Chemical Dependence

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CHEMICAL DEPENDENCE refers to both physical and psychic reliance on a chemical and encompasses alcoholism and drug addiction. Three types of drugs for which chemical dependence often occurs are social drugs, such as alcohol, caffeine, and nicotine (The College will address the public health concerns related to cigarette smoking in other documents); licit drugs, both over-the-counter and prescription; and illicit drugs. Dependence on these substances constitutes a serious public health problem warranting increased attention, prevention, and treatment by physicians. Problem use (defined to include abuse, misuse, and overuse), other than dependence, of these drugs also constitutes a significant public health issue; even in the absence of dependence, intoxication with alcohol or other drugs is a cause of significant morbidity and mortality. In 1982 the Alcohol, Drug Abuse, and Mental Health Administration stated that between 5% and 10% of the workforce suffer from alcoholism and that alcohol and drug addiction cost nearly $50 billion yearly in health care costs, accidents, violence, and loss of productivity (Mayer W. Testimony before the Senate Subcommittees on Alcoholism and Drug Abuse and on Employment and Productivity. July 1982.).

Positions

Chemical dependence is a medical illness requiring medical diagnosis and treatment. The American College of Physicians accepts its responsibility to train physicians to prevent, recognize, and treat chemical dependence. The physician's role in recognizing and treating chemical dependence requires knowledge of the symptoms of chronic and excessive drug use and increased sensitivity to, and awareness of, behavior associated with such problem use.

The physician's role in preventing chemical dependence includes patient education and counseling about the appropriate use of substances on which dependence is likely. Thoughtful and knowledgeable prescribing practices that minimize the likelihood of producing or maintaining iatrogenic chemical dependence are essential.

Rationale

ALCOHOL

The problem use of alcohol is the major drug problem in this country, affecting 5% to 10% of all drinkers (1) for a total of 10 million people (2). Alcohol is a physically addictive drug. As tolerance develops, so do withdrawal signs and symptoms (for example, nervousness, sweating, insomnia, and tremulousness). In a few patients the withdrawal state can have life-threatening consequences (delirium tremens). Because the discomforts of withdrawal can be eased by more alcohol, excessive drinkers are strongly motivated to continue drinking. For those with untreated alcoholism, normal life expectancy is reduced by 12 to 15 years (1). Chemical dependence also imposes a costly medical and social burden on the patient's family and friends and affects innocent victims. Alcohol is involved in at least half of all automobile fatalities, 67% of drownings, 70% to 80% of deaths in fires, 67% of murders, 35% of suicides, and 85% of the 11 000 annual deaths from liver disease, making alcohol misuse the leading killer of persons aged 15 to 45 (2, 3). Alcoholism is implicated in a host of diseases (for example, cancer of the mouth, larynx, pharynx, and esophagus; pulmonary disease; cardiac arrhythmias; gastritis; pancreatitis) (2) as well as psychiatric complications (such as alcohol amnesiac disorder).

Nevertheless, physicians feel ill equipped to treat alcohol abuse. The health care system, indeed, has been criticized as inadequate in dealing with alcoholism. It is estimated that "up to a third of adult patients in our hospitals have problems related to alcohol, but only a fraction of these are correctly diagnosed" (2). In a recent study in New York City of hospital records involving 187 accident victims who allegedly were under the influence of alcohol when their accidents occurred, alcohol abuse was noted in the records of 80 (43%) but only 8 (4%) were referred for any follow-up for their problem drinking (4). In another study of 3411 persons with first hospital admissions for alcoholism treatment, less than 9% of referrals for hospital treatment were made by physicians (5).

Alcoholism needs greater recognition as a medical illness that is amenable to treatment. Acceptance of alcoholism as an illness may make physicians recognize more readily their responsibilities to prevent and treat alcoholism and may make patients accept more readily the need to seek help. One hypothesis for physicians' failure to take histories of alcohol or other chemical use and to intervene in the early stages of the disease is that physi-

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cians are unaware of the benefit of such intervention. Experts recognize, however, that an authoritative confrontation by a physician "may be the single most effective element of early intervention" (6) in treating this illness. The internist's role in treatment may consist of diagnosis and referral for further treatment by other health care personnel or for self-help under the guidance of an organization such as Alcoholics Anonymous. Some of the highest success rates in treating chemical dependence are achieved by patients involved with Alcoholics Anonymous or similar groups. As with many other diseases, the earlier a diagnosis is made and intervention begun, the better is the prognosis for recovery. This rule is particularly true for alcoholism, because the early alcoholic has more support systems intact and the psychological defense of denial often is less advanced.

