Seeking Drug Treatment for Oxycontin Abuse: A Chart Review of Consecutive Admissions to a Substance Abuse Treatment Facility in Kentucky

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Key Words
OxyContin, oxycodone, prescription opioid abuse, psychiatric treatment

Abstract
The abuse of prescription opioids has been reported to be on the rise and has gained much public attention, especially given the recent media coverage devoted to the abuse of sustained-release oxycodone (OxyContin, Purdue Pharma LP, Stamford, CT). We tracked admissions to our substance abuse program to put OxyContin abuse into perspective as a presenting problem in the region. A total of 258 admissions to a psychiatric facility for opioid dependence over a 15 month period, for the treatment of prescription opioid abuse, were examined in this chart-review study. A total of 162 patients (62.8%) were admitted for problems related to OxyContin, and the remaining 96 (37.2%) were admitted for abusing other prescription opioids (not including OxyContin). Those abusing OxyContin were found to be younger, more often from a rural background, and more likely to be male compared with those abusing other prescription opioids. In addition, more than half met the criteria for an additional chemical dependency diagnosis and had an additional psychiatric diagnosis. Poly-substance abuse, including OxyContin abuse, was a significant presenting problem to our Addictive Disease Unit between October 2000 and December 2001. Although this chart-review study is not designed to be indicative of the epidemiology of OxyContin abuse, it offers some insight into the nature of this phenomenon in a particular region during the height of public attention paid to it. A follow-up prospective study to examine this phenomenon in multiple regions, further away chronologically from the increased media attention, is underway. (JNCCN 2003;1:423–428)

Commentary:
What Oncologists Should Know About Prescription Opioid Abuse and Diversion

The presentation of this study to the readership of JNCCN requires some explanation to address its meaning and relevance to oncologists. We acknowledge that the work included here is not about cancer, but about the abuse and diversion of opioids in general and a specific medication (sustained-release oxycodone) by addicts and noncancer pain patients and in a specific region of the country that was particularly hard hit by this problem. Some readers might question the relevance of this work to clinicians and researchers in oncology generally and especially those outside of Kentucky. However, like the editors of this journal, we believed that oncologists should be educated about the potential scope of this problem and begin to break down the mythology that surrounds the broader issues of abuse of licit and illicit drugs and diversion of drugs involved in cancer pain management. The old mythology stated that addiction was so fearsome and unavoidable that opioids should be withheld until patients were close to death.3 Luckily, progress in pain management education, along with the use of opioids that began in oncology and spread to pain of all types, has lessened this false perception.

However, it is also important to consider another false perception, that oncology patients are immune to problems of aberrant drug-taking, abuse, or diversion, as if cancer pain management happens in a vacuum, protected from the problem of drug addiction and abuse in
society at large. Trivialization of these issues in our rhetoric has served to give oncologists the idea that the problems of drug abuse and diversion can be ignored. How ironic that experiences garnered during the revolutionarily expanded use of opioids in chronic noncancer pain, fueled as it was by observations of the sanguine experience in oncology, can now feedback and educate oncologists. The chronic noncancer pain population is highly diverse and it is no wonder that outcomes in opioid therapy in this group are more varied than those originally reported in the tertiary care cancer population. Importantly, the general and community oncology population also may be more diverse than those patients seen in some tertiary care centers. Cancer patients are living longer, and pain management for them is changing.

Addiction and drug abuse is common in our society. In the general population, 6% to 10% abuse illicit drugs; 15% abuse alcohol; 25% of the population is addicted to nicotine, and 33% of the population has sampled illicit drugs at least once. Given that substance abuse of one form or other is a risk factor for some cancers, it is inevitable that these problems will be seen in a sizable, often labor-intensive, subset of cancer patients. There is no reason to think that abuse rates would be any lower in cancer patients than in the general population, other than the fact that cancer patients tend to be of advanced age (prevalence of addiction does drop with advancing age). However, the focus of drug abuse tends to shift away from illicit drugs and toward pharmaceuticals in older patients, making these issues potentially relevant to our patients.

Prescription opioid abuse has risen sharply since the 1980s, and its prevalence now rivals that of cocaine abuse. Commonly used medications (such as hydrocodone and some benzodiazepines) are abused and diverted more frequently than OxyContin (Purdue Pharma LP, Stamford, CT). Even patients who do not abuse opioids may live in communities where abuse and diversion are problems, and thought must be given to prescribing to patients in the wider world. The outbreak of OxyContin diversion in Maine was apparently set in motion by a cancer patient who was an example of the new breed of “patient dealers.” This patient, who had a bona fide pain syndrome, was obtaining medication from multiple physicians and selling it. The need to monitor such behavior has probably never occurred to many oncologists.

