The Addiction Potential of Oxycodone (Percodan®)

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• **Dihydrohydroxycodeinone (oxycodone, Percodan®) is a useful analgesic. Its addiction potential, however, is comparable to that of morphine. This fact should be considered when it is prescribed. Because of increasing numbers of addicts to this drug in the State of California, the California Medical Association Committee on Dangerous Drugs and the House of Delegates has recommended that oxycodone-containing drugs be returned to the triplicate prescription list as they were originally in 1949. This recommendation was incorporated in Senate Bill 385, which failed to pass the legislature.**

DIHYDROHYDROXYCODEINONE (OXYCODONE) was introduced into medical use some 40 years ago. It has proved to be a useful analgesic. It has also demonstrated an addiction potential comparable to that of morphine.[1] The manufacturers of Percodan,® the principal United States product containing oxycodone, recognized this during the early phases of its commercial distribution and in the initial literature supplied with the drug warned:

"The habit-forming potentialities of Percodan approach those of morphine more closely than those of codeine. The same care should therefore be exercised when using Percodan as when morphine is prescribed."

Later this warning was deleted from the detail literature and the minimum warning required by law, "may be habit-forming," was substituted. This was unfortunate, for as oxycodone production has increased in this country (from 9 kilograms in 1948-1950 to 569 kilograms in 1960[2]) and as it continues to rise, there is evidence that the original warning has been forgotten by many who prescribe or sell this drug for the relief of pain. As a result an increased misuse of oxycodone-containing drugs has caused the addiction of numerous persons normally not associated with the illicit drug traffic. And the drug has acquired the unenviable status of being the principal choice as a substitute for heroin by California-based heroin addicts.

The misuse of Percodan, Percodan-demi, Percobarb and Percobarb-demi has precipitated a fourfold problem in California.

1. Oxycodone-containing drugs are being prescribed in increasing amounts for a variety of illnesses. Their consumption in this state has increased out of proportion with the rest of the country. In 1962, 35,951,020 units of these drugs were purchased by California pharmacies, hospitals and physicians. A blasé attitude has seemingly developed among some that has resulted in a situation described by John E. Storer, Chief of California's Bureau of Narcotic Enforcement: "People are eating Percodan as though it were popcorn, with extremely telling effects."

2. Numerous non-criminal persons without previous history of addiction or of association with illicit narcotics are becoming addicted to the drug and are committing criminal offenses to obtain it.

3. The underworld addicted population is apparently seeking this product to support or supplement its habit. Thousands of tablets are being diverted into illegal channels. And crime associated with this activity has increased. California is faced for the first time in its history with the problem of underworld sources actively seeking an otherwise licit narcotic as a substitute for heroin. Addicts have discovered that oxycodone can control withdrawal symptoms and produce heroin-like effects when taken either orally or intravenously. Additionally, it may mask the presence of heroin addiction if the drug is taken orally for a week or two before an addict's scheduled appearance in court. Homatropin, an ingredient in Percodan, masks the ocular signs usually seen with opiate addiction and may confuse Nalline testing. The oral use of the drug gives time for needle marks to heal and thus not be valid as evidence of recent intravenous use of a drug.

4. Ingredients in Percodan (oxycodone has been combined with aspirin, phenacetin and homatropin) may cause toxic side effects because of the ingestion of large quantities of these drugs by persons taking the mixtures to obtain the effects of oxycodone. The dependence caused by oxycodone is apparently strong enough that an addict will ignore skin rashes, gastrointestinal bleeding and compa-

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rable symptoms which result from the gross misuse of Percodan and comparable compounds until he is forced to obtain emergency medical treatment. Patients with gastrointestinal diseases such as colitis and gastric or duodenal ulcer and patients who have glaucoma are poor candidates for prescription of this drug unless extreme caution is exercised. Yet, there are numerous cases on file at the Attorney General's office which indicate that addiction began as the result of using Percodan for pain associated with gastrointestinal disease.

The average physician and hospital staffs see few cases of Percodan addiction because of the careful monitoring of naroctic drugs in private offices and institutions. This can be expected to change, however, if current impressions concerning the addiction potential of oxycodone remain uncorrected. Percodan addiction is well known to personnel of state hospitals, for it is here that oxycodone addicts appear—addicts whose addiction is primarily ascribable to the illicit use of the drug by persons who, for the most part, were introduced to it by prescription for a legitimate illness.

Since the average physician may not as yet be aware of the hazards of the misuse of oxycodone products and because recent legislative activities may have augmented the misconception that oxycodone is of little addictive importance, it seems wise to review certain evidence which has been placed before the California Medical Association's Committee on Dangerous Drugs within the past few months.

Originally and as late as 1949 Percodan was controlled by triplicate prescription. Two years later, because it had caused little or no enforcement problem, Section 11166.12 of the California Health and Safety Code was amended to permit prescription of the drug on a plain blank. In 1953 another amendment permitted telephoned orders without accompanying written prescriptions.

Violations of Section 11166.12 involving Percodan became noticeable with the passing of the 1953 amendment and caused the Bureau of Narcotic Enforcement to begin agitation for the return of the drug to the triplicate form. The Federal Bureau of Narcotics investigated the situation during this period but refrained from interfering on a Federal level inasmuch as the problem seemed confined to California.

