



# PAIN

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## Pain Control Near the End of Life

Assessment and management of pain are crucial to the successful care of dying patients and their families. Pain must be controlled if dying patients are to identify and fulfill social, psychological, and spiritual needs, to complete life reviews, and to pass on their legacies. Pain must be controlled if families are to say their goodbyes and recover from their grief, rather than dwell on memories of a loved one in agony.<sup>1</sup> The case of Madeline (a fictional patient) illustrates many of the challenges that face a consultant who is asked to “manage the pain” of a cancer patient near the end of life.

### Case History

Madeline, a 35-year-old woman with recurrent cervical cancer, was admitted for pain control. She had a radical hysterectomy 3 years ago, followed by radiation therapy. One year later the tumor recurred in her pelvis. She initially responded to chemotherapy, but her most recent MRI, one week ago, showed enlargement of her extensive pelvic and retroperitoneal tumor; her oncologist feels it is now refractory to all therapies.

She rates her pain as “15+” on a 0–10 scale. The pain is deep in her pelvis, sacrum, and buttocks and travels down the back of both legs. It is a constant, severe, gnawing ache. She has not been able to sleep, and her husband reports that she is difficult to get along with. Sitting for any length of time makes the pain worse, and she can no longer sit through weekly religious services. She has little appetite and is constipated. Recently, after her latest increase in morphine dose, her family reports that she is seeing things no one else sees and is agitated at night.

Medications include sustained-release morphine (300 mg every 8 hours), immediate-release morphine (90 mg as needed), gabapentin (900 mg three times daily), rofecoxib (25 mg daily), senna and stool softener (three tablets three times daily), and polyethylene glycol powder (taken at bedtime as needed as a laxative). She uses a heating pad at night.

Madeline, the only child of frail, elderly parents, has three children (aged 13, 10, and 5 years). An elementary school teacher, she has been on disability since her chemotherapy began. She has not attended her weekly book club in the past month.

Madeline is lying quietly and has normal vital signs, but appears tired. Her physical examination, including a neurological examination, is normal except for a surgical scar.

## UPCOMING ISSUES

**Chronic Pain Prevalence**  
**Pain Control: a Human Right?**  
**Depression and Pain**

## Multidisciplinary Assessment

Madeline has neuropathic and somatic pain from the tumor, probably exacerbated by her constipation.<sup>2,3</sup> She is likely to benefit from a switch to methadone from morphine, or if that fails, from the addition of ketamine. Alternatively, a spinal catheter delivering analgesics may help control her tumor-related discomfort.<sup>4</sup> But in addition to physical factors, social, psychological, and spiritual well-being are needed if she is to have improved quality of life and diminished distress.<sup>1,5</sup> If these dimensions are not addressed, she may continue to complain of “pain” even when she is somnolent and barely rousable from her analgesics.

***Pain must be controlled if dying patients are to identify and fulfill social, psychological, and spiritual needs, to complete life reviews, and to pass on their legacies.***

### Social Distress

Cassell, in *The Nature of Suffering and the Goals of Medicine*, describes the dimensions of personhood that illness can strip away.<sup>6</sup> Suffering occurs when we lose any aspect that we regard as core to our personhood. Someone may have a private life, a secret life that no one else knows about, a role as a family member, a work life, a public life, and a spiritual life. To Madeline, her roles as mother, homemaker, and teacher were key to who she was. As she became weaker, with advanced disease and pain, she lost her ability to fulfill these roles. She is ashamed of needing to go on disability and of the financial strain this has caused the family. Anguished about leaving her children, she also is concerned about who will care for her parents.

Her relationship with her husband has been difficult since her diagnosis. He felt she was “no longer a whole woman” after the hysterectomy. He stayed with her because he knew that this kind of cancer may be caused by a sexually transmitted virus and felt guilty because Madeline has had no sexual experience outside their marriage.

Madeline and her family clearly need help from a social worker who can also assess their financial and personal resources, sources of support, coping skills and styles, family dynamics and tensions, and financial concerns.

