the use of opioids can be easily managed with a combination of patient education and reassurance about the transient nature of sedation and emesis, careful selection of dose and route of opioid, and the use of additional drugs such as antiemetics and laxatives [2].

Adjuvant drugs are used for difficult pain syndromes including neuropathic and bone pain. Among the agents frequently used for the management of neuropathic pain, tricyclic antidepressants, systemic local anesthetics, and baclofen have been traditionally used for dysesthetic pain, whereas anticonvulsants such as gabapentin, carbamazepine, and phenytoin have been more frequently used for the management of lancinating pain [3].

Incidental pain, defined as pain that is sudden and severely aggravated as a result of movement, swallowing, defecation, or urination, is usually controlled if the patient remains immobile or refrains from performing the painful maneuver [10]. Other techniques to increase local control of incidental pain episodes include radiation therapy, orthopedic procedures, or neurological procedures such as percutaneous cordotomy. Bisphosphonates are useful in relieving both the continuous and the incidental pain components in patients with bone cancer pain [5].

Pain can also be relieved by modification of the disease process when appropriate with surgery, chemotherapy, and radiotherapy. Other methods include psychological interventions, physical therapy, and complimentary medicine.

About 10% of patients may require interventional techniques (peripheral nerve blocks, autonomic nervous system blocks, radiofrequency lesions, and neurosurgical procedures) for some pain problems as part of a multimodal, multidisciplinary approach to pain control.

For pain not controlled with oral medications, low doses of an opioid plus a local anesthetic can be delivered by the spinal or epidural routes to provide relief with relatively few side effects. Systems used for chronic intraspinal opioid administration include percutaneous tunneled epidural or spinal catheters, tunneled catheters connected to subcutaneously implanted injection ports, and implanted infusion pump systems [9].

References

1. Bruera E, Kuehn N, Miller MJ, Selmer P, Macmillan K. The Edmonton symptom assessment system (ESAS): a simple method for the assessment of palliative care patients. *J Palliat Care* 1991;7:6–9.
2. Bruera E, Neumann CM. Cancer pain. In: Max M, editor. *Pain 1999: an updated review*. Seattle: IASP Press; 1999. p. 25–35.
3. Bruera E, Ripamonti C. Adjuvants to opioid analgesics. In: Path R, editor. *Cancer pain*. Philadelphia: Lippincott; 1993. p. 142–59.
4. Charlton JE, editor. *Cancer pain*. In: *Core curriculum for professional education in pain*, 3rd ed. Seattle: IASP Press; 2005. p. 139.
5. Ernst DS, MacDonald RN, Paterson AHG, Jensen J, Brasher P, Bruera E. A double blind cross-over trial of intravenous clodronate in metastatic bone pain. *J Pain Symptom Manage* 1992;7:4–11.
6. Foley KM. Pain syndromes in patients with cancer. In: Bonica JJ, Ventafridda V, editors. *Advances in Pain Research and Therapy*. New York: Raven Press; 1979.
7. Foley KM. Supportive care and quality of life. In: De Vita VT, Hellman S, Rosenberg SA, editors. *Cancer principles and practice of oncology*, 5th ed. Philadelphia: Lippincott-Raven; 1997.
8. Higginson IJ. Innovations in assessment: epidemiology and assessment of pain in advanced cancer. In: Jensen TS, Turner JA, Wiesenfeld-Hallin Z, editors. *Proceedings of the 8th World Congress on Pain*. Progress in Pain Research and Management, Vol. 8. Seattle: IASP Press; 1997. p. 707–16.
9. Kedlaya D, Reynolds L, Waldman S. Epidural and intrathecal analgesia for cancer. *Best Pract Res Clin Anesthesiol* 1996;16:651–65.
10. Portenoy RK, Hagen NA. Breakthrough pain: definition, prevalence and characteristics. *Pain* 1990;41:273–81.
11. Twycross RG, Fairfield S. Pain in far advanced cancer. *Pain* 1982;14:303–10.
12. World Health Organization. *Cancer pain relief and palliative care*. Expert Committee Report. Technical Series 804. Geneva: World Health Organization; 1990.
13. World Health Organization. *Cancer pain relief*, 2nd edition with a guide to opioid availability. Geneva: WHO; 1996.
14. Zech DFJ, Grond S, Lynch J, Hertel D, Lehmann KA. Validation of the WHO guidelines for cancer pain relief: a 10-year prospective study. *Pain* 1995; 63:65–76.

