Substance Abuse and Opioid Use in Chronic Low Back Pain

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BACKGROUND

Chronic lower back pain (CLBP) is one of the top 10 reasons why patients make doctor visits. Low back pain interferes with numerous aspects of life such as work, recreation, and even daily activities.[1] Furthermore, it is the leading cause of job-related disability leave and accounts for over $50 billion in spending in the U.S. annually.[1,2]

Opioid medicine is the most common treatment for patients with chronic low back pain. Many physicians have reservations about using opioids to treat chronic pain, and emphasize that patients on these medications should be strongly monitored. The controversy is based on the addictive properties of these drugs and the potential misuse of them to treat pain.[3,4] While opioids are useful for pain relief, the development of tolerance, the risk of drug dependence, and side effects are key limitations of opioid use.[5]

Currently, the relationship between a patient's history of substance abuse and current opioid usage is unclear. Nor is it clear if patients with a history of substance abuse have less control over their CLBP. Therefore, the purpose of this study is to evaluate the relationship between a history of substance abuse and current opioid use in patients with CLBP, and examine the influence of opioid use and substance abuse on pain severity outcomes.

METHODS

In eight Texas family medicine residency programs, medical students identified and surveyed 223 family medicine patients with chronic low back pain (3 months or longer) during a routine office visit. Surveys addressed characteristics of the pain (severity, cause, duration); characteristics of the patient (age, gender, ethnic background, occupation); mediators of pain (trust in the doctor, length of the doctor/patient relationship, treatments for pain, and social support), and issues that exacerbate pain (depression, anxiety, substance abuse, adverse childhood experiences, co-morbidities, and social stress). An Addiction Risk Score was calculated from items addressing pain intensity, a need for higher doses of pain medication, a craving for medicine, and a concern of becoming addicted to pain medicines. Outcome measures included pain severity and health and functional status, measured by the MOS Short-Form-36.

After the visit, students surveyed subjects' doctors, addressing characteristics of the back pain, patients' use of and requests for medicines, and doctors' levels of trust of their patients.

RESULTS

The patient sample (223 surveyed) was 33.2% male and 66.8% female. Ethnic background was: 47.4% Anglo, 35.3% Hispanic, and 17% African American. Average age was 52 years with a standard deviation of 14.6 years. The average level of pain reported amongst all subjects was 6.38 (1 to 10 scale), with an average duration of 10.7 years (Figure 1).

Of these patients, 67.7% reported using addictive pain medications to treat their pain (41.7% use daily). 84.3% of patients felt that their pain was out of control often or sometimes. With respect to alcohol, 71.6% of the sample did not drink. 96.4% had no reported drug use in the past 30 days. 38.1% had a drug abuser in their household while growing up.

Drinking alcohol was negatively related to opioid use for pain (p=.016), and unrelated to Addiction Risk. Patients who used addictive medicines (versus non-addictive medicines) reported a higher level of pain (on 1 to 10 scale), a higher Addiction Risk Score, worse physical function and perceived health, and reported more chronic diseases (Table 1). Binge drinkers (versus others) reported better physical function, less body pain, and fewer chronic diseases. (Table 2)

Correlation analysis demonstrated that high pain levels were associated with lower alcohol consumption (r= -.142), worse physical function (r= -.356) and poorer overall health score (r= -.321).

Regression analysis revealed that the pain level was positively correlated with use of addictive pain medicines (beta = .389), negatively correlated with alcohol consumption (beta = -.119), and positively associated with the Addiction Risk Score (beta = .150). (R^2 = 20.7%)

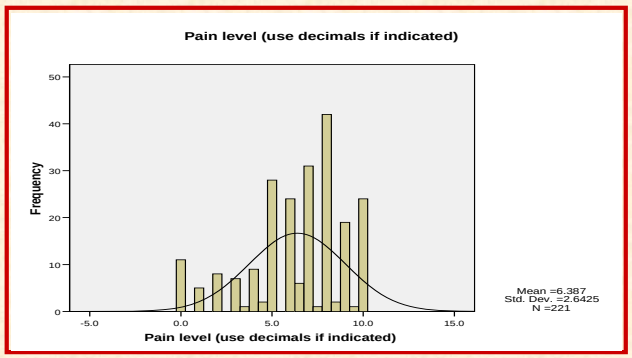

Figure 1 – Pain Level of Sample

RESULTS *(cont.)*

	Uses Addictive Pain Medicine		
	No N=63	Yes N=150	Significance
Pain Level	4.65 (3.12)	7.04 (2.06)	0.000
Addiction Risk	9.28 (2.31)	10.50 (2.25)	0.000
Physical Function	1.95 (.62)	1.62 (.48)	0.000
Role Function	1.11 (1.48)	.46 (1.00)	0.000
General Health Score	3.11 (.81)	2.59 (.85)	0.000

Table 1 – Comparing Users of Addictive Pain Medicine with Nonusers.

	Binge Drink men: >5 drinks, female: >4 drinks		
	No N=198	Yes N=25	Significance
Physical Function	1.67 (.54)	1.93 (.57)	0.026
Body Pain	3.69 (1.03)	3.16 (.81)	0.014
# of Chronic Diseases	4.83 (2.39)	3.88 (1.83)	0.056

Table 2 – Comparing Binge Drinkers with Others

CONCLUSIONS

- Current alcohol use does not increase the use of opioids for pain; in fact opioid users are less likely to drink alcohol. Therefore, in prescribing medicines, doctors cannot use past substance abuse to predict whether a patient will abuse opioids.
- Patients classified as "Binge Drinkers" (males: > 5 drinks, females: > 4 drinks) were healthier, reporting higher physical function, lower body pain, and fewer chronic diseases.
- Those patients who use addictive pain medication reported higher levels of pain, felt their pain was out of control, had lower physical function, and perceived themselves to be less healthy than those patients who use non-addictive pain medicines.

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