Characteristics of chronic pain patients in a rural teaching practice

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Abstract

Objective To describe the characteristics of chronic noncancer pain (CNCP) patients taking oxycodone or its derivatives in a rural teaching practice.

Design Characteristics of CNCP patients taking oxycodone over a 5-year period (September 2003 to September 2008) were compared with those of patients not taking opioid medications using a retrospective chart audit.

Setting A rural teaching practice in southwestern Ontario.

Participants A total of 103 patients taking chronic oxycodone therapy for CNCP and a random sample of 104 patients not taking opioid medication.

Main outcome measures Number of visits, health problems, sex, and previous history of addiction and mental illness.

Results Patients with CNCP taking oxycodone had significantly more health problems ($P<.001$), including drug and tobacco addictions. They had more than 3 times as many clinic visits during the same period of time as patients not taking opioid medication (mean of 39.0 vs 12.8 visits, $P<.001$).

Conclusion Patients with CNCP in this rural teaching practice had significantly more health issues ($P<.001$) and were more likely to have a history of addiction than other patients were. They created more work with significantly more visits over the same period compared with the comparison group.

EDITOR'S KEY POINTS

- Treatment of chronic noncancer pain (CNCP) with opioids presents a challenge for primary care physicians. This study aimed to characterize the CNCP patients taking chronic oxycodone therapy in a rural Ontario teaching practice. Of the 161 patients in the practice prescribed oxycodone in the 5-year study period, 103 were or became chronic users.

- The CNCP patients and the comparison patients were similar in terms of age and sex, but CNCP patients had more health problems, made more visits to the clinic, and were more likely to have past or present alcohol or drug abuse or mental illness. Back pain and musculoskeletal pain other than back pain were the most common origins of pain.

- During the period studied there were 5 lost or stolen prescriptions and 2 aggressive telephone calls documented. Three patients eventually had their medication discontinued and required methadone treatment for addiction.

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Caractéristiques des patients d'une clinique médicale rurale souffrant de douleur chronique

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Résumé

Objectif Établir les caractéristiques des patients d'une clinique universitaire rurale qui prennent de l'oxycodone ou ses dérivés pour des douleurs chroniques non cancéreuses (DCNC).

Type d'étude Les caractéristiques des patients prenant de l'oxycodone pour des DCNC sur une période de 5 ans (entre septembre 2003 et septembre 2008) ont été comparées à celles des patients ne prenant pas d'opiacés, au moyen d'une vérification rétrospective de dossiers.

Contexte Une clinique universitaire rurale du Sud-Ouest de l'Ontario.

Participants Un total de 103 patients recevant un traitement chronique d'oxycodone pour des DCNC et un échantillon aléatoire de 104 patients ne prenant pas d'opiacés.

Principaux paramètres à l'étude Nombre de visites, problèmes de santé, sexe et antécédents de dépendance et de maladie mentale.

Résultats Les patients prenant de l'oxycodone pour des DCNC avaient un nombre significativement plus élevé de problèmes de santé ($P<,001$), incluant des dépendances au tabac et aux drogues. Par rapport aux patients qui ne prenaient pas d'opiacés, ils ont fait plus de 3 fois plus de visites à la clinique durant la même période de temps (moyenne de 39,0 vs 12,8 visites, $P<,001$).

Conclusion Par rapport aux autres clients de cette clinique universitaire rurale, ceux qui prenaient de l'oxycodone pour des DCNC avaient un nombre significativement plus élevé de problèmes de santé ($P<,001$) et étaient plus susceptibles d'avoir des problèmes de dépendance. Par leurs visites significativement plus fréquentes, ils ont causé plus de travail durant la même période de temps que ceux du groupe de comparaison.

POINTS DE REPÈRE DU RÉDACTEUR

- Le traitement de la douleur chronique non cancéreuse (DCNC) au moyen d'opiacés constitue un défi pour le médecin de première ligne. Cette étude voulait établir les caractéristiques des patients d'une clinique universitaire rurale de l'Ontario recevant un traitement chronique d'oxycodone pour des DCNC. Sur les 161 patients de la clinique auxquels on prescrivait l'oxycodone pour des DCNC, 103 étaient ou sont devenus des utilisateurs chroniques.