LICIT DRUGS

Problem use of licit drugs has received increased attention recently, leading to studies to quantify precisely the amount of problem use, the increase or decrease in this problem use, and the amount of medical and social problems caused by such problem use. Regardless of whether dependence on licit drugs is more prevalent now than previously, it is generally agreed that problem use of, and dependence on, licit drugs—primarily prescription stimulants, sedatives, and narcotics—result in many injuries and deaths; the General Accounting Office (7) has estimated that legal drugs cause more injuries and deaths to Americans than all illegal drugs combined. Abuse of over-the-counter drug products, including diet pills and cough medicines, appears to be on the rise. Licit drugs commonly abused are readily available through illicit channels (for example, drugs that have been stolen from legitimate distribution channels, manufactured illicitly in this country, or manufactured abroad and imported).

The physician's roles as prescriber of prescription drugs and adviser about the use of over-the-counter products mandate a responsibility to identify, treat, and help rehabilitate persons who have become functionally dependent on these drugs. An important aspect of this responsibility is to prescribe correctly. Special caution may be required in prescribing drugs for geriatric patients who may have altered metabolism or increased risk of drug interactions. Concern about the problem use of, and the development of dependence on, some prescription drugs—particularly the hypnotics, sedatives, tranquilizers, and narcotic analgesics—has led to criticism of the drug-prescribing practices of American physicians. The exact extent to which these drugs are misprescribed is not known, nor has it been determined the extent to which less-than-rigorous prescribing practices add to the problem. Whatever the degree of the problem, there is agreement that the information provided physicians by our medical education and drug regulatory systems about drugs and their safety, effectiveness, and appropriate uses is not fully integrated into patient care.

That physicians may not be adequately informed has been shown by a report issued in 1979 by the Institute of Medicine of the National Academy of Sciences (8) on the use of common hypnotic drugs to treat insomnia. Although clinical studies show that the effectiveness of benzodiazepines against insomnia diminishes substantially after 7 nights, this study found that up to 2 million persons may take the pills nightly for more than 2 months at a time. It was further noted that physicians receive little or no training in treating insomnia or in the use of hypnotic drugs (9).

Physicians clearly have some degree of control over the availability of licit drugs for which chemical dependence is possible. Responsible physicians should be encouraged to exercise such control within the best interests of their patients. Poorly informed or careless physicians need to be better educated, and physicians who are convicted of abusing their right to prescribe drugs and pandering to the illicit market should have their licenses to practice medicine revoked and be punished to the fullest extent of the law.

ILLICIT DRUGS

In 1982 the National Academy of Sciences (10) issued a report on marijuana which, among other findings, confirmed that illicit drug use is increasing; physicians do not have adequate information about the use, abuse, or effects of illegal drug substances; and conclusive scientific evidence is lacking on all effects of the most commonly used illegal drugs. The average physician is dimly aware of the enormous problem of illicit drug use and feels powerless to stop the flood of heroin, cocaine, and other drugs. Nevertheless, physicians are called on to treat patients with addiction or complications of dependence on illegal drugs, and thus they require the most complete, accurate, and up-to-date information. Physicians must be able to recognize problem drug use, treat it and its effects or refer such patients knowledgeably, and assist the government and private groups in efforts to prevent it.

TREATMENT

Chemical dependence is highly treatable (11), particularly in comparison with other chronic illnesses, but the success of any treatment depends largely on early diagnosis and proper treatment, including referral to self-help groups. Diagnosis of chemical dependence relies on physician sensitivity to the behavioral and physical signs and symptoms of each type of chemical dependence plus an awareness of dysfunctions caused by the drugs (for example, chronic tension states, depression, and cardiovascular and gastrointestinal disorders), the natural history of this disease, its insidious onset, and the possibility that presenting findings may not be those of obvious organ damage but more subtle behavioral or social changes (such as mood change, sexual dysfunction, and family disruption).

Certain laboratory findings should raise a physician's sensitivity to the diagnosis of chemical dependence, including elevated mean corpuscular volume, elevated uric acid levels, and abnormal hepatocellular function. The Michigan Alcoholism Screening Test (12), a 10-minute test, has been found to be "highly reliable and effective" in identifying alcoholics in the hospital (2). The diagno-

sis of alcoholism can be enhanced by questioning a patient about drinking habits, including the effect of drinking on family, job, and social functioning and any history of problems caused by drinking. Questions about drinking and other drug use should be included routinely in general medical evaluations and should be specific about the patients' habits: How often do they drink or use substances? How much, what kind, and on what occasions do they drink? How long have they had difficulty controlling consumption (1). Defensiveness during this history taking can be a clue to chemical dependence.

