Difficult Cases in Pain Management:
Use of Methadone in a Multifactorial Approach

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Cancer pain management is a crucial aspect of patients’ quality of life. During the course of the disease, patients with cancer may develop difficult pain management problems that do not respond to interventions that use the basic principles of pain management. Ongoing assessment, multiple approaches, and excellent communication among all care management team members are critical. Pain management goals must be continually evaluated, reestablished if necessary, and negotiated by patients and the team. Difficult pain management cases demand the involvement of all team members, especially patients, to assist in determining acceptable approaches. Nurses must recognize the challenge, advocate for better management, and provide ongoing assessment. Ultimately, pain management outcomes are determined by nursing advocacy. Through nurse leadership, suffering is minimized and quality of life is improved for this patient population.

Or too many patients with cancer, pain requires as much effort to effectively control as it takes to manage the disease. MacDonald (2003) defined a difficult patient as one who does not assume the role expected by the healthcare provider, differs from the caregiver in beliefs and values, and causes the caregiver to experience self-doubt. Patients labeled as having “difficult pain management syndromes,” that is, the outcomes of management are not those expected by providers, have many of MacDonald’s proposed characteristics. They represent a wide spectrum of pathologies and psychological issues. The complexity of their pain management requires ongoing expert assessments, participation by practitioners from multiple disciplines, and consistent use of nonpharmacologic interventions. Goal setting must be done in the context of understanding who a patient is and the meaning of pain in his or her personal experience. Difficult pain management cases require up-front multidisciplinary communication, consistent care providers, and a team committed to using all possible tools appropriate and available to patients. Key concepts of care, based on the authors’ experience, are

- Recognition that pain is a multifaceted experience involving not only a tissue damage response but also a suffering and existential component
- Ongoing assessment and reassessment of the different etiologies of a patient’s pain and the effectiveness of interventions
- Consistent use of analgesic principles and nondrug approaches
- Emphasis on the patient’s—not the healthcare team’s—goals
- Skilled patient-healthcare provider communication.

Difficult cases may begin with seemingly uncomplicated pathologic conditions such as breast cancer with bone metastasis. Complex psychological issues may override the pathologic component of the diagnosis and hinder pain management. Assessing the meaning of the pain experience to a patient is one of the most critical parts of formulating a plan of care. The assessment requires the establishment of trust in care providers. This requires a commitment of time because trust must be earned.

At a Glance

- Difficult cases in pain management demand use of a broad spectrum of team members from appropriate disciplines. If these disciplines are not available in a particular clinical setting, a referral elsewhere may be necessary.
- Patient education must be done in the context of who the patient is.
- Goal setting by the patient, not the team, is critical. The team educates the patient with information as to what is believed to be medically possible.

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Clinical pain management begins with a clear understanding of the etiology and pathology of a patient’s basis for pain. Assessment includes a physical examination, medication history, and critical descriptive aspects of the physical and psychosocial pain. An intensity scale appropriate to the age, cognitive ability, and cultural background of the patient is used to determine baseline intensity and monitor the effectiveness of interventions. As the assessment is completed, a team approach should be used to examine the information and assist with developing a plan of care that is acceptable to the patient. The team may be complex, involving many specialists and care providers, or more limited, involving minimal specialists and basic care providers. When pain management is complex, it requires an interdisciplinary team that consists of providers such as an advanced practice nurse, anesthesiologist, rehabilitation medicine physician, physical or occupational therapist, psychosocial support specialist, pharmacist, and others. Maximizing the resources available is critical. The patient remains the center of the team throughout the management process.

Three clinical cases are presented in this article to illustrate the complexity of assessment and management of pain that nurses frequently encounter in their day-to-day clinical practice and to explain why input from a multidisciplinary team is important. Two of the cases presented include the use of oral methadone, perhaps reflecting the increasing use of methadone in many cancer centers, especially when neuropathic pain is a key component of difficult-to-control pain or if patients have had unmanageable adverse side effects while receiving other opioids.

Case One
Intractable Pain: Where Do We Start?