### Psychological Distress

Madeline hates being a burden. In her birth family, dependency was considered shameful. She worked very hard to be an equal partner in her marriage. She now wonders what use she is to anyone, and more importantly, who she is now. The limitations imposed by her pain have stripped away her previous sources of strength and coping strategies (her women friends, book club, and church), and she has nothing to replace them. Lately, after the morphine dose was increased, she has been less able to concentrate and fears she is losing her mind.

Madeline may be suffering from anxiety, depression, and an opioid-related delirium, all of which can exacerbate her pain. It can be difficult to discern which dying patients are depressed. Typical somatic signs of depression (e.g., anorexia, sleep distur-

bances, fatigue, or weight loss) are not helpful indicators because they may be due to the advanced illness.<sup>7</sup> Depressed dying patients, however, feel sad, cry, are unable to get pleasure from any activity, and feel worthless, guilty, hopeless, or helpless.<sup>7</sup> Madeline has expressed many of these sentiments. Terminally ill patients responding “Yes” to the screening question “Are you depressed?” are very likely to be confirmed as depressed in a more comprehensive evaluation.<sup>8</sup> Useful follow-up questions include: How do you see your future? What do you imagine is ahead for yourself with this illness? What aspects of your life do you feel most proud of? Most troubled by?<sup>7</sup>

### Delirium and Pain

Madeline must also be assessed for delirium because she is having hallucinations, is easily distractible, and has difficulty concentrating. Other signs of delirium include insomnia and daytime somnolence, nightmares, restlessness or agitation, irritability, hypersensitivity to light and sound, anxiety, difficulty in marshaling thoughts, fleeting illusions, delusions, emotional lability, attention deficits, and memory disturbances.<sup>9</sup> In some patients, the delirium presents as rapidly escalating pain that resolves when the delirium is treated.<sup>10</sup> Patients with delirium may cry out, be restless, pick at bed sheets, and constantly appear uncomfortable. Families may ascribe these symptoms to uncontrolled pain, but they are manifestations of delirium, which affects up to 80% of dying patients.<sup>11</sup>

Delirious patients can be agitated, hypoactive, or switch between the two.<sup>9</sup> A comprehensive psychiatric evaluation can detect delirium and exclude other disorders such as anxiety, minor depression, anger, dementia, or psychosis. Experienced hospice personnel can often make the diagnosis in a patient at home or in a nursing home if no psychiatric clinician is available.

The exact cause of delirium is found in only about 43% of cases, and the etiology is often multifactorial.<sup>12</sup> Medical causes include metabolic abnormalities (hypercalcemia, hyperglycemia, uremia), malnutrition, dehydration, hypoxia, fever, infection, uncontrolled pain or hepatic failure, primary brain tumor, and brain metastases.<sup>12</sup> Medications, especially opioids, nonsteroidal anti-inflammatory drugs, and high-dose corticosteroids, often contribute to delirium.<sup>9,13</sup>

High doses of opioids, especially after rapid dose escalation, can cause central nervous system (CNS) toxicity that presents as hyperalgesia: the patient is delirious, hypersensitive to touch, and myoclonic.<sup>14</sup> Patients have developed this complication when clinicians, confusing the earlier stages of opioid-induced delirium with increasing pain, administer even higher opioid doses. In some patients, sedation is required either for myoclonus, seizures, or uncontrolled anguish until the syndrome responds to appropriate therapy.<sup>15</sup> Opioid-induced CNS toxicity is more common in patients with renal dysfunction, those taking high doses of opioids or other psychoactive drugs for long periods, those with impaired cognition before starting opioids, and those with dehydration.<sup>16</sup>

***Pain must be controlled if families are to say their goodbyes and recover from their grief, rather than dwell on memories of a loved one in agony.***

**Table I**  
Assessment of spiritual distress

***Indicators of Spiritual Distress***

Questions meaning or purpose of illness, pain, life itself.  
Asks, “Why me?”  
Expresses hopelessness, despair.  
Withdraws from or loses relationships.  
Is grieving.  
Cannot accept change, loss.  
Expresses feelings of abandonment by religion or God.  
Feels anger at God.  
Feels guilty, deserving of punishment.  
Feels bad, sinful, unlovable.  
Is anxious about hell or the afterlife.  
Questions the moral or ethical implication of therapies.