- Les patients souffrant de DCNC et ceux du groupe de comparaison étaient semblables pour ce qui est de l'âge et du sexe, mais ceux traités pour des DCNC avaient plus de problèmes de santé, visitaient la clinique plus souvent et étaient plus susceptibles d'avoir, ou d'avoir eu, des problèmes d'alcoolisme ou de toxicomanie ou des maladies mentales. Les lombalgies et les autres problèmes musculo-squelettiques étaient les sources les plus fréquentes de la douleur.

- Durant la période de l'étude, on a documenté 5 cas de vol ou de perte de prescription et 2 appels téléphoniques de nature agressive. Trois patient ont vu leur prescription d'oxycodone interrompue et ont dû avoir un traitement de méthadone pour dépendance.

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Treatment of chronic noncancer pain (CNCP) with opioids presents a challenge for primary care physicians. Concerns about increased addiction and diversion of opioids for recreational use have been documented in general practice[1-4] and are seen as barriers to the use of opioids. Physician worries about increased workload in the management of CNCP patients have also been documented.[1,2,5] There are increasing concerns regarding misuse of opioids in our communities.[6,7] Primary care physicians manage most CNCP sufferers[8] and are being called upon to improve their management of chronic opioid use.[9] Despite this, there is little documentation of the primary care experience of managing CNCP patients.

Oxycodone is a common drug of abuse in our community in southwestern Ontario[10] and in Ontario generally,[11] and it is the most frequently used long-term narcotic in our clinic. We were interested in comparing our CNCP patients taking opioids to those previously reported in the literature, and in documenting the workload required to care for these patients.

METHODS

A retrospective chart review of the electronic patient records of those patients prescribed oxycodone or a formulation of oxycodone from September 2003 to September 2008 was conducted. *Chronic users* were defined as those using oxycodone or a formulation of oxycodone for 3 months or longer. Palliative care patients were excluded from the study. The investigators retrieved the following information from the medical charts: age and sex; number of patient visits during the study period; number of medical problems; referral to and attendance at a pain clinic; time interval between pain clinic referral and attendance; history of tobacco, drug, or alcohol addiction; past or present psychiatric diagnoses; eventual treatment with methadone; and incidence of problematic behaviour. *Problematic behaviour* was defined as telephone calls requesting early or replacement prescriptions, angry or threatening behaviour, or reliable reports of drug diversion. For the comparison group, 110 charts were randomly drawn from among adult patients (older than 18 years of age) seen during the same period. Patients taking other narcotics were excluded, resulting in a comparison group of 104 patients. Statistics were calculated using SPSS 17. The project received approval from the University of Western Ontario Ethics Review Board.

RESULTS

During the study period 28 of 103 (27.2%) CNCP patients were referred to pain clinics, with an average wait time of 4.6 months. Of those referred, 15 patients attended the clinic and 13 did not. Three patients declined the referral.

There were 5 lost or stolen prescriptions and 2 aggressive telephone calls documented. Three patients eventually had their medication discontinued and required methadone treatment for addiction.

Differences between the comparison and study groups are presented in **Table 1**. The CNCP patients and the comparison patients were similar in terms of age and sex, but CNCP patients had more health problems, made more visits to the clinic, and were more likely to have past or present alcohol or drug abuse or mental illness.

Causes of pain are presented in **Table 2**. Back pain and musculoskeletal pain other than back pain were most common.

DISCUSSION

During the study period there were approximately 5000 patients in the practice. Of these, 161 patients were prescribed oxycodone or its formulations. Of these, 103

Table 1. Comparison of comparison and study groups

CHARACTERISTICS	CHRONIC OXYCODONE USERS (N = 103)	COMPARISON GROUP (N = 104)	*P* VALUE
Mean (SD) age, y	52.3 (13.1)	51.9 (16.7)	>.05
Sex, %			>.05
• Male	53.9	51.5	
• Female	46.1	48.5	
Mean (SD) no. visits in 5-y period	39.0 (19.0)	12.8 (13.6)	<.001
Mean (SD) no. of health problems	6.3 (3.9)	3.1 (2.5)	<.001
Proportion of patients with past or present			
• Alcohol or drug abuse	24.8	4.9	<.001
• Smoking	67.6	45.6	<.003
• Psychiatric illness	31.3	14.6	<.006