One of the authors (S.D.P.) recently saw a cancer survivor with chronic pain secondary to cancer who had been dramatically self-escalating pain medication and acting erratically. The author spoke to the patient’s oncologist about ordering a Kasper report (in Kentucky, physicians can obtain a report detailing all of the controlled substances patients receive from any physician in the state). He had no idea how to order the report and had never needed to order one before.

Cancer patients, thankfully, are living longer. This may require oncologists to prescribe long-term opioid therapy in ways that they have not before. Assessment of the patient’s potential vulnerabilities (a history of substance abuse) is crucial in prescribing opioid therapy, not as a reason to withhold opioids, but as a rationale for structured care with measured dispensing and close monitoring. This type of management is not typical of cancer pain management but may be needed in some cases. Involvement of pain and even addiction medicine specialists may sometimes be required for patients with significant psychiatric comorbidity and those whose pain management will be conducted in the context of a preexisting substance abuse problem. An assessment of psychiatric, genetic, social, and spiritual factors that could lead to problematic drug-taking behavior should be assessed so that the appropriate structures can be mobilized before problems develop. Perhaps oncologists should know which drugs are abused and diverted in the patient’s community and try to prescribe drugs with a low “street value” in cases in which the patient or family might be expected to have contact with the drug abusing subculture.

A final and important myth to dispel is that drug addiction is an inevitably intractable problem about which oncology staff should be fatalistic. Such therapeutic nihilism often leads to ignoring the issues. Ironically, ignoring the issues allows them to wreak clinical havoc and situations progress in ways that fuel further cynicism. Indeed, our group has had useful and beneficial interactions with patients about drug and alcohol abuse, even near the end of life, with satisfying results.

That studies indicate cancer pain is still undertreated in this country cannot be overemphasized. Being educated and thoughtful about drug abuse and diversion issues is important to assure that pain management continues to become even more available for all of our patients. If it is not, undertreated pain can lead to desperation and drug seeking behavior in some patients (so-called pseudo-addiction), which only con-
continues to confound our efforts to understand these complicated issues. Oncologists may become more confident about their efforts to treat pain if they become truly informed about addiction, drug abuse, and diversion. We hope that our article helps oncologists develop a richer understanding of these issues that they can incorporate into their clinical work.

Study Background
The use of opioids for chronic pain, both malignant and nonmalignant, has been increasing and is viewed as an essential part of pain management. One unfortunate consequence of this expanded use of opioids for pain may be an increased amount of drug available societally for potential diversion and abuse. From 1990 to 1998, new legitimate users of pain relievers increased by 181%, whereas in 1998 about 1.6 million Americans used prescription pain relievers nonmedically for the first time.14 This latter figure represented an increase from the 1980s, when there were about 500,000 first-time users per year. Overall, men and women have similar rates of nonmedical use.7

Significant media attention has recently been given to the abuse of OxyContin. OxyContin is a controlled-release form of oxycodone hydrochloride and is supplied in 10-, 20-, 40-, 80-, and 160-mg tablets. The formulation is designed to deliver 37% of the medication in the first hour and then provide controlled release delivery of oxycodone over a 12-hour period. It is indicated for the management of moderate to severe pain.15 OxyContin is well absorbed orally and has high bioavailability because of a low first-pass metabolism. It is metabolized to noroxycodone, oxymorphone, and their glucuronides and primarily excreted through urine.16

Over the past few years, OxyContin has become an alternative to street drugs such as heroin. Because of its popularity in Appalachia and other rural areas, it has been called “Hillbilly Heroin.” Although it is available as an oral preparation, illicit users tend to crush the tablet to circumvent the sustained release delivery system and then snort it or dissolve it in water to inject the drug. This results in a more rapid onset of mood altering effects that may be contributing to the popularity of OxyContin and the comparison of its use to the cocaine and heroin epidemic of the late 1980s.17

Although the abuse or diversion of this drug was originally thought to have begun in West Virginia and other Appalachian areas, there has been a spread both through Western areas and along the Atlantic seaboard to Maine. It has been most popular east of the Mississippi, with the following states having the most prescriptions of OxyContin per capita in the year 2000: West Virginia, Alaska, Delaware, New Hampshire, Florida, Kentucky, Pennsylvania, Maine, Rhode Island, and Connecticut.18

A study that used the Drug Awareness Warning Network (DAWN), which is sponsored by the Substance Abuse and Mental Health Services Administration (SAMSHA), showed that from 1990 to 1996 the medical uses of morphine, fentanyl, oxycodone, and hydromorphone increased. During that period, a 6.6% increase in the drug abuse mentions per year for opioids in emergency rooms was noted, although a decrease was seen in the proportion of mentions for opioid abuse relative to total drug abuse mentions (from 5.1% to 3.8%). The conclusion of this study was that the trend of increase in medical use of opioid analgesics to treat pain does not appear to contribute to increases in the health consequences of opioid analgesic abuse.19 However, the data for this study were from before the social and media phenomenon of OxyContin abuse.