A range of therapeutic options exists for treatment of chemical dependence (11). In any of these options, the physician would be wise to develop with the patient an informal psychologic contract that makes plain the expectations and responsibilities of each (1).

When the diagnosis is made of significant uncontrolled drinking, the physician should consider inpatient care. The data indicate short-term (6 months) improvement rates of 80% and long-term improvement rates (defined as abstinence for more than 1 year) of up to 50% from "well-integrated modern medical, psychiatric, and psychosocial treatment" (2). A short hospitalization has several advantages: It removes patients from the sources of alcohol and settings in which they drank; it protects patients from some of the dangerous effects of withdrawal during detoxification; it allows the physician to obtain some baseline data; and it starts patients on the recovery process (1).

Although alcohol withdrawal has been treated with pharmacologic intervention (substituting a seemingly nontoxic drug, usually a benzodiazepine, for the toxic alcohol), it is not generally recommended to treat alcohol dependence with substitution (1). Too often this therapy is problematic; alcohol-dependent patients may use drugs not as substitutes for alcohol but in addition to it. Additionally, some patients might trade one form of chemical dependence for another (1). To substitute one drug of dependence for another is not advisable, because this only perpetuates the chemical dependence problem and may lead to increased morbidity and mortality. An exception to this general rule is oral methadone, which can be used effectively by users of usually illicitly acquired opioids, such as heroin, to stabilize their addiction. Generally, methadone stabilization should be seen as a prelude to eventual detoxification and overall rehabilitation (Palmer M. Personal communication.). Disulfiram (Antabuse; Ayerst Laboratories, Inc., New York, New York) can be used as a deterrent to continued drinking, if the patient is willing to take the drug daily and understands the risks of the disulfiram-alcohol reaction (1, 11).

Treatment of chemical dependence requires knowledge about the different therapies for acute management (detoxification, nutritional support) and chronic management (dealing with long-term rehabilitation needs); communication with the patient about the diagnosis and the treatment possibilities available for recovery, including referral to the appropriate resources; and commitment to follow the patient through long-term therapies. As discussed above, the physician may elect not to treat the chemical dependency but to refer the patient elsewhere for treatment. Thus, physicians should be familiar with other medical specialists committed to treating this disorder as well as with community resources, in particular, self-help approaches such as Alcoholics Anonymous, Al Anon, and Alateen, which may operate as free-standing community programs or be integrated into other rehabilitation treatment programs. Whether or not physicians assume the primary treatment role, their influence on the patient's progress can be considerable.

PATIENT EDUCATION

The hallmark of all disease prevention efforts is patient and public education. Physicians have an important responsibility to educate patients about the proper use of licit drugs, including the concept that some drugs that are effective for short-term or intermittent use can carry risks of dependency when used for long periods. Physicians should also participate in public education about the need to use licit drugs only as prescribed or instructed. Other public education methods should be explored by physicians. Physicians are on the front lines of patient and public education about appropriate use of alcohol, the hazards of its misuse, and recognizing signs of alcohol dependence. Furthermore, they are expected by the public to know about and to counsel on the hazards of illicit drugs.

Before physicians can fulfill these responsibilities, they must receive sufficient education and training in the field. The subject of medical education about substance abuse, particularly alcohol abuse, was the focus of a Josiah Macy, Jr., Foundation conference in the early 1970s. That conference concluded (13):

> . . . drug and alcohol abuse is a major medical and social problem with diverse implications, and . . . physicians must accept the obligation to play a dominant role in both treatment and prevention. Medical students and house officers must be trained to accept this responsibility as individuals, and to assume leadership roles on the team approach to both present and future needs. Thus it was the consensus . . . that medical schools must train students and house officers to approach the problem of drug abuse just as they are taught to approach other serious medical problems. It was also the consensus that increased education in these areas needs to be included in the core curriculum.

The American College of Physicians concurs that chemical dependence is a medical problem and that diagnosis and treatment of it are thus responsibilities of internal medicine, in cooperation with psychiatry and other specialties. Instructors in internal medicine should take a greater role in educating medical students and house staff about, and in diagnosing and treating, patients with chemical dependence. Internists have an obligation to treat chemical dependence, and patient education is an important aspect of that obligation.

Summary

The American College of Physicians believes that chemical dependence should receive increased recognition as a medical illness that requires medical diagnosis and treatment and greater educational attention. The

College encourages physicians to help prevent, diagnose, and treat chemical dependence. Referral of patients to community resources, with appropriate support and patient counseling as well as patient and public education, are important components of this treatment.

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