

Substance Abuse Among Patients with Chronic Back Pain

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BACKGROUND. Little is known about substance use and substance use disorders among primary care patients with chronic back pain. This study compared groups of patients with and without chronic back pain for the prevalence of substance use and substance use disorders. It also assessed the temporal relationship between the onset of chronic back pain and that of substance use disorders.

METHODS. Adult patients aged 18 to 59 years who made three or more visits for back pain to a family practice clinic were eligible for the pain group. The comparison group consisted of a random sample of patients of the same ages who made appointments with the same clinic. A validated diagnostic interview about substance use disorders and other issues related to substance use was administered.

RESULTS. Ninety-two percent of the patients in the chronic pain group reported severe pain, high disability, and severe to moderate limitation of activity. Two thirds (67%) of this group reported having continuous pain, and 21% experienced at least one episode of pain daily. Forty-four percent said their pain continuously interfered with their activities, and 31% reported daily disruption of activity. There was little difference, however, in the adjusted rates of lifetime and current substance use disorders between the chronic pain and comparison groups. Lifetime prevalence rates were 54% for the pain group and 52% for the comparison group; current prevalence rates were 23% for both the pain and comparison groups. Substance abuse preceded the onset of pain by as much as 20 years for 77% of patients with chronic pain who had current substance use disorders and 63% of those who had lifetime substance use disorders.

CONCLUSIONS. Chronic back pain did not connote special risk for current substance use disorders.

KEY WORDS. Back pain; chronic pain; substance abuse; epidemiology; family practice. (*J Fam Pract* 1996; 43:152-160)

Clinicians often assume that patients with chronic noncancer pain syndromes are at special risk for psychoactive substance use disorders, ie, substance abuse and dependence.^{1,4} Pain specialists frequently report the need to detoxify many of their new patients. Emergency department physicians express frustration with "drug-seeking" patients who complain of chronic pain. Despite evidence that chronic opioid analgesic therapy is safe and effective for

many patients with chronic noncancer pain,⁵ most physicians avoid prescribing opioids for these patients, in part because of a concern about their being at special risk for drug dependency. It would be useful to know whether patients who have chronic pain are indeed at higher risk than the general patient population for alcohol and other drug problems.

There have been many studies on the prevalence of substance use disorders among populations of patients in specialized pain programs. Most of these studies used nonstandard or poorly specified approaches to assessing for substance use disorders.⁶ There were five studies that used standard measures for diagnostic assessment. These studies found a 15% to 28% prevalence of current substance use disorders and a 23% to 41% prevalence of life-

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time substance use disorders.⁷⁻¹¹ Polatin et al¹⁰ found that 94% of the patients with lifetime substance use disorders experienced the onset of these disorders before the onset of their chronic pain. This finding led the authors to suggest that chronic pain may not precipitate substance use disorders as often as some clinicians might believe.

The currently available data are not as helpful to many clinicians as they could be. The findings for patients referred to inpatient or outpatient specialty programs for chronic pain may not be generalizable to those who receive most of their care for chronic pain in other settings. Additionally, earlier studies lack comparison groups, which limits their ability to determine whether chronic pain is a risk factor for substance use disorders.

The goals of this study were to assess substance use and the lifetime and current prevalence of substance use disorders among a primary care sample with chronic low back pain; to compare the pain group and the comparison group with respect to the quantity and frequency of substance use, the prevalence of substance use disorders, and the receipt of substance abuse treatment; and, for patients with both chronic pain and substance use disorders, to discern the relative chronology of the onset of each.

METHODS

THE PAIN GROUP

The study was conducted at a family medical center that serves as a faculty and residency clinic of the University of Wisconsin–Madison Department of Family Medicine. At this clinic, 4800 different patients made a total of 20,000 visits during the previous year. The health care providers included four family practice residents in each of 3 years of training, two full-time nurse practitioners, and five family physician faculty who, on average, devote one-half their time to patient care. Two of the faculty physicians have a particular interest in the treatment of chronic noncancer pain.

Patients were eligible if they (1) were 18 to 59 years old, (2) had made at least three visits to the clinic for back pain in the previous year, as recorded in a computerized patient care and billing database, and (3) had experienced back pain within the previous month, according to self-report solicited either by telephone or interview in the office waiting room. Pregnant patients were excluded because of the sen-

sitivity of questions about substance use. The database identified a total of 2952 patients aged 18 to 59 years who had made 15,285 visits over the previous year.

