Cancer Pain


A. Recognize that pain management is part of a broader therapeutic endeavor known as palliative care.

Know that palliative care is defined as the active, total care of the patient with active, progressive, life threatening disease. Recognize that palliative care involves a variety of health care professionals.

Know that palliative care provides a model for continuing management including control of pain and symptoms, maintenance of function, psychosocial and spiritual support for the patient and family, and comprehensive care at the end of life.

B. Know that pain is common in cancer and that many patients have more than one site of pain. Know that the prevalence of pain in cancer varies with the nature of the cancer, the stage of the disease, and the methods used for assessment. Know that more than 50% of patients in hospitals and hospices have pain. Know that advanced cancer is more likely to be painful. Know that breakthrough and incident pain are common in cancer pain (McQuay and Jadad 1994; Addington-Hall and McCarthy 1995; Vainio and Auvinen 1996; Portenoy et al. 1999).

C. Understand that adequate pain relief can be achieved by at least 75% of cancer patients who receive optimal analgesic management using simple techniques such as those suggested by the World Health Organization analgesic ladder. Know the difficulties in interpreting validation studies (Jadad and Browman 1995; Zech et al. 1995; World Health Organization 1998a).

D. Know about the barriers to cancer pain treatment, including patient related barriers, health care provider barriers, and health policy and reimbursement barriers. Recognize the importance of health care provider education in removing these barriers.

E. Recognize the need to assess the quality of analgesia in terms of effectiveness, efficacy, efficiency, humanity, and equity.

F. Know the importance of developing evidence-based practice in the management of cancer pain. Realize that much of the evidence about cancer pain management is incomplete. Know that clinicians often need to make analgesic treatment decisions based on less robust evidence. Know the importance of balancing benefits and burdens of treatment in this situation (McQuay and Moore 1998).

II. Evaluation of patients with cancer pain (McGuire 1995; Higginson 1997)

A. Recognize the importance of assessing the need for primary anticancer therapies. Recognize the need to assess for other medical problems (e.g., anemia, infection, and hypercalcemia).

B. Recognize the importance of comprehensive pain assessment. Know that optimal pain management within the broader context of palliative care depends on detailed information about the pain, comorbid and premorbid medical problems, and physical function. Recognize the importance of psychosocial and spiritual factors. Be aware of the role of the family and significant others (Steifel 1993; Derrickson 1996; Grond et al. 1996; Gatchel and Turk 1999; Twycross 1999).

C. Know that cancer pain is associated with structural pathology. Realize that definition of the extent of the disease and the nature of the underlying etiology of the pain is essential to pain assessment. Know the roles of radiological investigations into the etiology of pain. Know the importance of assessment of the contribution of skeletal, neural and soft-tissue pathology to pain (Gonzales et al. 1991).
D. Know that the comprehensive evaluation of cancer pain requires an accurate history, a full physical examination, a review of laboratory and radiographic tests and appropriate further investigations. Know specific methods of investigating cancer pain, e.g., ultrasound, radioisotope, single photon emission computed tomography, computed tomography, positron emission tomography, and magnetic resonance imaging scanning, with biopsy if necessary. Know about the need for surgical staging in some cases (Irvine 2000).

E. Know that syndrome recognition is an essential part of pain assessment. Recognize that this may provide information relevant to treatment and prognosis. Know the characteristics of common pain syndromes. Know that these can be direct effects of tumor (e.g., bone metastases) or may result from anticancer therapies (e.g., surgery, drugs), from general debility (e.g., pressure sores), or from factors unrelated to the disease or its treatment (e.g. osteoarthritis) (Cherny and Portenoy 1999a).

F. Know the importance of an accurate characterization of the pain or pains including location, severity, quality, temporal factors, and aggravating/relieving factors.