***Questions to Ask***

Do you feel at peace with the changes in your life that have come about because of your illness?  
Are there any religious activities or practices that have been interrupted because of your illness?  
Pain is a hard thing physically. Has it been a hard thing for you spiritually?  
Would you like to speak with someone about your spiritual concerns?

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*Source:* These indicators are based on, but not confined to, the North American Nursing Diagnosis Association’s Diagnosis of Spiritual Distress (personal communication from J. Ehman, K. Wieser, R. Ciampa, and J. Abraham).

***Spiritual Distress***

Not only has Madeline been unable to share in the community of her church, but her faith in God has been severely shaken. She asks herself what kind of sin she could have committed for God to punish her with such relentless, excruciating pain. She spends hours searching her past, praying by herself, and looking for answers. She sometimes feels furious with a God that would force her young children to grow up without her.

***Depressed dying patients feel sad, cry, are unable to get pleasure from any activity, and feel worthless, guilty, hopeless, or helpless.***

Madeline is also aware of how sick she is, how close to death. She is only 35. What has she accomplished in her life? What did it mean? How can she leave her mark in the short time she has left? How can she connect with those she loves so she will feel less alone and unsupported?

Dying patients like Madeline are in special need of assessment for spiritual or existential distress, which both causes pain and exacerbates other painful conditions. Indicators of spiritual distress and direct questions clinicians can ask to detect it are listed in Table I.

**Comprehensive Treatment**

The pain from the tumor is contributing to Madeline’s social, psychological, and spiritual distress. Uncontrolled pain is a major risk factor for depression and suicide.<sup>7</sup> Control of physical and psychological suffering, therefore, is key if patients and caregivers are to address the other dimensions of their lives, and to minimize the suffering of bereaved survivors.<sup>17</sup>

***Sedation for Refractory Symptoms***

Madeline has several options left for pain control.<sup>18,19</sup> But should her pain become refractory to all measures, it may be necessary to administer opioids or other agents at doses that induce profound sedation to achieve adequate pain relief. It is by no means certain that opioids hasten a patient’s death.<sup>20</sup> Patients chronically receiving opioids may become tolerant to their respiratory depressant effect,<sup>20</sup> and opioids appropriately titrated to symptom relief do not induce death.

The American College of Physicians holds that it is ethical to provide analgesia—even at the risk of hastening death—as long as the patient or health care proxy gives informed consent, and the physician’s intent is to relieve pain and suffering, and not to shorten the patient’s life.<sup>21</sup> According to the ethical doctrine of “double effect” the physician may increase pain medication for a legitimate purpose (the relief of pain) despite the risk of an unintended consequence (the shortening of life) and not bear responsibility for the latter.<sup>22</sup>

Families may be concerned that by providing or allowing administration of an opioid, they are hastening the death of the

patient. Catholic patients may be reassured that the Catechism supports the relief of pain, even if as an unintended result, the patient dies.<sup>23</sup> Most Jewish and Islamic teachings also support the relief of pain in this manner.<sup>24</sup> Buddhists, however, may feel that clouding of the senses interferes with the work the dying need to complete, and may choose not to receive or give opioids for terminal pain control.<sup>25</sup>

### Management of Opioid-Induced Side Effects

Opioid-induced side effects, particularly obstipation and delirium, must be prevented or treated aggressively in patients near the end of life. Impaction itself can cause delirium in dying patients. Myoclonus is usually more troubling for families than for the patients themselves; it often resolves with a change of opioid,<sup>26</sup> but if it persists clonazepam (0.5 to 1 mg orally at sleep or 0.5 mg orally two to three times daily) is often effective. If sedation is a concern, baclofen (5 mg orally three times daily, increased as tolerated to as much as 20 mg per dose), can be given so long as oral medications are tolerated. In terminal patients with refractory myoclonus, intravenous midazolam (1 to 7 mg/hour) can be used.<sup>27</sup>

### Addressing Social Causes of Distress

Social workers play many valuable roles in caring for patients like Madeline and her family. They can help address the financial concerns and unresolved family issues that contribute to Madeline's suffering. They can address her fears about her parents and children, work with the school counselors to be sure

the children get the help they need, and identify other counseling resources specific for each child. The social worker will counsel Madeline, her husband, and her parents, provide education in coping skills and strategies, and help Madeline to come to terms with impending death. He or she will determine whether Madeline or her family need more intensive psychological support.