Prospective subjects received up to two recruiting letters and three telephone messages. They were offered \$10 to participate in a 1-hour interview. They were assured that the information they provided would not be shared with anyone, including their health care providers.

The interviews were conducted by trained research assistants. Information was collected on demographics, pain, physical function, psychiatric disorders, medical care, use of medications, and outlook for the future. This report provides general descriptive data and information on substance use disorders.

The Chronic Pain Grade¹² was the instrument used to assess the severity of the pain syndrome. This instrument assesses intensity of pain, extent of disability, and extent of limitation in activities. It has been validated in studies of 1213 primary care patients with chronic pain.

The Composite International Diagnostic Interview–Substance Abuse Module (CIDI-SAM)¹³⁻¹⁵ was used to assess disorders related to alcohol, marijuana, sedatives, tranquilizers, analgesics, cocaine, stimulants, inhalants, hallucinogens, and heroin. It is based on the *Diagnostic and Statistical Manual of Mental Disorders, Third Edition, Revised* (DSM-III-R) criteria for psychoactive substance abuse and dependence¹⁶ (Table 1). Despite the potential for denial, social desirability bias, and memory lapse,¹⁷ there is widespread agreement that self-report is the most accurate method available for assessing substance use disorders.¹⁷⁻²¹ The CIDI-SAM was chosen over the Structured Clinical Interview for DSM-III-R (SCID) and the Diagnostic Interview Schedule–Revised (DIS-R) as the instrument for this study because of its reliability,^{13,14} concordance with other diagnostic methods,¹⁵ use of DSM-III-R criteria for substance abuse and dependence, ability to distinguish age of onset and recency of disorders,¹³ and design for administration by nonclinicians.¹³

Some of the items from the CIDI-SAM were used to assess the frequency of substance use. These items included a series of frequency ranges presented as multiple-choice response options. In calculating group means, the midpoint of each range was imputed for each respondent. Additional items were

TABLE 1

DSM-III-R Criteria for Substance Abuse and Dependence**Substance Dependence**

A. At least three of the following:

1. The substance is often taken in larger amounts or over a longer period than the person intended
2. Persistent desire or one or more unsuccessful efforts to cut down or control substance use
3. A great deal of time spent in activities necessary to get the substance (eg, theft), taking the substance (eg, chain smoking), or recovering from its effects
4. Frequent intoxication or withdrawal symptoms when expected to fulfill major role obligations at work, school, or home (eg, does not go to work because hung over; goes to school or work "high"; or intoxicated while taking care of his or her children), or when substance use is physically hazardous (eg, drives when intoxicated)
5. Important social, occupational, or recreational activities given up or reduced because of substance use
6. Continued substance use despite knowledge of having a persistent recurrent social, psychological, or physical problem that is caused or exacerbated by the use of the substance (eg, keeps using heroin despite family arguments about it; cocaine-induced depression; or having an ulcer made worse by drinking)
7. Marked tolerance: need for markedly increased amounts of the substance (ie, at least a 50% increase) in order to achieve intoxication or desired effect; or markedly diminished effect with continued use of the same amount
8. Characteristic withdrawal symptoms*
9. The substance is often taken to relieve or avoid withdrawal symptoms*

B. Some symptoms of the disturbance have persisted for at least 1 month or have occurred repeatedly over a longer period

Substance Abuse

A. A maladaptive pattern of psychoactive substance use indicated by at least one of the following:

1. Continued use despite knowledge of having a persistent or recurrent social, occupational, psychological, or physical problem that is caused or exacerbated by use of the psychoactive substance
2. Recurrent use in situations in which use is physically hazardous (eg, driving while intoxicated)

B. Some symptoms of the disturbance have persisted for at least 1 month or have occurred repeatedly over a longer period

C. Never met the criteria for substance dependence for this substance

*These items may not apply to cannabis, hallucinogens, or phencyclidine (PCP).