G. Recognize the significance of different temporal patterns of pain (e.g., continuous, intermittent, acute pain superimposed on continuous pain). Know how to assess these different clinical presentations when making treatment decisions (e.g., use of supplemental doses of an opioid to treat “breakthrough pain”). Know that rapidly escalating pain is an emergency that requires prompt assessment and intervention (Portenoy 1997).

H. Know that the consistent use of a valid pain measurement scale (e.g., verbal categorical, numerical, or visual analogue) can help inform clinical practice. Be aware of the need to use appropriate pain measurement approaches for children, elderly patients and those with learning disabilities or cognitive impairment. Know the inherent problems with the use of these tools in different circumstances, e.g., the frail or confused patient (De Conno et al. 1994; Smith et al. 1998; De Wit 1999).

I. Understand the importance of inferring a pathophysiological mechanism for each pain and recognize the implications that this has for therapy. Know that “nociceptive pains” are sustained by continuing injury to somatic structures (“somatic pain”) or visceral structures (“visceral pain”). Know that abnormal processes in the peripheral or central nervous system sustain “neuropathic pains.” Neuropathic pains may include painful peripheral mononeuropathy and polyneuropathy, plexopathies, pain from spinal cord compression, complex regional pain syndrome, and deafferentation pain.

J. Recognize that an increase in pain intensity following a stable period necessitates new evaluation of the underlying etiology and pain syndrome.

K. Know the common emergencies in cancer patients that present with pain (e.g., back pain due to spinal cord compression, pathological fracture). Be aware of the need for prompt evaluation and treatment of these conditions.

L. Know the issues involved in the assessment and treatment of pain at the end of life (Saunders and Platt 1999).

M. Know the importance of assessment of factors other than pain. These include physical symptoms (e.g., fatigue, nausea, anorexia and constipation), coexisting psychological symptoms and psychiatric disorders (e.g., anxiety and depression), functional status, family dynamics, spirituality, social support systems, medical support systems, and financial resources (Breitbart et al. 1999).

N. Know that cancer pain and distress affects activities of daily living, family life, and social functioning. Realize that it is important to assess and address these issues during pain management (Lancee et al. 1994; Strang 1998).

O. Recognize that the patient’s and family’s health beliefs and previous experiences affect the presentation of pain and its management (Ward et al. 1993; Glajchen et al. 1995).
P. Recognize that pain predominantly sustained by psychological factors appears to be rare in the cancer population. Know that psychological factors are important in determining the impact of the pain on the patient’s life and response to pain. Appreciate the difficulties that can be faced if a patient with long-standing chronic pain from a benign condition develops pain from cancer. Know about the differences in behavioral response that may be seen. Know that psychological and psychiatric problems may accompany pain. Realize that it is important to treat distress as well as pain (Massie and Holland 1992; Glover et al. 1995; Holland 1997; Passik et al. 1998; Strang 1998).

Q. Know about the need for psychoeducational care that involves a program of educational, psychological and social strategies aimed at treatment and support (Ferrell et al. 1993; Devine and Westlake 1995).

III. Principles of cancer pain treatment (Patt 1993; Cleeland et al. 1994; Jacox et al. 1994; Cherny and Portenoy 1999b; Hillier et al. 2000; Simpson and Budd 2000)

A. Recognize that therapies for pain must be integrated into the oncological management of the patient. Know that management may include both primary anticancer therapy—intended to prolong life—and palliative care.

B. Recognize that treatments aimed at the underlying pathology may also be useful in the management of cancer pain. Know that these treatments may include radiotherapy, pharmacotherapy (including chemotherapy and hormonal, biological and antibiotic therapy), and surgery. Know that the use of any of these strategies for analgesic purposes requires careful evaluation. Realize that the appropriateness, feasibility, benefits, burdens, and risks of such treatment must be carefully considered (Ashby and Stoffell 1991).