Caregivers of patients with advanced disease, especially spouses, are at risk of increased mortality following the spouse's death.<sup>28</sup> The social worker can help Madeline's parents and husband explore their concerns about caring for her, and may alleviate Madeline's worry that she will be a burden or that they will not be able to meet her needs. Such worries can lead patients to request physician-assisted suicide.<sup>29</sup>

### Addressing Psychological Causes of Distress

Treatment of depression is often very effective even in patients with advanced disease.<sup>30</sup> Counseling focuses on providing emotional support and helping patients review their lives and find the meaning and areas of accomplishment in them. Patients also benefit from antidepressants.<sup>7</sup> Selective serotonin uptake inhibitors (SSRIs) are the first choice when immediate onset is not needed, as they may take several weeks to act. Suggested daily oral dose ranges are: sertraline 12.5–25 mg initially to a maximum of 200 mg; fluoxetine 5–10 mg, maximum 60 mg; paroxetine 10 mg, maximum 60 mg; and citalopram 20 mg, maximum 60 mg. Supplemental venlafaxine (37.5 mg twice a day, maximum 375 mg) can be helpful in certain cases. The

**Table II**  
Drugs to treat delirium

Drug	Dose	Comment
Haloperidol	0.5–5 mg p.o., i.m., s.q., i.v.†; repeat q2–12 h as needed	Do not exceed 20 mg in 24 h. Maintain the patient on the effective dose (divided into a b.i.d. dose) for 3–4 days, then taper over 1 week, as tolerated.
Risperidone	0.5–3 mg p.o. b.i.d.	Start 1 mg p.o. b.i.d. (0.5 mg in elderly).
Quetiapine	25–250 mg p.o. t.i.d.	Particularly useful in elderly patients with evening delirium. Start 25 mg h.s.
Olanzapine	5–20 mg p.o. q.d.	Start at 2.5 mg in elderly. Available as soluble oral wafer.
Chlorpromazine	25–50 mg p.o./i.v./p.r. q6–8 h	Sedating; in very agitated patients, may give q1 h until sedated.
Lorazepam	0.5–2 mg q1–4 h	Add to haloperidol for patients with an agitated delirium. Available as soluble oral tablets. Tablets can be used p.r. for terminal delirium.
Diazepam	10–30 mg	Useful p.r. for patients unable to take oral medication.
Clonazepam	0.5–6 mg b.i.d./t.i.d.	Tablets have been used p.r. for terminal delirium. Do not exceed 20 mg/24 h.
Midazolam	30–100 mg over 24 h	Intravenous drip or subcutaneous infusion for terminal delirium.

† Oral doses are half as potent as parenteral doses.

psychostimulants dextroamphetamine and methylphenidate (2.5–5 mg at 8 am and noon, maximum dose 60–90 mg) often act within a few days.<sup>31</sup> If the patient is expected to live longer than a few weeks or months, a stimulant and an SSRI should be started simultaneously, and the stimulant can be tapered several weeks later. Tricyclic antidepressants are less useful in patients with advanced disease because of their adverse side-effect profile.