Information in this table is from the *Diagnostic and Statistical Manual of Mental Disorders, Third Edition, Revised*. Washington, DC: American Psychiatric Association, 1987. Used with permission of the American Psychiatric Association.

included to ascertain the frequency of alcohol and other drug use and the maximal daily quantity of alcohol use over the previous month. For quantifying alcohol use, standard drinks were defined as 1.5 oz of liquor, 5 to 6 oz of wine, and 12 oz of beer. Quantification of illicit drug use was not attempted because many common units of drug consumption are not well standardized.

The Comparison Group

The comparison group comprised patients at the same clinic who were interviewed for a study on substance abuse screening questions. Eligible patients were 18 to 59 years old and had appoint-

ments on days on which a research assistant was available. Pregnant patients were excluded. The prospective subjects were selected randomly within certain time blocks from appointment lists 1 to 2 days before their appointments. Patients who could be reached by telephone were invited to participate on the day before their appointment. Otherwise, recruiting occurred in person at the clinic.

The subjects responded to questions on demographics, potential screening questions, and the CIDI-SAM. This report provides only general descriptive data and information on substance use disorders.

Analysis

Chi-square tests were used to compare most of the categorical data. When expected cell sizes were too small, Fisher's exact tests were used. Mann-Whitney *U* tests were used to compare continuous data, since none of the continuous variables were normally distributed.

Statistical adjustment for demographic differences

between the pain sample and the comparison sample was accomplished by summing the products of the prevalence rates for particular demographic subgroups of the pain sample and the proportional sizes of the demographic subgroups of the comparison sample.

RESULTS**PARTICIPATION RATES AND DEMOGRAPHICS**

For the pain group, a patient care database search found that 82 patients met the age criterion and had made at least three visits during the previous year for back pain. The third eligibility criterion, pain within

the previous month, could not be assessed for 11 prospective subjects who could not be located and for 2 who did not respond, and 8 eligible patients declined. Thus, of the 69 patients known to be eligible, 61 (88%) participated. For the comparison sample, 200 patients were recruited and 181 participated, yielding a response rate of 91%.

Table 2 shows the demographic attributes of the two groups. When available, similar information is shown for all 18- to 59-year-old patients in the practice who had made at least one visit in the previous 2 years. There were no significant differences between the pain group and the comparison group with respect to sex (χ^2 , $P=.23$), age (χ^2 , $P=.12$), or marital status (χ^2 , $P=.70$). As expected, a significantly greater number of patients were insured by Medicare in the pain group than the comparison group (χ^2 , $P=.04$), since Medicare provides insurance for the permanently disabled. Compared with patients in the control group, the back pain group was more educated (χ^2 , $P=.07$) and had a higher proportion of white patients (Fisher's exact test, $P=.05$).

Description of Patients with Chronic Back Pain

Responses to the Chronic Pain Grade revealed that 41 (67%) of the subjects of the pain group had grade 4 pain (severe pain with high disability and severe limitation), 15 (25%) had grade 3 pain (severe pain with high disability and moderate limitation), 1 (2%) had grade 3 pain (high-intensity pain with low disability), and 3 (5%) had grade 1 pain (low intensity and low disability). One subject gave an unusable response.

Two thirds (66%) of the subjects in the pain group reported continuous pain; 21%, at least one episode of pain every day; 5%, episodes of pain occurring at least monthly but not daily; and 3%, less than monthly; three subjects gave unusable responses. Forty-four percent reported continuous limitation of activity; 31%, at least daily but not continuous; 10%, at least weekly but not daily; and 8%, less than

TABLE 2

Characteristics of Patients in the Pain Group, the Comparison Group, and the Entire Study Practice

Characteristic	Chronic Pain Group (n=61)	Comparison Group (n=181)	Entire Practice* (N=2952)
Sex, %			
Female	57	66	62
Male	43	34	38
Age, y			
18 - 29	15	28	30
30 - 39	34	32	32
40 - 49	38	25	26
50 - 59	13	15	12
60 - 69	0	0	0
70 - 79	0	0	0
80 - 99	0	0	0
Race/ethnicity[†]			
White, non-Hispanic	93	84	
White, Hispanic	2	3	
Black, non-Hispanic	3	10	
Asian	2	1	
Other	0	2	
Insurance status[†]			
Commercial	71	72	79
Medicare	12	3	5
State or county assistance	12	15	8
Self-pay	7	10	7
Education[†]			
9th grade or less	3	2	
10th to 12th grade	2	13	
High school graduate	49	53	
Associate/vocational degree	20	15	
Bachelor degree	18	9	
Advanced degree	8	8	
Marital status			
Married	43	40	
Remarried	3	2	
Never married	26	29	
Divorced	15	16	
Separated	5	6	
Widowed	0	2	
Significant other	8	6	

*Patients 18-59 years old. Not all demographic data were available for the entire practice population.