C. Know that analgesic pharmacotherapy is the mainstay of cancer pain management. Know that most patients with cancer pain can be managed effectively with an optimal oral opioid regimen. Know the principles of opioid switching. Recognize the importance of expertise in opioid therapeutics for all practitioners who treat patients with cancer (Hanks et al. 2001).

D. Know that the use of other drugs e.g., nonsteroidal anti inflammatory drugs (NSAIDs), cyclooxygenase-2 inhibitors (coxibs), antidepressants, and anticonvulsants may be useful in the management of cancer pain.

E. Recognize the importance of other modalities for the treatment of cancer pain. Know that many patients achieve better pain control if opioid therapy is integrated with other analgesic modalities (multimodal therapy). Know that some patients who are unable to achieve a favorable balance between opioid analgesia and side effects require an alternative approach.

F. Know that alternatives may include invasive techniques such as nerve blocks, spinal drug delivery and neurostimulation, and surgery, as well as physical treatments and psychological approaches.

G. Know that patients must receive a full explanation of the procedure and risks of any invasive procedure before giving consent. Where there is no evidence base to indicate likely benefit, the patient should be made aware of this.

IV. Pharmacological approaches to cancer pain (Jacox et al. 1994; World Health Organization 1998a; Cherny and Portenoy 1999b; Hillier et al. 2000; Hanks et al. 2001)

A. Understand the “analgesic ladder” approach to drug selection. Know the indications and dosing guidelines for non-opioid analgesics, including acetaminophen (paracetamol), NSAIDs, and coxibs (step one). Know the therapeutics of opioids that are used orally for moderate pain, including codeine, oxycodone (combined with a non-opioid analgesic in a single preparation), propoxyphene, hydrocodone, and dihydrocodeine (step two). Know the therapeutics of opioids that are used for severe cancer pain, including morphine, hydromorphone, oxycodone (used alone), levorphanol, methadone, fentanyl, buprenorphine, and diamorphine (step three). Know the rationale for sometimes omitting step 2 analgesics from the ladder.
B. Understand the pharmacokinetics of opioid analgesics given by different routes including the relationships between kinetics and efficacy. Know the importance of active metabolites for some opioids (specifically morphine and meperidine [pethidine]) and that this factor may be important in those with renal impairment.

C. Know the reasons why meperidine (pethidine) should not be used for cancer pain management.

D. Know the rationale for oral administration of drugs whenever feasible.

E. Know the availability other routes of opioid administration. Know the indications for sublingual, oral transmucosal, rectal, transdermal, subcutaneous, intramuscular, and intravenous use. Know that intravenous drugs may be given by repeated injection, continuous infusion, and patient-controlled delivery. Know the pharmacology and availability of drugs given directly into the central nervous system, e.g., by epidural, intrathecal, or intraventricular routes. Know that drugs can be given by repeated administration, continuous infusion, and patient-controlled analgesia. Know that drugs may be delivered via a percutaneous catheter, an implanted subcutaneous port, or a fully implanted pump.

F. Know the appropriate dosing intervals for different drugs by different routes. Know that some routes may not be appropriate in certain situations e.g., transdermal drug delivery for rapidly changing pain.

G. Know about the value of “around the clock” dosing, but be aware of the importance of supplemental “rescue” doses offered on an as needed basis for pain exacerbations (Coluzzi 1998).

H. Know the critical importance of dose titration to individualize opioid therapy. Know that dose titration is based on the principle that the dose should be increased until adequate analgesia occurs or intolerable and unmanageable side effects supervene. Recognize that the absolute dose is not important as long as a favorable balance between analgesia and side effects is maintained.

I. Know the concept of opioid switching in some patients who develop tolerance to, or side effects from, the first-line opioid, when it may be beneficial to try an alternative opioid (de Stoutz et al. 1995; Hawley et al. 1998).