Treatment for delirium should begin while efforts are made to eliminate the underlying cause(s). In addition to the medications listed in Table II, it is helpful to make the patient's surroundings as familiar as possible, restore hearing aids and corrective lenses if they are needed, reorient the patient frequently, and ensure that family members, friends, or well-known caregivers are present as much as possible. Mild opioid-induced cognitive disturbances (e.g., nightmares, illusions, and hallucinations) often resolve when one opioid is replaced by another.<sup>32</sup>

If the patient does not respond to first-line agents for depression or delirium, a psychiatrist should be consulted. Referral to a psychiatrist is also necessary when the physician is unsure of the diagnosis; when the patient is psychotic, confused or delirious; when the patient previously had a major psychiatric disorder; when the patient is suicidal or requesting assisted suicide; or when family dynamics are dysfunctional.<sup>7</sup>

### ***Addressing Spiritual Sources of Distress***

Patients like Madeline need spiritual counseling and forgiveness if their suffering is to be ameliorated.<sup>33</sup> A specially

trained chaplain can discuss her feelings of abandonment by God, of punishment for unknown offenses, her fear of death or the afterlife, or her need for prayer or sacraments, and remind her of the forgiving nature of God. Other patients may need to confess, or even to have a wedding ceremony in the hospital room. For some, Byock's "Five things of relationship completion" are sufficient: "I forgive you," "Forgive me," "Thank you," "I love you," and "Good-bye."<sup>34</sup>

Chaplains of all faiths can also enhance hope, help families view health care as part of what they believe is ultimately God's healing role, and sustain them and their faith when physical healing is no longer possible. Many can provide comforting religious rituals such as meditation, prayer, sacraments, or reading of sacred texts, when the patient cannot participate in public religious services. They can also ascertain which rituals are important to those patients nearing the end of life, and communicate these to the other staff working with the patient and family.

### ***Palliative Care Consultation Teams***

When available, anesthesiologists can partner with hospital-based palliative care teams to provide effective interventions such as celiac plexus block<sup>35</sup> or spinal drug infusions.<sup>4,36</sup> Palliative care teams, which may include nurses, physicians, social workers, and chaplains, can address all the domains of distress discussed above.<sup>37</sup> These teams have positive effects on physical symptoms, and, with a palliative care unit, can decrease hospital costs and resource utilization.<sup>37</sup>

**Table III**

Hospice misconceptions and truths

***Patients enrolling in hospice programs must agree not to be resuscitated.***

Patients need not relinquish resuscitation to enroll in a hospice program. In the United States, for example, for a patient to elect the Medicare Hospice Benefit, the referring physician and the hospice medical director must both certify that the patient is terminally ill and has a likely life expectancy of 6 months or less, and the patient or an appropriate health care proxy must file an election statement with the selected hospice program agreeing that the hospice benefit will replace standard benefits.

***Patients enrolled in hospice programs lose their primary physicians.***

The referring physician continues to direct and approve patient's care.

***Patients receiving hospice care cannot be hospitalized and remain enrolled in hospice programs.***

Hospice programs are required to provide acute care hospitalization if needed for control of a distressing symptom or to meet exceptional bedside care needs related to the terminal illness.

***Patients receiving hospice care cannot volunteer to participate in research projects while enrolled in hospice programs.***

Most hospice programs encourage patients to participate in research so long as the project is consistent with the mission of hospice care.

***Nursing personnel in hospice programs do not provide sophisticated care.***

Nurses who work in hospice programs provide expert palliative care, including home oxygen, tracheal suctioning, enteral feeding, and intravenous therapies when appropriate.

***Patients must have a live-in caregiver to enroll in a hospice program.***

Many hospice programs care for "live-alone" patients, employing special protocols to enhance their care and safety.

## Hospice

Madeline is already receiving intensive home care,<sup>38</sup> but she is likely to benefit from a hospice program. Hospice programs can provide comprehensive care for patients and families, address the physical, social, psychological, and spiritual sources of distress that arise at the end of life, and support bereaved families after the patient's death. Some patients who would be good candidates for hospice care resist enrollment due to misconceptions about hospice programs rather than from any desire to pursue further treatments (Table III).

## Summary

Clinicians who wish to relieve the pain of their patients with cancer must explore and address all dimensions of distress. Ideally, they will have the help of a team of skilled practitioners who together will assess and confront the patient's physical, social, psychological, and spiritual sources of suffering. Once suffering is minimized, the team can turn its efforts to helping patients create legacies, bring about closure, and fulfill their final goals.

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