Prevalence of Abuse and Dependency in Chronic Pain Patients

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ABSTRACT

A series of 414 chronic pain patients referred to Are Hospital, Are, Sweden, for evaluation and rehabilitation were administered a structured diagnostic interview to detect alcohol and drug misuse and dependence according to DSM-III-R criteria. A total of 97 (23.4%) met criteria for active alcohol, analgesic, or sedative misuse or dependence; an additional 39 (9.4%) met criteria for a remission diagnosis. Current dependency was most common for analgesics (12.6%) followed by alcohol (9.7%) and sedatives (7.0%).

INTRODUCTION

Alcohol/drug misusers are known to use a disproportionate amount of medical care, especially hospitalization (Burton et al., 1981; Holder and Hallan, 1981; Putnam, 1982; Reiff et al., 1982; Roghmann et al., 1981; Zook and Moore, 1980), yet it is not known how many hospital beds are occupied by alcoholics and drug-dependent persons. Although attempts have been made to determine the prevalence of alcoholism among hospital patients (Barchia et al., 1968; Cote and Roche, 1978; Gomberg, 1975; Gottheil and Weinstein, 1980; Green, 1965; Jankowski and Drum, 1977; Jaman and Kellett, 1979; Kearney et al., 1967; Lewis and Gordon, 1983; Lloyd et al., 1982; Moessner, 1979; Moore, 1971; Nolan, 1965; Page, 1979; Tamayo and Feldman, 1975), findings have been inconclusive. Prevalence estimates tend to vary from 10 to 50% depending upon methodology and the specific population in question. Even with the same evaluation method, recent studies suggest differences between patient populations. One study found that obstetrics populations have low estimates (10%) while other patient populations, such as medicine and orthopedics, approach (30%) (Moore et al., 1989).

Most previous studies suffer from inadequate diagnostic criteria or the lack of standardization in data-gathering methodology. Some studies have based...
diagnoses solely on chart reviews (Cote and Roche, 1978; Jankowski and Drum, 1977; Kearney et al., 1967; Tamayo and Feldman, 1975), despite the fact that alcoholism is known to be undereported in medical records (Cote and Roche, 1978; Gomberg, 1975; Kearney et al., 1967; Clark, 1981; Skinner et al., 1981). Studies have generally failed to report the extent of related impairments in patients, and many times to distinguish between lifetime and current substance misuse.

The diagnostic criteria employed in this study are those established by the Diagnostic and Statistical Manual of Mental Disorders, Third Edition, Revised (DSM-III-R) (APA, 1987). DSM-III criteria (APA, 1980) are reportedly the most commonly used in the United States (Boyd et al., 1983). DSM-III criteria for alcohol misuse identify almost the same subjects as Research Diagnostic Criteria (RDC) (Feighner et al., 1972), and DSM-III criteria for dependence identify subjects in excellent agreement with the International Statistical Classification of Diseases (ICD-9) criteria (ISCD, 1977). Thus, although there is no universally applied definition of alcoholism, the DSM-III and DSM-III-R diagnostic scheme appears valid.

The primary aim of this study was to rigorously document the prevalence of past and present substance misuse/dependence and consequent impairment among chronic pain patients hospitalized for examination and treatment of chronic pain. This is one of the few Chronic Pain Substances Abuse Prevalence Studies to employ a structured interview to validate a diagnosis of substance misuse/dependence. Are Hospital in Are, Sweden, specializes in the treatment of patients whose medical conditions have resulted in some disability or temporary inability to work. Patients are typically referred from other hospitals and private physicians for further treatment. Chronic pain, asthma, and other chronic conditions interfering with functioning are frequently encountered.

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In response to concerns about the possible role addictions might have in the status and physical rehabilitation of patients, physicians at Are Hospital enlisted the services of one of the authors (L.W.), a chemical dependency consultant, to identify patients with addictions. Ms. Wickstrom received her degree in education and CDC training in the United States and has worked in the area of addictions and addictions education in Sweden for a number of years. She confirmed a relatively high prevalence of addictions, and recommended more formal procedures to routinely screen entering patients and make appropriate diagnoses. To accomplish this, she consulted with another of the authors (N.G.H.) to translate a structured interview used in the United States into Swedish and employ a more formal protocol to the diagnostic process for addictions. This report is based on the initial results from the employment of that instrument in a Swedish medical facility.

METHODS

Subjects for this study were chronic pain patients between the ages of 17 and 73. They were referred to Are Hospital by Swedish National Health Insurance and by private doctors for further evaluation, treatment, and/or recommendations. All patients had been on sick leave for at least 1 month prior to arriving at Are Hospital. All patients admitted to the hospital during November 1988-October 1989 were given the interview after being hospitalized for at least 24 hours as part of the standard evaluation procedures. Immigrants with severe language difficulties were excluded from the analysis for this report. Of 425 patients participating in this study, eight patients refused to answer questions about alcohol and drug use, and all but three of the 417 patients who began the interview completed the interview.