On October 5, 1961, Attorney General Stanley Mosk openly cited the need for increased control of Percodan, stressing that the drug was creating a new class of addicts composed of otherwise honest, not criminally inclined persons. The problem was brought before the California Medical Association Committee on Dangerous Drugs. The evidence was reviewed. The personal experience of the members of the committee and a lack of evidence sufficient to warrant the return of the drug to triplicate blank at that time caused the Committee to refrain from making a formal recommendation concerning Percodan.

The Committee did, however, suggest a continued period of observation and expressed interest in following the problem inasmuch as the arrest record for Percodan violations for the first nine months of 1961 was 50 per cent higher than violations involving all other licit narcotics combined.

The addiction history of oxycodone was also noted. In 1954, the *Bulletin on Narcotics* stated that oxycodone then accounted for 11.5 per cent of narcotics misused by addicts in France. "This high percentage of dihydrohydroxycodeinone should be emphasized," *Bulletin* author Charles Vaille warned. "This substance, which began to be used in France only a few years ago, has proved to be particularly dangerous with regard to drug addiction. It seems to act more like heroin than like morphine."[4]

Later, Dr. Nathan B. Eddy, an eminent authority, added to this observation: "Oxycodone has an analgesic potency approximately the same as that of morphine, with a usual dose of 10 mg, and a similar duration of action. The incidence of most side effects appears to be less for oxycodone than for morphine, but its respiratory depressant effect and its addiction liability are not materially different from these effects of morphine. Either of these effects should preclude its use as an antitussive."[2] Dr. Eddy re-affirmed this opinion on February 13, 1963, in a personal communication to Dr. William F. Quinn, chairman, California Medical Association Committee on Dangerous Drugs as follows:

"Your letter indicates that use of the triplicate prescription forms has decreased diversion of opiates from legitimate channels to abuse. If this is so and if codeine is subject to prescription on the triplicate form, it would be my opinion that making Percodan subject to the use of such forms could be justified and could help to prevent diversion of Percodan to improper use."

When the California Bureau of Narcotic Enforcement approached the C.M.A. Committee on Narcotics again in 1963 its evidence was more voluminous and more impressive. It was shown, for example, that a five-week spot check, begun on February 6, 1963, of 174 pharmacies in Los Angeles and San Francisco, had revealed 946 forged prescriptions in the files of unsuspecting pharmacists. The names of 240 physicians had been forged on these blanks, which had been stolen from various offices. This spot check represented a survey of but 4 per cent of California's 4,300 pharmacies.

Additionally, numerous cases in which Percodan was implicated in violations of Section 11166.12 of

the State's Health and Safety Code were presented. Some of these are included here in brief summary. Each case represents a specific problem. All cases are from the Los Angeles office of the Bureau of Narcotic Enforcement. In each case, the subject was apprehended because he had forged prescriptions to obtain Percodan for illicit use.

CASE 1. Male pharmacist. Age 52.

Subject placed forged prescriptions in his files to cover his personal misuse of Percodan. His wife and daughter were also involved. He sought assistance from the Bureau after being forced to commit his daughter to a sanatarium for addiction. Some 5,000 tablets had been used by the family by that time.

This man was a community leader, an outstanding lecturer to civic clubs on the subject of the evils of narcotics. He had represented his profession before the California State Legislature.

CASE 2. Male pharmacist. Age 75.

Subject illegally supplied an addict with Percodan for two years without legitimate prescription. A physician, learning of the addict's plight, attempted unsuccessful ambulatory withdrawal. The addict collapsed at his place of employment, was discovered to be addicted, and later helped in the apprehension of the pharmacist.

CASE 3. Male physician. Age 35.

Subject used Percodan for two years with a current habit of 50 tablets daily. He stated he was originally unaware of the addicting potential of the drug. He failed repeated attempts to cure himself. Eventually he underwent psychotherapy.

CASE 4. Male physician. Age 85.

Subject wrote over 700 prescriptions for Percodan in a 16-month period without vertifying patients' illnesses or identity. Unwittingly he became a source of supply for heroin addicts. The physician claimed he was misled by advertisements which merely noted the drug was "habit forming" and thus felt free to prescribe without caution.

CASE 5. Male minister of the gospel. Age 54.

Subject was apprehended with numerous stolen prescription blanks. He forged these for personal use of Percodan. Ironically, when apprehended, he was found to have used the back of some of these blanks as a scratch pad for his next sermon, "He Was Weighed and Found Wanting."

CASE 6. Male school teacher. Age 33.

Subject was apprehended forging prescriptions during a period when he was undergoing psychotherapy. He said he knew he was "hooked" after his intake had reached 7 to 8 tablets daily.

CASE 7. Male restaurant owner. Age 49.

Subject sent his employees to fill prescriptions he had forged. He began his habit in New York where, according to the subject, the drug is easily obtained. Initially his physician provided him with a prescription for 400 tablets.

CASE 8. Housewife. Age 21.