Table 2. Origins of chronic pain in chronic oxycodone users in the study: *N* = *103.*

ORIGIN	CHRONIC USERS, N (%)
Musculoskeletal (other than back)	39 (37.9)
Back	35 (34.0)
Neurologic	2 (1.9)
Gastrointestinal	6 (5.8)
Other	21 (20.4)

patients were or became chronic users. Of the chronic users, 3 patients required treatment with methadone for addiction. This is lower than previously documented,[1] probably reflecting the nature of a primary care setting compared with a pain clinic setting. Routine urine toxicology screening was not in use at the clinic during the study period, and we were unable to document the use of other illicit substances or the possibility that oxycodone was being diverted for profit.

The study and comparison groups were similar in terms of sex and age. The mean age of the chronic users was similar to that reported in the literature.[8,11,12] Men and women were equally represented among the chronic users in our study, although sex balance has varied in other studies.[8,12,13] Chronic users had significantly higher rates of smoking, psychiatric illness, and histories of drug and alcohol abuse, all of which mirror the experience of pain clinics.[8,12,13] Musculoskeletal and back pain were the most common sources of pain, also similar to previous reports.[8,11,12]

The CNCP group had significantly more clinic visits during the study period. The 2010 Canadian Guideline for Safe and Effective Use of Opioids for Chronic Non-Cancer Pain[9] recommends that patients taking chronic narcotics should have routine visits, which in our clinic are every 3 months. Each chronic user should therefore have had 20 visits in the 5-year study period. We often deal with other medical issues during pain visits but, despite this, chronic users were seen on average 39.0 times in the 5-year period. Patients in the comparison group were seen 12.8 times in the same period. Primary care physicians' concerns about increased workload[1,2,5] with CNCP patients taking opioids seem well founded according to the results of this study. The CNCP patients did have significantly more health problems than the comparison group did (5.43 vs 3.18), as has been documented in other research.[14] Perhaps poorer health is the cause of the increased visits. If primary care is to shoulder this increased burden of care for these patients, it should be reflected in payment models. However, this is not currently the case. In Ontario, other chronic illnesses (eg, diabetes and congestive heart failure) have been recognized as creating increased workload for family physicians, which has resulted in increased payments. Other jurisdictions that use capitation or that are considering capitation models will also need to take this into consideration.

Guidelines recommend referral to pain clinics for problematic patients.[9] A previous study revealed that most family physicians were comfortable prescribing oxycodone.[15] Only 27.2% of our patients were referred, which could reflect this comfort in prescribing for most patients. Among those referred to the pain clinic, only 53.6% attended. The average wait between referral and appointment was 4.6 months, which is lower than in other Canadian regions.[13] This nonetheless highlights the difficulty of obtaining timely consultation in Ontario. This difficulty might have caused the low referral rate; physicians might not have bothered, knowing that the patients' issues would not be resolved in a timely manner. As well, the poor attendance by those referred might be a reflection of the long wait time. Further research is needed to explore the reasons for consultation, the challenges of obtaining a pain clinic consultation, and the effects such delays have on care from both physicians' and patients' perspectives.

The number of lost and stolen prescriptions was extremely low—5 documented over a 5-year period. It is the clinic's policy to only replace lost or stolen prescriptions under exceptional circumstances. This might have influenced the low rate of requests for extra prescriptions.

Limitations

This study is limited in that it only reflects the experience of one rural clinic, and the results might therefore not be generalizable to other populations. It also studied a single opioid only. It is further limited in that it is a reflection of only what was recorded in patient charts. This study was done before recent widespread concern regarding high dosages of oxycodone,[11] and so did not examine the effects of dosage on behaviour or health of the patients.