Of the 414 subjects who completed the interview, 64% were female and 36% men. Almost all (96%) were of Swedish decent. The mean age was 41.6 while the median age was 42.2. As for age, 14% of the subjects were under age 30, 23% in their thirties, 41% in their forties, 19% in their fifties, and 3%
between 60 and 73. In regards to marital status, 46% of the subjects were married, 20% were separated or divorced, 5% widowed, and 27% had never married. In addition, it is one of the few to identify disorders in remission or to consider misuse of drugs besides alcohol.

The structured interview used in this study was the Swedish version (ADDIS—Alcohol/Drug Diagnostic Instrument) of the Substance Use Disorder Diagnostic Schedule (SUDDS). The SUDDS, developed by Norman G. Hoffmann, Ph.D., and Patricia A. Harrison, Ph.D., is grounded on a body of work developing diagnostic interviews. This work includes the development of general interviews for epidemiological studies and clinical interviews for spec-
cific psychiatric disorders. The SUDDS/ADDIS is a structured series of questions designed to elicit information essential to the diagnosis of substance use disorders in accordance with DSM-III-R criteria. Direct, event-oriented questions are used to obtain information; it has been used for both clinical and research applications. The SUDDS/ADDIS has been designed to elicit a lifetime diagnosis first, then to differentiate current from remission diagnoses. The SUDDS/ADDIS provides a total symptom picture plus an indication of when each symptom was first and last experienced.

Structured interviews elicit information in a uniform and reliable manner. The National Institute of Mental Health Diagnostic Interviews Schedule—Version II (NMH-DIS) has been found to have high validity and reliability in the diagnoses of psychiatric disorders, particularly alcoholism. Actually, alcoholism was found to be among the most accurate diagnoses despite the sensitivity of subject matter (Helzer et al., 1977, 1978; Hesselbrok et al., 1982; Robins et al., 1981, 1982). It has also been found that structured interviews conducted by properly trained lay interviewers can be as accurate and effective as interviews administered by a psychiatrist (Robins et al., 1982).

Six staff members who were nurses' aids (two from each of the three chronic pain wards) were specially trained to give the interview and summarize the results. Previous to working with ADDIS they were given a 16-hour education program on chemical dependency and then an additional 16-hour special training program in giving an ADDIS interview. Their first 10 interviews were supervised by the project leader, Ms. Wickstrom. The average time to complete an ADDIS interview was about an hour, but if there were multiple drugs involved, it could take up to 2 hours. The interview consists of 100 questions, in which 86 questions deal directly with alcohol and drug use. After the interview, information was transferred to the DSM-III-R ADDIS checklist sheet. One page allows for coding of alcohol-related symptoms, and the back page allows for coding of drug-related symptoms.

The project leader reviewed the interview results, met with the individual patients, and consulted with their respective physicians in making the final diagnostic determinations. Diagnoses were based on the DSM-III-R criteria in light of all the information obtained from the structured interviews additional patient interviews, medical records, and physician observations. She also met individually with the patients to explain what the diagnosis meant and to give appropriate recommendations.

The present study followed typical clinical procedures and did not routinely verify the diagnosis via the other independent diagnosticians. However, previous work with the SUDDS has shown that the interview provides consistent information appropriate for making clinical diagnoses (Davis et al., 1992).

All of the interviews with positive indications were given to this specialist. She reviewed them, met with the respective patients, and made the final assessment. She then met individually with these patients, explained what the diagnosis meant, and gave appropriate recommendations.

For purposes of this particular study, several substances were combined
in a single diagnostic category. Sedatives and minor tranquilizers were included in the sedative category. The category for analgesics included both opiate and synthetic analgesics.

RESULTS

A striking prevalence of substance use disorders was found in this patient sample. Of 414 subjects, 97 (23.4%) met DSM-III-R criteria for a diagnosis of active alcohol or drug misuse or dependence. An additional 39 (9.4%) met diagnostic criteria for a substance use disorder in remission. For the purposes of this study, a substance use disorder was considered to be in remission if no pathological use or resulting impairment had occurred within the past year. Thus 278 patients (67.1%) of this sample did not meet diagnostic criteria for a substance use disorder for alcohol, sedatives, or analgesics, either active or in remission.

The individual prevalences of misuse and dependence as defined by DSM-III-R for alcohol, sedatives, and analgesics are presented for each of these individual drugs in Table 1. A current diagnosis for dependence is most frequent for analgesics (12.6%), but when remission cases are considered, both alcohol and analgesics have an equal prevalence of dependency (15.5%). Sedative dependence is less prevalent (10.4%). Misuse diagnoses are relatively rare for these three drugs in comparison to dependency.