†Comparison between chronic pain and comparison groups, $P<.05$.

TABLE 3

Substance Use by the Pain and Comparison Groups

Substance	Chronic Pain Group (n=61)	Comparison Group (n=181)
Alcohol		
Used during lifetime, %*	98.4	98.9
Age of first use, y	16.2±3.3	16.0±3.9
Maximal daily quantity during period of heaviest use*	12.9±7.9	15.4±8.5
Used in the past month, %†	73.8	53.9
Days of use in previous month‡	7.2±8.5	5.8±7.1
Maximal daily quantity in previous month‡	4.2±4.2	4.1±4.3
Marijuana		
Used during lifetime, %	68.9	58.9
Number of episodes of use in lifetime§	64.1±79.4	93.9±89.2
Age of first use, y§	19.6±5.0	17.6±4.3
Used in the past month, %†	6.6	11.0
Days of use in previous month‡	6.0±9.3	11.9±10.4
Cocaine		
Used during lifetime, %	24.6	24.7
Number of episodes of use in lifetime‡	22.3±30.7	56.6±73.6
Age of first use, y§	26.7±6.8	22.1±6.2
Used in the past month, %	0	1.1
Days of use in previous month‡	—	10
Analgesics¶		
Used during lifetime, %	13.1	15.4
Number of episodes of use in lifetime§	29.3±29.8	72.3±87.1
Age of first use, y§	23.8±7.6	23.0±8.2
Used in the past month, %	0.0	0.6
Days of use in previous month‡	—	0.05±0.7
Heroin		
Used during lifetime, %	3.3	3.3
Number of episodes of use in lifetime§	1.5	56.7±75.0
Age of first use, y§	22±2.8	24.3±6.6
Used in the past month, %	0	0
Days of use in previous month‡	—	—

*The quantity of alcohol is expressed as standard drinks (1.5 oz spirits, 5 to 6 oz wine, or 12 oz beer).

†The difference between the pain group and the comparison group was statistically significant ($P<.05$).

‡The days of use in the previous month are reported only for subjects with one or more episodes of use in the previous month.

§The number of episodes of use in lifetime and the age of first use are reported only for subjects with one or more episodes of use.

¶Refers to use either "without a doctor's prescription, or in greater amounts than prescribed, or more often than prescribed, or for any reasons other than a doctor said [the medication] should be taken" (from the Composite International Diagnostic Interview-Substance Abuse Module [CIDI-SAM] questionnaire).

NOTE: Data are reported as mean ± standard deviation unless otherwise noted.

weekly interference. Four responses were unusable.

The duration of the subjects' back pain syndrome ranged from less than 1 year to 47 years, with a median of 5 years. The mean duration was 8 years with a standard deviation of 10 years.

Substance Use

Table 3 shows data on the quantity and frequency of substance use for each of the groups. The prevalence of lifetime use of alcohol (ie, the percentage of subjects who have used alcohol at any time in their lives), the age of first use of alcohol, and the maximal quantity of alcohol used in a day were similar between the two groups. A significantly greater number of patients in the pain group had used alcohol during the previous month than had those in the comparison group. For those who had used alcohol in the past month, however, there were no significant differences between the pain and comparison groups with respect to the number of days of alcohol use or the maximal quantity of alcohol consumed in a day.

The pain group had a comparatively higher proportion of patients with lifetime use of marijuana, but a significantly lower number of episodes of use among subjects with lifetime use. There were significantly fewer subjects in the pain group who had used marijuana during the last month. Among all subjects who had used marijuana in the previous month, those in the pain group tended to use marijuana on fewer days than did those in the comparison group.