OxyContin abuse began slightly after its introduction in 1996, hitting full media attention in 2000, and was particularly acute in rural Appalachia.20 Our location, as a referral center for eastern Kentucky, put us in a unique position to examine an aspect of this phenomenon—that is, its prevalence of those seeking treatment—in our psychiatric setting.

Methods
The authors performed a retrospective chart review from a private freestanding psychiatric facility in Lexington, Kentucky, to develop a profile of OxyContin addicts seeking treatment. This facility is affiliated with the University of Kentucky Medical Center, Department of Psychiatry. This study consisted of a 15-month retrospective chart review of inpatient cases of opioid dependence from October 2000 through December 2001. In addition to serving patients from the urban Lexington area, this facility also treats patients from rural areas of Central and Eastern Kentucky. Information was obtained from the admission assessment as well as the discharge summary.
Results

A total of 491 admissions occurred to the Addictive Disease Unit during the 15-month period described previously. Of these, 258 (52.5%) patients were admitted for abuse, including abuse of prescription opioids. This sample of 258 charts was selected for a structured review. The sample included 169 men (65.5%) and 89 women (34.5%). A total of 219 patients (84.9%) were from rural areas, and the remaining 39 (15.1%) were from urban areas. The mean patient age was 34.0 years (SD, 10.6).

Of the 258 charts reviewed, 162 (62.8%) admissions were primarily for abuse of or dependence on OxyContin, and the remaining 96 (37.2%) were admitted for other prescription opioids. Compared with all of the admissions to the Addictive Disease Unit (N = 491), OxyContin abusers accounted for a third of all admissions (n = 162; 33%). Due to this large discrepancy between OxyContin admissions and all other opioid prescription abuse admissions combined, the sample of OxyContin abusers was examined in closer detail.

Profile of Patients Abusing OxyContin

The subgroup of patients abusing OxyContin included 117 men (72.2%) and 45 women (27.8%); most were from a rural background (n = 148; 91.4%). The average age of this group was 31.5 years (SD, 10.0), and the average education level was 12.1 years. Most were either married (n = 65; 40.1%) or single (n = 59; 36.4%) followed by those who were divorced (n = 32; 19.8%) or separated (n = 5; 3.1%). More than half of the sample (n = 83; 51.2%) had at least one child.

Another interesting point of exploration was where patients obtained OxyContin. A large majority (n = 160; 98.8%) admitted to buying it on the street at some point in their abuse history, and only 48 (29.6%) had ever obtained it via legitimate prescription written by a physician for them (categories are not mutually exclusive).

A total of 78 (48.1%) OxyContin abusers admitted to abusing other opioids. These were most likely to be hydrocodone-containing products: Lortab (UCB Pharma, Inc, Smyrna, GA; n = 36; 22.2%) or Lorcet (Forest Pharmaceuticals, Inc, St. Louis, MO; n = 20; 12.3%), Percocet (Endo Pharmaceuticals Inc, Chadds Ford, PA; n = 21; 13.6%) or methadone (n = 15, 9.3%) (categories are not mutually exclusive). Regarding the use of OxyContin, the charts reflected a mean dose of 181.3 mg (range, 40 to 400 mg) used for an average of 19.7 (range, 1 to 48) months. The route of administration recorded most often at the time of admission to the facility was snorting (n = 68; 58.1%), followed by intravenous (n = 24; 20.5%) and oral use (n = 25; 21.4%) (missing data, n = 45). The initial route of administration recorded in the charts was overwhelmingly through oral use, though it is unclear if oral meant altered (chewed) or taken intact (n = 86; 82.7%) followed by snorting (n = 17; 16.3) and intravenous use (n = 1; 1%) (missing data, n = 58).

A total of 77 patients (47.5%) reported chronic pain problems, although only 60 of the 77 (77.9%) still reported an active pain concern at the time of admission. A series of analyses were conducted to determine if this subgroup of patients (n = 60) with reported pain concerns differed from OxyContin abusers without a current pain problem. Although there was very little difference among these subgroups on issues such as gender, education, or marital status, the results showed that those with pain were significantly older (mean 35.9 years; SD 9.1) than those without pain (mean 29.0; SD 9.7; t\textsubscript{1,160} = 4.46; P < .001).

In addition, a series of chi-square analyses were conducted to compare the route of administration used, both initially and at the time of admission. No significant differences were found between those with pain problems (oral = 47, snorting = 6, intravenous = 0) versus those without (oral = 39, snorting = 11, intravenous = 1) concerning the initial route of administration chosen when taking OxyContin (\chi^2 = 4.34; not significant [NS]). However, a significant difference was discovered (\chi^2 = 12.27; P < .01) for the route of administration used at the time of admission, with nonpain patients (oral = 6, snorting = 42, intravenous = 16) more likely than the pain group (oral = 19, snorting = 26, intravenous = 8) to abuse the medication through snorting or intravenous use. An additional \chi^2 analysis showed there was no significant difference between the pain group and those without pain (\chi^2 = 1.08, NS) concerning whether the groups changed the route of administration over time.