When the three drugs are considered in combination, 12.6% of all patients have multiple diagnoses and 20.3% are misusing or dependent on only one substance. For these latter patients, a diagnosis involving analgesics is most prevalent (9.2%) for the total sample, followed by alcohol (8.7%) and sedatives (2.4%). A diagnosis for sedative misuse or dependence is most likely to

<table>
<thead>
<tr>
<th>Diagnostic group</th>
<th>Alcohol</th>
<th>Analgesics</th>
<th>Sedatives</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
</tr>
<tr>
<td>No diagnosis</td>
<td>343</td>
<td>82.9</td>
<td>335</td>
</tr>
<tr>
<td>Misuse in remission</td>
<td>3</td>
<td>0.7</td>
<td>7</td>
</tr>
<tr>
<td>Misuse current</td>
<td>4</td>
<td>1.0</td>
<td>8</td>
</tr>
<tr>
<td>Dependence in remission</td>
<td>24</td>
<td>5.8</td>
<td>12</td>
</tr>
<tr>
<td>Dependence current</td>
<td>40</td>
<td>9.7</td>
<td>52</td>
</tr>
</tbody>
</table>

be found in conjunction with a diagnosis for alcohol or analgesics. In contrast, alcohol or analgesic diagnosis are as likely to be the only drug involved as they are likely to be found in combination with other substances.

Equally striking for these chronic pain patients is the severity of the active substance use problem. For those individuals with active alcohol dependency, the number of positive diagnostic indicators for alcoholism ranged from 3 to 23 with a mean of 9.6. This level of symptomatology is comparable to that of patients in treatment for alcoholism. There were relatively few marginal diagnostic cases; 87.5% had 5 or more symptoms.

In contrast, the nonalcoholic patients typically denied any serious problems with alcohol. Of the 343 individuals who did not meet criteria for an alcohol disorder, 258 (75%) reported no diagnostic indicators, and 67 (19.5%) reported only one. This supports the consideration of addictions as a discrete, clinical condition.

DISCUSSION

This study established a significant prevalence (23.4%) of active substance misuse/dependency among chronic pain patients. The most common was
misuse or dependency of alcohol plus a pharmaceutical medication. Those substances in which diagnoses were made were alcohol, sedatives (sleeping pills and/or minor tranquilizers), and analgesics including opiate-based medications. It should be noted that for the group of patients with a diagnosis of misuse/dependence in remission (9.4%), administration of addictive sedatives or analgesics may reactivate their addictive disorder.

Prevalence of addictions in these patients justifies the need to routinely evaluate such patients for addictive disorders. Structured diagnostic interviews based on DSM-III-R criteria, such as the SUDDS/ADDIS, provide a systematic procedure for the comprehensive documentation of the diagnosis of alcohol and drug misuse and dependence in medical patients. Such standardized procedures can help to ensure that consistent information is obtained for all cases and that important information is not omitted. A structured diagnostic interview is highly efficient in that it facilitates the collection of a large amount of information in a short time. Furthermore, it can be used by nurses and other personnel with appropriate training to provide information to physicians and other diagnosticians so as to most effectively utilize the time of these professionals.

Several future studies are planned to further explore both the identification of addictions in chronic pain patients and the management of such patients. Most immediately, the authors hope to compare several diagnostic criteria in light of the ADDIS information and the clinical determinations derived from this study. We anticipate that the different criteria such as DSM-III and DSM-ABUSE AND DEPENDENCY IN CHRONIC PAIN PATIENTS

III-R will produce comparable results in these patients in light of the extent of symptoms and the disability issues. It would also be interesting to evaluate what differences might be determined in terms of the histories of chronic pain patients given the presence or absence of an addiction disorder. One might expect that those who are not chemically dependent might be more likely to successfully return to work while the addicted individual would be more likely to remain disabled, have impaired functioning, encounter future injuries, or continue to have physical complaints. The investigation of various intervention and rehabilitation strategies in conjunction with physical rehabilitation will also be potentially productive areas of research.

Outside the research arena the findings of this study suggest some pragmatic clinical steps. Routine screening for addictions in chronic pain patients seems warranted. The presence of addictive disorders may necessitate modification of the medical management of pain (for example, the type of medications prescribed) and may warrant rehabilitative treatment of the addiction.

REFERENCES


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THE AUTHORS

Norman G. Hoffmann, Ph.D., is senior vice president of New Standards, Inc., a firm specializing in the development of clinical instruments and the evaluation of treatment outcomes. He has worked on the development of a number of assessment tools for diagnosis and placement of addicted individuals and founded the largest evaluation system for the addictions treatment field.

Olle Olofsson, M.D., is a general surgeon and family practitioner specializing in the examination and diagnosis of chronic pain patients. He was formerly chief physician for the orthopedic department of Are Hospital.

Bo Salen, M.D., is the chief physician for the orthopedic department of Are Hospital and is currently investigating chronic pain patients for work on his doctorate degree.

Lynn Wickstrom, B.S., is president of the 4M Consulting Co. which provides educational services and consultation in the area of alcohol and drug misuse and dependency. Her specialty is assessment and diagnosis and has consulted with the Are Hospital since 1988.