J. Know that patients may become tolerant to some opioid side effects, e.g., nausea, but not usually to others, e.g., constipation. Know the importance of prompt management of common opioid side effects in optimizing therapy. Know the pharmacology, therapeutics, and side effects of drugs used for the treatment of opioid induced emesis. Know about different types of aperients (bulking, stool-softening, and stimulant agents). Know the potential adverse effects of aperients. Know treatments that are used for refractory constipation, e.g., regular aperients that are titrated to effect bowel lavage. Be aware of the use of psychostimulants for opioid induced sedation and how to prescribe them (Dalal and Melzack 1998).

K. Know that the risk of ventilatory depression is extremely low when opioid doses are gradually titrated. Know that a new cardiopulmonary insult in a patient who is receiving opioids may produce ventilatory depression that is, in part, naloxone reversible. As a consequence, know that a response to naloxone is not evidence for a primary opioid effect.

L. Know about the concept of equianalgesic doses and the many factors affecting this. Know that the use of equianalgesic dose tables, when switching opioids or changing from one route of administration to another, is a guide to therapy rather than definitive. Realize that opioid switching and changes of route of administration, e.g., oral to spinal, must be individualized (Ripamonti et al. 1998).

M. Know the concept of tolerance and its importance in cancer pain management. Be aware that cancer patients with stable disease seldom escalate opioid dose. Know that patients who do escalate the opioid dose probably do so because of recurrent or progressive disease.

N. Know about physical dependence on opioids and its implications for cancer pain management. Know that all patients on opioids will develop withdrawal symptoms if the drugs are stopped abruptly. Be
aware of the need to prevent this problem by tapering opioids prior to discontinuation of therapy and avoiding antagonist drugs.

O. Know the definitions of problem drug use, tolerance and dependence. Know that problem drug use is fundamentally a psychological and behavioral disorder characterized by loss of control over drug use, compulsive drug use, and continued drug use despite harm. Know that iatrogenic addiction during opioid treatment for cancer pain is very rare.

P. Know the indications, pharmacological properties, therapeutic guidelines and side effects of other analgesics used to treat cancer pain, including drugs used for neuropathic pain such as antidepressants, anticonvulsants, local anesthetics, corticosteroids, and miscellaneous drugs such as ketamine, baclofen, and clonidine (McQuay et al. 1995, 1996; Mercadante et al. 1995).

Q. Know the indications, pharmacological properties, therapeutic guidelines and side effects of other analgesics used to treat cancer pain, including NSAIDs, coxibs, calcitonin, bisphosphonates, and radiopharmaceuticals (e.g., strontium 89).

R. Know about the use of drugs for malignant bowel obstruction, e.g., corticosteroids, anticholinergic drugs (e.g., scopolamine), and octreotide (Doyle et al. 1998).

V. Anesthesiologic approaches to cancer pain (Wall and Melzack 1999; Simpson and Budd 2000)

A. Know about the important aspects of explanation and consent when considering anesthesiologic techniques for pain management. Know how to explain the benefits and burdens of such interventions to patients, caregivers, medical staff and other health care professionals.

B. Understand the common nerve blocks used to manage cancer pain. Know about their indications and risks.

C. Recognize that sympathetic nerve blocks with local anesthetic may be valuable in some types of cancer pains. Know about other procedures that may be useful in selected patients with cancer pain, e.g., myofascial trigger point injection or injection of a neuroma or metastasis.

D. Know about the use of prolonged temporary blocks using local anesthetic infusions.

E. Know the role of neurolytic blocks in some cases, e.g., celiac plexus block in the management of abdominal pain due to cancer of the upper gastrointestinal tract.

F. Understand the indications, risks and practical implications of intraspinal therapies for cancer pain. These may include epidural or intrathecal drugs delivered by percutaneous or implanted systems. Be aware of the organizational structures required for the ongoing care of patients receiving spinal drug delivery.