Finally, the psychiatric diagnosis of these patients was examined. A majority (n = 108; 66.7%) had an additional axis I diagnosis besides opioid dependence. Slightly more than half (n = 96; 56.2%) met the criteria for additional chemical dependency diagnoses. These additional diagnoses were most likely to be sedative hypnotic dependence (n = 37; 22.8%), alcohol dependence (n =
17; 10.5%), or cocaine dependence (n = 14; 8.6%). Nearly a third of the patients (n = 48; 29.6%) also carried a psychiatric diagnosis. This diagnosis was most often major depression (n = 23; 14.2%), followed by substance-induced mood disorder (n = 5; 3.1%), bipolar affective disorder (n = 4; 2.5%), schizoaffective disorder (n = 3; 1.9%), and panic disorder (n = 2; 1.2%).

Comparison of OxyContin and Other Opioid Abusers

As a final area of analysis, we compared the group abusing OxyContin with patients abusing other opioids, using a series of t-tests and \( \chi^2 \) analyses on the available data. An independent samples t-test indicated that the OxyContin-abusing group (mean 31.5 years, SD 10.0) was significantly younger than the group abusing other opioids (mean 38.1 years, SD 10.3; \( t_{1,256} = 5.05; P < .001 \)). In addition to this finding, two of the \( \chi^2 \) analyses were revealing also. First, the OxyContin-abusing group was more likely to be from a rural location (148 rural, 91.4%; 14 urban, 8.6%) than those abusing other opioids (71 rural, 74%; 25 urban, 26%; \( \chi^2 = 14.22; P < .001 \)). Second, those in the OxyContin-abusing group included a higher percentage of men (117 men, 72.2%; 45 women, 27.8%) than the group abusing other opioids (52 men, 54.2%; 44 women, 45.8%; \( \chi^2 = 8.70; P < .003 \)).

Discussion

The problem of opioid abuse has been a media and social phenomenon, with OxyContin receiving more media attention. A negative consequence of the progress made in treating pain can sometimes include increased quantities of drugs for abuse and diversion. The impact of this has been felt in many areas nationally and particularly in rural Kentucky.

Abuse of OxyContin was an important psychiatric challenge in Kentucky in the 15 months at the height of the problem. Fully a third of patients admitted to the Addictive Disease Unit were using it, many with other drugs and alcohol. These patients were young, and had substantial habits, with very high doses and high cost, developed by 19 months of use. An average dose of 181 mg/d is a habit costing nearly $181 per day or $1267 per week based on the usual street price of $1 per mg. The consequences of such a costly habit in lifestyle (sold possessions, etc.) and societally (involvement in crime) is not difficult to imagine. Most of the drug was bought on the street, probably at this price. Cases of OxyContin abuse also were complicated cases that included multiple other psychiatric problems. Most patients reported snorting, typically along with other drugs and alcohol.

The group of 60 patients who reported chronic pain is of interest. Although we know little of their pain treatment, it begs the question: Could this group of patients been recognized as potential addicts earlier? One wonders if better patient selection or safeguards might not have forestalled the development of psychiatric and addiction problems and helped these patients avoid the need for addiction treatment. They were significantly older than the rest of the OxyContin-abusing group but otherwise did not differ demographically. However, on admission to the program, a smaller percentage of these patients were snorting or using the drug intravenously than those without pain problems. This is in line with the impression that serious aberrant drug-related behaviors (such as changing the route of administration) is the purview of recreational users and addicts and not typical of the pain patient. Nevertheless, on admission, 8 of 60 pain patients admitted to injecting OxyContin, which is a startling percentage (13.3%). Although clinicians must be careful in interpreting this finding because of the small sample, the relatively high percentage of people with pain problems engaging in these behaviors suggests, perhaps, how necessary a good history and screening is before initiating opioid therapy in some chronic pain patients and settings.

In conclusion, this study was a small retrospective chart review illustrating one aspect of OxyContin abuse in one region of the country at a single facility. The results should be understood in that light. Thirty-five percent of the patients with an OxyContin abuse problem had pain, and it may be possible that safeguards and better history taking might have helped forestall the need for drug treatment. The other two thirds were recreational abusers or addicts, mainly obtaining the drug on the street. Strategies to limit diversion would help with the reduction of access by this group. OxyContin is an excellent and important pain medication. Keeping it in the therapeutic armamentarium, in safe use by pain patients while avoiding abuse and diversion by a subset of patients and the larger group of addicts, should be a priority. At the same time, more research about the abuse of prescription medications by those with and without pain is crucial for the future.
References