Patient history: Mrs. J is a 50-year-old patient with widely metastatic colon cancer involving the bones. Her physician recently stopped her chemotherapy regimen because it was causing more burden than benefit to her quality of life. She has been experiencing increasing pain despite taking 300 mg of extended-release morphine every eight hours. Her breakthrough medication is 30–60 mg of immediate-release morphine every two to three hours as needed for pain. Presently, she requires seven breakthrough doses daily. Her pain is currently a 6 on a 0–10 scale at rest and an 8 on movement; the pain is located in her lower abdomen with occasional radiation to her coccyx region. Her baseline pain is constant and aching in nature.

Despite frequent opioid titration, Mrs. J reports ongoing problems with opioid-related side effects, including occasional nausea, fatigue, sedation, decreased activity, and constipation. She is on an aggressive bowel regimen. Presently, she is taking 10 mg of methylphenidate (Ritalin®, Novartis Pharmaceuticals, East Hanover, NJ) twice a day to combat sedation and fatigue with minimal benefits. She is reluctant to increase her dose of Ritalin because she may feel “wired.” Mrs. J reports that her quality of life has been affected significantly in a very negative way by the pain and symptoms she experiences constantly. She says that she has undergone periods of severe depression. She describes tremors in her extremities that are myoclonic jerks probably related to accumulation of the morphine metabolite.

Interventions

Clearly, Mrs. J is experiencing poorly controlled pain and dose-limiting side effects related to her analgesic regimen. However, her disease process cannot be ruled out as a contributing factor to the perceived dose-limiting issues that include nausea, vomiting, myoclonic activity, and sedation. Team strategies were to:

- Review the status of disease and factors that may influence drug metabolism and accumulation of active metabolites.
- Review the goals of care.
- Review treatment options.
- Review previous opioid rotation, including drugs, doses, routes, effectiveness, and adverse effects.
- Review the management of side effects such as sedation, nausea, fatigue, and constipation.
- Discuss potential benefits or burdens of invasive therapies.
- Review the use of coanalgesics.
- Perform a psychosocial evaluation, including patient and family concerns and avenues for additional support.
- Consider nonpharmacologic interventions.
- Consider a family meeting to review the previous strategies.

Evaluation of disease progression always should be considered if opportunities for treatment exist. Mrs. J may benefit from radiation therapy if appropriate to her pain locations and likely responsiveness to radiation therapy. If maximum radiation dosages to the areas have been reached, further radiation may not be possible. However, exceptions occasionally are made based on goals of care, closeness to death, and likelihood that radiation therapy will produce rapid pain relief. Although chemotherapy has been stopped, could palliative chemotherapy be used to help decrease pain? If a patient has days or weeks to live, benefit versus burden of each approach always must be considered.

Opioid rotation should be considered when intractable pain exists despite aggressive titration and severe side effects, as well as if previous opioid rotation has not included methadone, long-acting oxycodone, hydromorphone, or a fentanyl patch. With the exception of methadone, where an even lower starting dose of the drug may be used, opioid rotation usually is initiated with a starting dose of the new drug at 50% of the previous equianalgesic dose if a patient’s pain is well controlled or he or she has dose-limiting side effects. This allows for cross-tolerance and a greater sensitivity to the effects of the drug. However, Mrs. J’s pain is not well controlled because she requires seven breakthrough doses daily. Opioid rotation with a conversion to an equianalgesic dose of the new opioid would be appropriate. Remember that the first dose of the new drug is an estimated figure. The only way to know if the dose is correct for a patient is to reassess for adequacy of pain relief and reduction of opioid-related adverse side effects—the reason for the rotation. Methadone should be considered when swallowing pills is an issue, medication cost is a concern, or neuropathic pain is present (Gazelle & Fine, 2002).