Cocaine use, nonprescription use of opioid analgesics, and heroin use were less common than was use of alcohol and marijuana. For all measures of cocaine, opioid analgesic, and heroin use, there were no statistically significant differences between the two subject groups.

Substance Use Disorders

Table 4 shows the rates of substance use disorders in the pain and comparison groups. The significantly higher rate of life-

time substance use disorders in the pain group and the similar rates of current substance use disorders between the two groups are noteworthy.

To assess the potential effect of confounding by demographic differences between the two samples, the rates of substance use disorders were adjusted as if the distributions of race/ethnicity and education were equal in the two patient groups. The adjustments were carried out in three different ways: for education only, race/ethnicity only, and both. The three procedures yielded prevalence rates for lifetime substance use disorders from 52% to 54%. These rates are down from the 67% raw prevalence rate and comparable to the 52% lifetime prevalence rate for the comparison sample. The three adjustment procedures yielded prevalence rates for current substance use disorders ranging from 23% to 27%, close to the raw rate of 21%, and comparable to the current prevalence rate of 23% for the comparison sample.

Although the two groups did not have statistically significant different age distributions, there appeared to be substantial differences. Adjustment for these differences resulted in a 54% lifetime prevalence and a 23% current prevalence of substance use disorders in the former sample. These results are similar to those obtained by adjusting for differences in race and education.

Substance Abuse Treatment

The rates of lifetime substance abuse treatment were similar in the two groups: 16.4% for the pain group and 17.6% for the comparison group ($\chi^2, P=.83$).

Chronology of Substance Use Disorders

Substance use disorders preceded the onset of the chronic pain syndromes for 10 (77%) of the 13 subjects with current substance use disorders, 16 (57%) of the 28 subjects with substance use disorders in remission, and 26 (63%) of the total of 41 patients with lifetime substance use disorders (Figure). The modal 5-year period of risk for incident cases of substance use disorders occurred immediately after the onset of the chronic pain,

TABLE 4

Prevalence of Substance Use Disorders in the Pain and Comparison Groups

Substance Use Disorders	Pain Group, % (n=61)	Comparison Group, % (n=181)
Lifetime		
Any substance use disorder*	67	52
Any substance dependence	41	34
Any alcohol abuse or dependence	61	48
Any drug abuse or dependence	26	25
Analgesic abuse or dependence	11	6
Heroin abuse or dependence	0	2
Analgesic or heroin abuse or dependence	11	6
Current (within the previous year)		
Any substance use disorder	21	23
Any substance dependence	15	15
Any alcohol abuse or dependence	18	19
Any drug abuse or dependence	10	8
Analgesic abuse or dependence	5	1
Heroin abuse or dependence	0	0
Analgesic or heroin abuse or dependence	5	1

*The difference between the pain and comparison groups was statistically significant ($P<.05$).

although this time frame accounted for only 21.9% of incident substance use disorders. The distribution of the onset of substance use disorders relative to the onset of back pain trailed off at 20 years before the onset of chronic pain and at 9 years afterward.

