Commentary (Grossman/Nesbit)—Opioids in Cancer Pain: Common Dosing Errors

By Stuart A. Grossman, MD [2] and Suzanne A. Nesbit, PharmD [3]

Drs. Kochhar and coauthors are to be congratulated for providing concrete examples of opioid dosing errors that contribute to inadequate management of cancer pain. As the authors note, controlling cancer pain is far more complicated than the World Health Organization’s three-step ladder of nonsteroidal antiinflammatory drug (NSAID)/aspirin, codeine, and morphine would suggest.

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Pain Assessments

According to available data, physicians and nurses have difficulty recognizing the intensity of the pain that their patients are experiencing.[1] Therefore, it is imperative that healthcare providers obtain quantitative pain-intensity information to provide optimal therapy to patients with cancer pain. Collection of this information is feasible in busy inpatient and outpatient medical oncology and radiation therapy facilities.[2]

The etiology of the pain must also be assessed. Although opioids may provide some relief to a patient with an epidural cord compression, the addition of glucocorticoids and radiation is highly likely to improve analgesia and prevent paralysis and permanent bowel and bladder incontinence. Adjuvant medications, laxatives, antiemetics, and stimulants are also integral components of therapy.

Beyond Pharmacologic Measures

Not all patients can be optimally managed with only systemic opioids. A recent study suggests that 10% to 30% of cancer patients will not achieve adequate pain control with pharmacologic therapy alone.[3] In selected patients, invasive procedures can play a critical role in optimizing pain control. For example, a patient with epigastric pain from pancreatic cancer may be better served by a neurolytic block of the celiac plexus than high doses of systemic opioids. Intraspinal analgesia has also recently been demonstrated to improve analgesia and decrease the adverse effects of opioids in cancer patients with refractory pain.[4]

Education of patients and family members is also crucial. The most enlightened prescribing will not achieve its goal if patients and family are not counseled about the importance of good pain control, the potential toxicities of the drugs, and the data that these agents are highly unlikely to result in drug addiction. Efforts to educate patients, simplify their analgesic regimen, and use less expensive drugs will lead to increased patient compliance.

Opioid Conversion

The difficulty that health-care providers have converting from one opioid or route of administration to another has been a major interest of ours. Our initial studies documented that even with the appropriate pages from the Washington Manual and the Physicians Desk Reference, house officers at the Johns Hopkins Medical Institutions were incapable of accurately converting hypothetical patients from one opioid regimen to another.[5] Experienced oncology nurses were also unable to recognize major physician opioid prescribing errors.[6] The availability of opioid conversion algorithms and nomograms did not have a significant impact on the clinical performance of our physicians and nurses.[7] However, opioid conversion software for the Comprehensive Cancer Center's clinical computer system has brought physicians, nurses, and pharmacists from throughout the institution to these terminals.
As a result, we recently released opioid conversion software for the Palm operating system that can be downloaded from the Internet free of charge at www.hopkinskimmelcancercenter.org/specialtycenters/hop.cfm.[8] We are using this to educate medical students, residents, and fellows on appropriate opioid prescribing in the cancer center, knowing that they will take this software with them as they move throughout the institution. Versions for Windows CE handheld organizers and Windows desktop computers will be available shortly through the same website.

Unfortunately, equianalgesic opioid conversions are more difficult than they appear on an equianalgesic chart or opioid-converting software. Incomplete cross-tolerance complicates opioid rotation and requires that any conversion be followed by careful reassessment of the patient. Methadone and transdermal fentanyl pose other challenges. Methadone's potency appears to be nonlinear as the opioid dose increases.[9] This has led to a recent publication documenting the potential complications of rotating from methadone to another opioid.[10] Conversions involving transdermal fentanyl are also difficult because of the long onset and offset of the delivery system and the poorly studied conversion factors related to this agent.

Conclusions

The authors of this manuscript have appropriately reminded readers of practical solutions to common opioid prescribing errors. Appropriate analgesia also relies on careful assessment of the pain, appropriate use of ancillary medications and invasive procedures, and optimal patient and family education. These, and other fundamental components of cancer pain control, are encompassed in the National Comprehensive Cancer Network (NCCN) Cancer Pain Practice Guidelines, which are available on the Internet at www.nccn.org.[11] As illustrated above, additional research is required in the areas of opioid rotation, equianalgesia, and cross tolerance to continue to improve our ability to provide patients with optimal analgesia.

Disclosures:
The author(s) have no significant financial interest or other relationship with the manufacturers of any products or providers of any service mentioned in this article.

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