Conclusion

This study of our rural practice revealed that the characteristics of our chronic pain patients differed from those of patients reported in the literature in that male and female patients were equally represented and that they displayed a lower rate of problematic behaviour. However, similar to patients in previous reports, our population of chronic pain patients had a higher incidence of psychiatric illness, other health problems, and problems with addiction. Most important, this is the first paper to report on the significantly increased workload for physicians caring for chronic opioid users in primary care. This needs to be reflected in payment models. Capitation payment models often do not reflect the actual costs of caring for patients with complex

medical and psychosocial needs. More timely access to pain clinics might improve care for CNCP patients in the community, but further research is needed.

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Contributors
All authors contributed to the concept and design of the study; data gathering, analysis, and interpretation; and preparing the manuscript for submission.

Competing interests
None declared

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References

1. Bendtsen P, Hensing G, Ebeling C, Schedin A. What are the qualities of dilemmas experienced when prescribing opioids in general practice? *Pain* 1999;82(1):89-96.
2. Morley-Forster PK, Clark AJ, Speechley M, Moulin DE. Attitudes toward opioid use for chronic pain: a Canadian physician survey. *Pain Res Manag* 2003;8(4):189-94.
3. Potter M, Schafer S, Gonzalez-Mendez E, Gjeltema K, Lopez A, Wu J, et al. Opioids for chronic nonmalignant pain. Attitudes and practices of primary care physicians in the UCSF/Stanford Collaborative Research Network. University of California, San Francisco. *J Fam Prac* 2001;50(2):145-51.
4. Bhamb B, Brown D, Hariharan J, Anderson J, Balousek S, Fleming MF. Survey of select practice behaviors by primary care physicians on the use of opioids for chronic pain. *Curr Med Res Opin* 2006;22(9):1859-65.
5. Ponte CD, Johnson-Tibinos J. Attitudes and knowledge about pain: an assessment of West Virginian family physicians. *Fam Med* 2005;37(7):477-80.
6. Ministry of Health and Long-Term Care. *Rising use and abuse of narcotics.* Toronto, ON: Ministry of Health and Long-Term Care; 2010. Available from: **http://news.ontario.ca/mohltc/en/2010/08/rising-use-and-abuse-of-narcotics.html**. Accessed 2011 Sep 27.
7. OxyContin Task Force. *OxyContin Task Force final report.* St John's, NL: Government of Newfoundland and Labrador; 2004. Available from: **www.health.gov.nl.ca/health/publications/oxycontin_final_report.pdf**. Accessed 2011 Sep 26.
8. Reid MC, Engles-Horton LL, Weber MB, Kerns RD, Rogers EL, O'Connor PG. Use of opioid medications for chronic noncancer pain syndromes in primary care. *J Gen Intern Med* 2002;17(3):173-9.
9. National Opioid Use Guideline Group. *Canadian guideline for safe and effective use of opioids for chronic non-cancer pain*. Hamilton, ON: McMaster University; 2010. Available from: **http://nationalpaincentre.mcmaster.ca/opioid/**. Accessed 2011 Sep 27.
10. Belanger J. Abuse of OxyContin has reached level of a crisis. *lfpress.com* 2010 Sep 10. Available from: **www.lfpress.com/comment/editorial/2010/09/10/15304421.html**. Accessed 2011 Sep 26.
11. Tara G, David JN, Irfan DA, Mailis-Gagnon A, Paterson JM, Mamdani MM. Trends in opioid use and dosing among socio-economically disadvantaged patients. *Open Med* 2011;5(1):e13.
12. Ives TJ, Chelminski PR, Hammet-Stabler CA, Malone RM, Perhac JS, Potisek NM, et al. Predictors of opioid misuse in chronic pain: a prospective cohort study. *BMC Health Serv Res* 2006;6:46.
13. Mailis-Gagnon A, Yegneswaran B, Lakha SF, Nicholson K, Steiman AJ, Ng D, et al. Pain characteristics and demographics of patients attending a university affiliated pain clinic in Toronto, Ontario. *Pain Res Manag* 2007;12(2):93-9.
14. Tripp DA, VanDenKerkhof EG, McAlister M. Prevalence and determinants of pain and pain-related disability in urban and rural settings in southeastern Ontario. *Pain Res Manag* 2006;11(4):225-33.
15. Scanlon MN, Chugh U. Exploring physicians' comfort level with opioids for chronic noncancer pain. *Pain Res Manag* 2004;9(4):195-201.