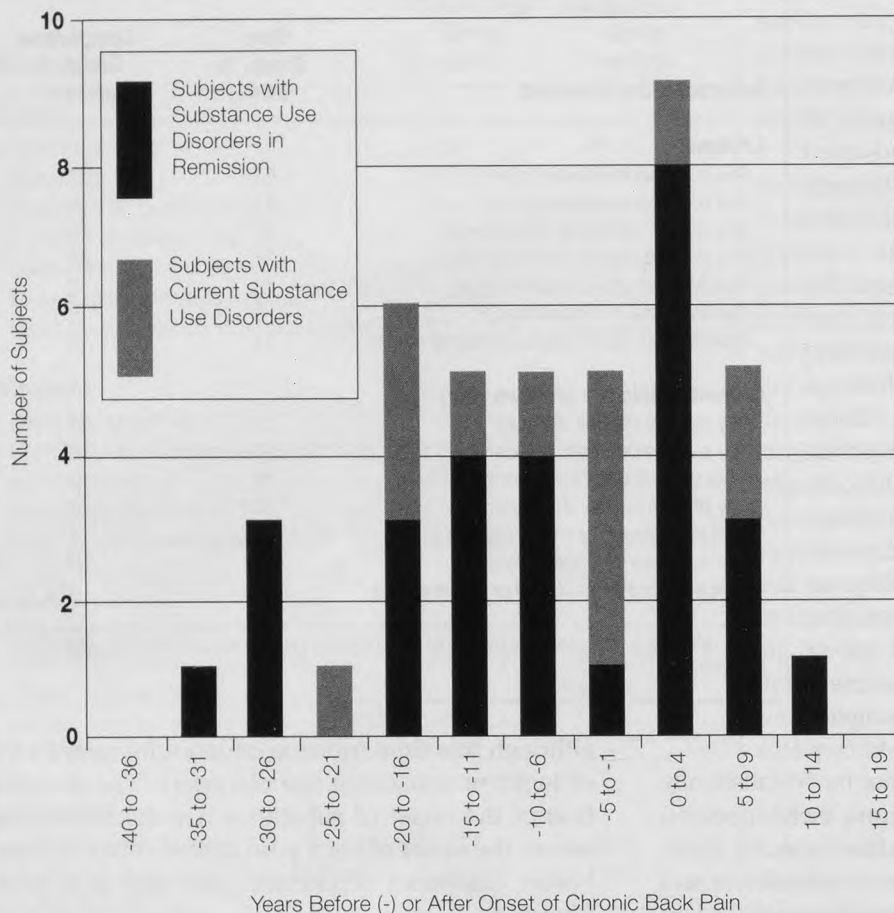
DISCUSSION

Literature searches failed to identify a previous study of substance use and substance use disorders among patients with chronic pain who are treated in primary care settings. Knowledge of the prevalence of substance use disorders in this population should help guide clinicians' index of suspicion for patients with chronic pain and help clinicians weigh the potential risks and benefits of prescribing potentially addictive medications.

Our study used a well-validated diagnostic instrument to assess for substance use disorders relating to alcohol and other commonly abused substances. It distinguished between lifetime and current substance use disorders; compared prevalence rates between a sample of pain patients and a random sample of patients from the same practice; and

FIGURE

The time of onset of substance use disorders relative to the onset of chronic back pain.



reported raw results and results adjusted for demographic differences. Although the study occurred in a primary care setting, the majority of patients had severe chronic pain syndromes, as measured by the results of the Chronic Pain Grade and other questions on pain and activity limitation.

There are some potential limitations of the study. Although we used a state-of-the-art instrument to assess for substance use disorders, there is still potential for inaccuracy. Self-report is the most accurate single source of information about substance use disorders,^{17,21} but there may have been some intentional or unintentional minimization in subjects' responses. Since it is likely, however, that the degree of minimization would be similar between the two patient samples, minimization should not have materially affected the comparative analyses.

Another potential limitation is that the CIDI-SAM

is based on the DSM-III-R,¹⁶ which uses diagnostic criteria for opioid disorders that perhaps should not be applied to persons with chronic pain.⁵ According to the DSM-III-R, at least three of nine possible criteria must be met to diagnose opioid dependence. Two of these criteria can be met when patients have physical dependence, which is defined as significant tolerance and/or the occurrence of withdrawal symptoms with sudden cessation or diminution of use. Physical dependence can be expected when patients are taking regular doses of opioids, but this is not necessarily harmful, provided the patients do not suddenly stop or diminish their use of opioids. Other criteria might be met by patients who are experiencing net benefit from opioids as prescribed. For example,

chronic pain patients may state that they are taking more opioids than they had intended and are having difficulty cutting down, not because of lack of control but because of unanticipated severity and duration of pain. Some chronic pain patients may report spending a great deal of time obtaining opioids because of physician reluctance to prescribe the amounts they believe are required to control their pain. This may be part of a syndrome of "pseudoadiction."²² Thus, if chronic back pain is associated with a higher risk for DSM-III-R opioid-related disorders, the association may be partly or completely an artifact of an inappropriately applied diagnostic scheme.

The method of selecting the comparison group also may have affected the results. Selecting subjects who made scheduled visits may have oversampled patients with chronic diseases relative to the entire

patient panel. Another comparison group selected randomly from the patient registry might have yielded different results.

The differences in demographic attributes between the patients with and without pain suggest that there could have been sampling bias. Alternatively, these differences could have occurred by chance or they could reflect the actual demographics of patients who have or seek care for chronic back pain. We do not have a precise explanation for the differences.