If methadone is used, it also could address the neuropathic component of Mrs. J’s pain (Paice, 2004). Methadone may be initiated first rather than adding a coanalgesic to keep the analgesic regimen as simple as possible. A coanalgesic, such as a tricyclic antidepressant, can be added for the neuropathic component of the pain if methadone is ineffective. Methadone titration demands careful monitoring because of the long half-life of the drug and the likelihood of drug accumulation resulting in sedation.
Figure 1 provides guidelines for converting from oral morphine to oral methadone. Because the current dose of extended-release morphine is 300 mg every eight hours, a starting dose of 30 mg of methadone every eight hours would be fairly comparable (Manfredi & Houde, 2003). Close monitoring, assessment, and reassessment of the amount of pain relief obtained and the presence of side effects are critical. Clinical experience suggests that during the titration period of methadone, cautious concern for dosing should reflect the knowledge of the long half-life of the drug and concern for patient sedation. This is different for other opioids where short half-lives of the drugs lower the risk of drug accumulation. More detailed information on methadone dosing can be found in the resources listed in the bibliography.

Clearly, certain individuals tolerate certain opioids differently, and some develop side effects. Mrs. J appeared to have myoclonic jerks from the morphine; therefore, opioid rotation to relieve the side effect should be considered. Ritalin can offer excellent benefits for sedation, fatigue, and depression, and further titration may help improve Mrs. J’s quality of life. The titration of Ritalin may be delayed pending the change of opioids and the outcomes they produce. If Ritalin is causing Mrs. J to feel “wired,” modafinil may be a useful alternative. Although Mrs. J has been on an aggressive bowel regimen, the treatment should be reevaluated because it is failing.

Invasive therapies always should be considered when individuals are suffering from intractable pain or side effects from analgesic therapies (Coyne, 2003). Such interventions are often forgotten, and yet approximately 10% of patients with pain would benefit from their use. Intraspinal administration delivers opioids or other drugs into the epidural or intrathecal space, placing the drug in close proximity to the receptors in the dorsal horn of the spinal cord. The delivery of drugs via the epidural route accounts for a 10-fold difference in drug requirements; therefore, a patient receiving 100 mg per day of IV morphine needs only 10 mg per day of epidural morphine or 1 mg per day via the intrathecal route to achieve the same analgesia. In addition, other drugs such as local anesthetics may be added to the patient’s regimen via this route (Coyne, Smith, Laird, Hansen, & Drake, 2005). The bibliography provides sources of additional information on invasive therapies.

Coadjutant agents are medications that possess independent analgesic activity or counteract the side effects of analgesics. Mrs. J clearly is suffering from her disease progression and the treatment of her pain. Psychosocial evaluation and support should be available and used. Patients suffering from ongoing pain or symptoms commonly experience depression, and the condition often is missed in cancer treatment. As a patient experiences periods of depression, greater assessment is needed in addition to possible psychiatric intervention. The problem should be evaluated and treated.

Nonpharmacologic interventions are a mandatory component of pain management for each patient. Providers must know and understand the meaning of pain to a patient. All patients benefit from the opportunity to explain the meaning or impact of the pain on their life situations. They also may benefit from simple, nonpharmacologic measures such as deep breathing and refocusing as well as more complex adjunct interventions such as music, art, pet therapy, and massage. A practice standard should be developed indicating that no pharmacologic intervention should ever be offered without a nonpharmacologic intervention being taught, suggested, or demonstrated at the same time.

Case Two

The Challenge of Complex Physiologic and Psychological Pain

Patient history: Mrs. F, a 45-year-old homemaker with three children aged 11–23, was diagnosed with a locally invasive and slow-growing thymoma 10 years ago. Recent tests revealed significant disease involving the right lung extending through the right diaphragm and the right lobe of the liver. The tumor also involved the central diaphragmatic region and the mediastinal chest and extended from the T-6 vertebra to the L-1 without spinal cord involvement or impingement.

Since diagnosis, Mrs. F’s tumor treatment included a right, upper-wedge resection, radiation therapy and implants, and intermittent chemotherapy. Her medical history included type 2 diabetes, asthma, and disease-related depression and anxiety.

Mrs. F’s social history is significant with a history of drug abuse and a son who is on a methadone maintenance program. She is divorced and lives with her 11-year-old son, who has been “acting out at school” and frequently complains of headaches. She has a supportive family and friend network, with two sisters who live nearby, one of whom is her healthcare proxy. Her ex-husband remains involved in his younger son’s life. Religion is extremely important to her. In times of distress, she turns to her faith and church support group as well as her family.