G. Know about the use of nitrous oxide for transitory analgesia.

H. Know the strengths and weaknesses of using modern technology in palliating cancer pain (Seely and Mount 1999).

VI. Surgical and interventional radiological approaches to cancer pain (Simpson and Budd 2000)

A. Recognize that some types of surgery can provide analgesia for those with cancer, e.g., repair of bowel obstruction, stabilization of pathological fracture, and vertebrectomy for metastatic disease.

B. Know about patient preparation. Realize the importance of adequate explanation and consent when considering surgery in this situation.

C. Be aware of the common neurosurgical procedures that may be useful for cancer pain, e.g., rhizotomy and cordotomy. Know about ventricular drug delivery. Know the indications and risks for these procedures.
VII. Neurostimulatory approaches to cancer pain (Hansson and Lundberg 1999; Simpson 1999)

A. Know that some noninvasive or minimally invasive stimulatory approaches, including counterirritation, transcutaneous electrical nerve stimulation, and acupuncture, are used empirically for some patients with cancer pain. Know that a strong evidence base does not support these interventions at present.

B. Recognize that invasive neurostimulatory approaches, including spinal cord stimulation and deep brain stimulation, are rarely used for cancer pain.

VIII. Physical therapy for cancer pain (Doyle et al. 1998; Wall and Melzack 1999; O’Gorman and Elfred 2000)

A. Know that physical therapy can be useful in cancer pain management, e.g., prevention of secondary painful myofascial or joint complications in patients with weakened limbs.

B. Recognize that physical modalities, such as the use of heat or cold, can be used to treat some patients with cancer pain.

IX. Psychological approaches to cancer pain (Doyle et al. 1998; Breitbart et al. 1999; Skevington 2000)

A. Recognize the range of psychological and psychosocial concerns that may be identified through a comprehensive assessment. Know about the need to select therapy appropriately.

B. Know that psychiatric disorders, most often depression and anxiety, are common in those with cancer pain.

C. Recognize that caregivers also suffer distress.

D. Recognize the importance of spiritual problems in some patients and families (Stoter 2000).

E. Be aware of the types of problems that should be referred to mental health care providers.

F. Be aware of the cognitive interventions, such as relaxation training, that may be used to improve pain control or coping with pain. Recognize that some patients with cancer pain can benefit from these techniques (Carroll and Seers 1998).

X. Special populations with cancer pain

A. Be aware of the needs of children with cancer pain. These include age appropriate assessment techniques, appropriate staff training and availability of interventions for procedure related pain. Be aware that there is a lack of specific research into cancer pain in children. Know about appropriate drugs and adjustment of doses for age and weight. Know the use of drugs not licensed for use in children. Know the use of nondrug pain management therapies. Know the psychological adaptation of the dying child and his or her family (Doyle et al. 1998; World Health Organization 1998b; Berde and Collins 1999).

B. Be aware of the needs of those with learning difficulties with cancer pain. Know about the difficulties in assessment and communication.

C. Be aware of the needs of the elderly with cancer pain. These include psychosocial concerns and changes in drug selection and dosing associated with age related variation in pharmacokinetics and pharmacodynamics. Know the importance of cognitive impairment in the elderly. Know the effects of comorbidity on drug handling and the problems of polypharmacy.

D. Be aware of the needs of problem drug users. These may include the requirement for closer monitoring of drug use and the increased likelihood of undertreatment. Know how to manage drug withdrawal. Know when to refer to appropriate specialists in addiction medicine.

E. Be aware of possible cultural differences in the presentation of painful disease, reaction to life-threatening illness, and response to therapies.
F. Be aware of the issues of adequate explanation and consent in these groups.

XI. Ethical issues (Ashby and Stoffell 1998; Randall and Downie 1999)

A. Understand that the acceptable ratio of benefit to burden in the therapeutics of cancer pain may vary according to the stage of illness.

B. Critically appraise the ethical issues regarding physician-assisted suicide and euthanasia.

C. Know about the doctrine of double effect, including the fundamental importance of intent, when prescribing in end-of-life care.

REFERENCES