Subject began using Percodan as a high school sophomore, obtaining her drugs from a friend for the relief of menstrual cramps. Addicted by her senior year, she obtained her drugs by going from physician to physician. When her baby was born she went through three days of withdrawal symptoms. At that time she consulted a psychiatrist, who continued to supply her with 30 tablets of Percodan daily while attempting psychotherapy. In time her family physician interrupted the cycle by placing her in a sanatarium for withdrawal therapy.

In connection with this case, it is well to note that a segment of the medical profession suggests that proper therapy of addiction involves the continued legal use of drugs until the "addict is ready to quit." A question that can reasonably be asked is: If a drug supplies all the answers to each of an addict's problems (which the addict feels it does), how can one reasonably expect he will ever voluntarily give up his drug as long as it is easily acquired? And as long as the drug is available, why should an addict seek or accept another method of solving his problems, particularly if this route involves the emotionally painful experience of maturing.

CASE 9. Housewife. Age 28.

Subject used 20 or more tablets of Percodan daily until a generalized rash developed. Scars from this rash are still visible after two years of abstinence. The patient had severe withdrawal symptoms and hallucinations when she tried to quit her habit. In desperation she walked into a police station, dumped her supply of Percodan on the desk and pleaded for assistance.

CASES 10, 11, 12. A family, the father a mechanic, age 48; the mother a housewife, age 47; and the son, a student, age 15.

The father of this family forged stolen prescription blanks after becoming addicted through the use of his wife's supply which she obtained from her physician for treatment of pain associated with colitis. He also telephoned various pharmacies, impersonated physicians, and thus obtained drugs illegally.

"I took Percodan which was prescribed for my

wife," he told investigators. "It seemed to give me a quick lift mentally as well as physically. I liked them immediately and have been taking them for approximately a year."

This case came to attention when agents apprehended the 15-year-old son as he tried to pass forged prescriptions. The boy himself was using 10 tablets a day at the time. He had stolen prescription blanks from physicians' offices, forged them and then passed them with minimal difficulty.

CASE 13. Male laborer. Age 24.

Subject was a heroin addict who used Percodan by preference because of its low cost, easy availability and the relative lack of danger of being in conflict with the police.

The use of Percodan by heroin addicts presents some interesting sidelights on techniques. Whereas most addicts whose primary addiction is to Percodan ingest the drug, heroin users if they have turned to Percodan "for kicks," may inject it intravenously. If they do, they employ the usual stock items—a spoon for boiling the drug into solution, a needle, an eye-dropper and a cotton pledget for straining the solution before injection. But, for Percodan, they add a technique not normally employed when heroin is used. They chew the cotton after they have "enjoyed" the effects of the intravenous injection in order to extract the last available drop of drug.

It may seem odd that California has become the center of Percodan misuse. Two factors, however, may contribute to this: California has an undue share of unstable personalities who welcome bizarre methods of escaping reality; and it is one of two states—the other being Illinois—where the triplicate system of prescribing narcotics is in effect.

In states where an addict can forge any narcotic on a plain blank, he preferentially would and does choose morphine, dilaudid or a comparable drug. When the triplicate system is present, however, he must make a second choice. In California Percodan is the only addict-preferred drug not currently on the triplicate system.

A question is frequently posed which implies that if codeine-containing drugs are exempt from the triplicate system, oxycodone-containing drugs should also be exempt. The best reply to this implication is that when and if codeine-containing drugs present an enforcement problem, a request will be made to place them on triplicate prescription. Until then, it seems unnecessary to burden practicing physicians with an additional task.

The argument has been presented that the placement of oxycodone-containing drugs on the triplicate list will limit their usefulness and prevent their acquisition by persons who require them for legitimate purposes. This should not be true for these drugs any more than it has proved true for other narcotics. Over 22,000 triplicate slips are written by California's physicians each month to provide adequate narcotics for those who need them. Interestingly, some physicians still seem to prefer the triplicate blank for Percodan even though it is not currently a legal requirement.

The problem of replacing Percodan on the triplicate list has precipitated many discussions. Certainly, there is room for debate on both sides of the question. When the subject was considered by the C.M.A. Committee on Narcotic Drugs earlier this year, however, the evidence seemed far too weighted on the side of public health and safety to permit the continued misuse of oxycodone-containing drugs if this misuse could be controlled by the expedient of employing the triplicate system.

The Committee felt it could not ignore the mounting evidence concerning the need for stricter controls for this drug. As a result, it recommended that oxycodone-containing drugs be replaced on the triplicate list, observed for a two-year period and then reconsidered. It was joined by the California Pharmacy Association in this recommendation.

On January 21, 1963, at the specific request of the Governor and the Attorney General and with the approval of the California Medical Association, Senator Edwin J. Regan introduced Senate Bill 385, which would have put oxycodone-containing drugs back on the triplicate list. A marathon of discussion then began among legislators. It continued on and off over a period of five months. Essentially the argument seemed to evolve itself into an issue of conservative management of a dangerous drug on one hand and matters of convenience, politics and finance on the other.

The bill passed the Senate but on May 15, 1963, by a vote of six to four, Senate Bill No. 385 was killed in the Assembly Criminal Procedure Committee.

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