The study was based at one particular university-affiliated, community-based family practice clinic in Madison, Wisconsin. This practice may have been unique in that two of its physicians have a special interest in treating chronic pain. The extent to which the results of this study are generalizable to other practices is unknown. Generalizability is also unknown for the many individuals who do not seek care for chronic back pain, including those who may have lost hope that they can be helped.

Despite the potential limitations, the lack of difference in current substance use disorders between patients with and patients without pain is a striking finding. It suggests that chronic back pain is not a risk factor for current substance use disorders.

The previous lack of comparison studies notwithstanding, authors have speculated that substance use disorders, including those in remission, may predispose individuals to chronic pain syndromes.¹⁰ This study found that primary care patients with chronic back pain have a significantly higher prevalence of lifetime substance use disorders than do patients without chronic back pain. The difference, however, may be a result of differences in demographics and may not reflect causality. It remains to be determined whether chronic pain is truly associated with preexisting substance use disorders.

The 21% unadjusted prevalence rate of current substance use disorders found in this study for patients with chronic back pain is comparable to the 15% to 28% rates found in studies of patients receiving specialty care for chronic pain.⁷⁻¹¹ This study's 51% prevalence rate of lifetime substance use disorders for patients with chronic back pain exceeds the rates found among previous samples of patients receiving specialty care for chronic pain.⁷⁻¹¹ The disparity may relate to the high rate of lifetime substance use disorders in the general patient population of the study clinic.

A greater proportion of subjects with pain reported current use of alcohol, but there was no greater prevalence of current alcohol abuse or dependence. A possible explanation for the more frequent use of alcohol among subjects with pain is the use of alcohol as an analgesic. In light of the similar prevalence of current alcohol problems between the patients with pain and those without pain, this result raises a question about whether the use of alcohol as an analgesic places individuals at risk for alcohol problems. Another possible explanation is that persons with chronic pain and alcohol problems would have developed alcohol problems in the absence of chronic pain. Part of the explanation for the more frequent use of alcohol among patients with pain may be a difference in preference for intoxicants. This explanation is supported by the significantly higher prevalence and a somewhat higher frequency of current marijuana use among subjects in the comparison group.

The analysis of the relative chronology of the onset of substance use disorders and pain syndrome requires careful interpretation. The finding that the onset of substance use disorders clusters within the 20 years preceding and the 9 years following the onset of pain may be attributable in part to statistical artifact. The accounting for substance use disorders arising in the years after the onset of pain may be incomplete for subjects whose pain syndromes have begun relatively recently, as these subjects may exhibit new substance use disorders in the future. Further, among subjects who developed pain syndromes at a young age, the chances of exhibiting preexisting substance use disorders may be relatively small, because of the small number of years in which such disorders could have manifested.

The results of the analysis of the chronological association between the incidence of chronic pain and substance use disorder suggest that patients with chronic pain are at increased risk for new substance use disorders during the 5 years following the onset of chronic pain, as compared with other 5-year periods in their lives. The therapeutic implications of this finding are not clear. One might conclude that potentially addictive medications should not be prescribed during this period. Alternatively, if undertreatment of pain and the associated depression and dysfunction lead to self-medication and substance use disorders, withholding opioids might be ill advised. Although several case series suggest that

opioids are safe and effective for selected patients with chronic noncancer pain,⁵ randomized controlled trials will be necessary to determine whether opioids truly help patients with and without preexisting substance use disorders.

It should be noted that the chronology analysis tracked only incident cases of substance use disorders. Further study is needed on the natural history of substance use disorders among patients with chronic pain to increase our knowledge about factors that contribute to relapses, remissions, and disorders involving new substances.

This study suggests that patients who repeatedly seek care for chronic back pain, compared with other patients, have similar prevalence rates of current and lifetime substance use disorders. For most individuals with chronic pain and substance use disorders, the substance use disorder may precede the pain. Persons with new chronic pain syndromes may, however, be at somewhat higher risk than usual for the development of substance use disorders. For such patients, regardless of previous history of substance use disorders, focused efforts at substance abuse screening and preventive education may be warranted. Larger studies of medical and general populations of individuals with chronic back pain are needed to confirm the results of this study.

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