Mrs. F’s pain is located in the right chest wall region and the mid- and lower-right paravertebral regions; it is chronic, and she describes the quality as aching, burning, sharp, and nonradiating. Her average pain score is moderate (5–6 on a scale of 1–10) with occasional brief episodes of lancinating pain rating a 10. Her pain is partially relieved with opioid drugs, but dose escalation

Figure 1. Conversion Ratios: From Oral Morphine to Oral Methadone

Note. Based on information from Manfredi & Houde, 2003.
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Case Three
When Patients Refuse “Standard” Pain Management Approaches

**Patient history:** Mrs. S is a 72-year-old retired schoolteacher. She is not married. She lives alone, except for her dear companion, her dog, but she has two nieces who are available to assist her. She presents to her physician with complaints of severe low back pain, radiating down and around her thigh. A neurologic examination is done, analgesic script is provided, and a referral is made for physical therapy. Although she did not indicate it initially, Mrs. S notes at the end of the clinic visit that she has a mass in her right breast. This unexpected physical finding illustrates the importance of a full physical examination that includes undressing the patient in the setting of pain assessment.

Mrs. S is referred to the breast care clinic. Examination by the surgeon reveals a 4 cm breast mass. Two axillary lymph nodes are palpable. She refuses a mammogram and biopsy. She does consent to spine films, which show vertebral compression. The surgeon suggests that a magnetic resonance imaging test be done, but Mrs. S refuses further workup. A midlevel analgesic is prescribed for pain management. An appointment is made for the following week to review the situation with the patient, family, and surgeon.

**Team concerns included**
- Assessing the need for biopsy
- Determining whether poor pain control influenced Mrs. S’s ability to trust the team and move forward with the diagnosis and treatment of breast cancer
- Building a trusting relationship with Mrs. S.

Mrs. S returned to the clinic three times. Biopsy was presented to her as a way to confirm if, indeed, the mass was breast cancer. If so, surgery and/or noninvasive treatment such as possible hormonal manipulation of the tumor were options. She continued to refuse and decided to allow only pain management as an intervention. However, she would not return to the clinic.

**Issues confronted included**
- No goal for pain management was agreed on.
- Pain assessments were made over the phone only, eliminating a clinical examination component.
Mrs. S refused home nursing care, and during the next 18-month period, some providers were reluctant to prescribe medications for her because she was not being physically assessed regularly.

The patient refused to allow the team to contact her nieces.

Team Approaches

The team agreed that Mrs. S’s pain assessments could be done via telephone. A consistent care provider contacted her to complete the pain assessment no less than once a month. Mrs. S agreed to few dose escalations and used opioids inconsistently despite coaching to use around-the-clock dosing. Nonpharmacologic interventions were used on a scheduled basis and as needed. Mrs. S’s functional status and her ability to care for her companion dog became the barometer of the status of her pain management goal.

When Mrs. S believed that she needed further intervention, she allowed the team to admit her to the hospital, where she continued to struggle with pain management. When she was transferred to an inpatient hospice setting, the same pattern of analgesic care continued, with Mrs. S dictating goals that were difficult for the staff to understand and accept. She was unconscious for the final 72 hours of her life. The staff noted that nonpharmacologic interventions such as the quiet presence of volunteers and staff members, soft lights, and classical music provided the most effective pain relief during the last weeks of her life.

Summary

Difficult cases in pain management are complex. Goals for pain management must be agreed on by a patient and care provider. The patient clearly guides the process. Often the goals of the patient may be far different from those of the care provider and may not be in the realm of the usual acceptable standard. For example, clinicians may set a threshold that pain levels greater than 6 on a scale of 1-10 may require further consultation, review, and a change in the intervention. However, patients may decide that this is not appropriate; provided that they are aware of the impact of their decision, this must be accepted. Patients must be educated about the realm of interventions. Review of these cases with pain experts will ensure that all possible approaches have been exhausted as all care providers continue to support patients along the disease continuum.

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References


Bibliography


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