

The Current Drug Scene in the United States

Dr Donald B. Louria är ordförande i staten och staden New Yorks narkotikakommittéer och en av världens ledande experter på narkotikaproblem. I den här publicerade artikeln ger han en översikt över aktuella narkomani-problem i USA.

Dr Maj Britt Holmberg, verksam vid Göteborgs stads narkomanpoliklinik, sammanfattar och kommenterar på vidstående sida vissa aspekter i dr Lourias artikel, som är av särskilt intresse för svenska förhållanden.



Donald B. Louria

Opiates

Over 90 % of the illicit opiate users in America take heroin (diacetylmorphine) by injection. There is very little illegal use of morphine, opium, or the various other synthetic opiates. The total number of heroin addicts has not significantly increased during the last 15 years; there continue to be approximately 100,000 addicts or habitues in the United States, about half of whom reside in New York City. Approximately $\frac{2}{3}$ of the addicts are of 3 ethnic minorities—Negro, Puerto Rican and Mexican—and the overwhelming majority of heroin users live in blighted areas of large urban centers.

Several points merit emphasis. First, since heroin is proscribed in the United States, all heroin is obtained in the "black market" which is controlled almost exclusively by major organized criminal groups.

Second, the increasing venality of the sellers is such that most addicts receive $< 1\%$ to 3% heroin. As a result many using 1—6 injections daily are psychologically but not physiologically addicted,—they can be easily withdrawn without use of substitute opiates such as methadone.

Third, although there is some spread from the deprived urban ghettos, only small numbers from middle and upper class socio-economic groups are involved in heroin abuse and most of those have substantial underlying psychiatric problems. Unlike the situation in England, in the United States there is little overlap between LSD-using groups and heroin users.

Fourth, the medical complication rate is appallingly high. The complications include subcutaneous abscesses, embolic lung abscesses, overdose, endocarditis, hepatitis and tetanus.¹ Some 30 years ago, malignant malaria transmitted by shared unsterile needles killed several hundred addicts but this is no longer true perhaps because heroin is often adulterated with quinine, a potent antimalarial.

Overdose is a fearsome disease killing 1% of the addict population every year. The frequency of this serious, often lethal, complication results from the variability in the strength of street packets of heroin. A study by the Chief Medical Examiner in New York City showed that 10% of street packets sold as heroin contained no

heroin at all and the concentration in the rest ranged from less than 1 % to 77 %.² If the user inadvertently injects too strong a dose, his respirations become markedly slowed and acute lung congestion follows. If untreated, death may occur in several minutes. If treatment, consisting of opiate antagonists such as nalorphine and supportive therapy, are instituted promptly, most patients recover rapidly.

Hepatitis is a frequently severe and sometimes lethal complication. The responsible virus is transmitted from user to user by unsterile needles. Several studies show that 75 % of chronic heroin users have hepatitis as determined by clinical evidence of jaundice, analysis of liver function tests or liver biopsy.³ It seems likely that any delinquent group injecting drugs intravenously without proper attention to sterile techniques will manifest a high incidence of hepatitis; thus, for example, the number of cases of hepatitis in Sweden secondary to preludin and ritalin injections is rising rapidly.

Fifth, studies of heroin users in blighted areas of large urban centers show that there is a profound degree of family disorganization, characterized by an absent, weak or hostile father figure and often by an over protective mother.⁴ This leads to delinquent behavior other than drug abuse; 80 % of the addicts have been in trouble with the law *prior* to arrests for drug taking.

Sixth, once a pattern of heavy heroin use is established, the individual becomes isolated from society both because of the drug habit and the necessity for obtaining a substantial amount of money to support the habit. Men usually turn to stealing or selling drugs and women to prostitution or shoplifting. Over half the street walking prostitutes in New York City are heroin users.

The most interesting developments in the United States are the recent experiments in rehabilitation. I shall mention 4 of the most promising.

a. The methadone maintenance program

The most extensive study is taking place in New York City under the aegis of Drs. Vincent Dole

and Marie Nyswander. Methadone, an addicting narcotics, is administered to patients during a 6 week in-hospital period, building up to a large dose (generally 80—100 mg. daily) given once by mouth. After the 6 week in-patient period, patients are discharged back to the community, returning at first daily for their methadone, later as infrequently as weekly (receiving a 7 day supply each time.) The methadone clearly prevents any "kick" from heroin and allegedly permits the patient to return to a normal constructive life in society. The figures thus far gathered indicate that among those on methadone 70 % become employed and criminal activity is sharply reduced though by no means eliminated.⁵

There are several important points that must be made.

1. These patients are voluntary and are therefore highly motivated. No studies have been made on persons assigned to methadone maintenance after arrest. Since most heroin users are ill-motivated, any maintenance program will have limited public health applicability unless it can be shown to effect rehabilitation in initially less well motivated individuals.

2. The average age is approximately 32 years. This is close to the so-called maturing out period described by Winick.⁶ According to the Winick concept, addicts between ages 30 and 40 frequently stop narcotic use spontaneously. It will be important to determine whether those who do well under methadone are in the older age group and therefore have a relatively good prognosis anyway.

3. Of those who volunteer, about 50 % are rejected. These will have to be scrutinized carefully to evaluate the possibility that those with the worst prognosis are being excluded.

There is no evidence that methadone *per se* cures anyone. These patients become committed to the charisma of the program and are provided which a great deal of supplemental help,—in obtaining jobs, schooling, job training and welfare payments. It would thus be imprudent to expand this experimental program to public health policy at this time. If this were done, methadone would

merely be dispensed widely and injudiciously with the erroneous notion this would in some magical fashion cure addiction. The result would be increase in addiction and secondary selling of the drug similar to what has happened in the last few years in Sweden with the central stimulants.

The methadone experiment is interesting and the results encouraging. Many more data are needed, however, before a judgement can be made as to how widely this experiment can be applied.

b. Daytop-Synanon

These two groups, one based in California, the other in New York, utilize abrasive group therapy for the most part using ex-addicts as group leaders. Synanon treats only volunteers whereas Daytop accepts both volunteers and arrested addicts. No drugs are used. The idea in general is to completely rebuild the personality during sheltered group living in which work and responsibility within the group and the group discussions are the mainstays of therapy. Both groups report excellent results but it is important to stress that neither has undergone impartial extramural evaluation and neither has yet returned any substantial number of cured addicts to the community.

c. The New York City program

Based on an experiment in Puerto Rico, this program has 3 stages,—induction, treatment and re-entry. Addicts are contacted in the community and attempts are made to inculcate motivation for rehabilitation while the addict is still in out-patient status. The second stage consists of 9—18 months of inpatient treatment which concentrates on group therapy, but unlike Synanon and Daytop, this is primarily under medical-psychiatric control. In the third stage, re-entry, the ex-addict lives first in a half-way house and then is returned to the community full time. During both the induction and re-entry phases, ex-addicts are used extensively as members of the therapeutic team.

The preliminary results of this program are likewise encouraging. The data are however thus far fragmentary. The patients are voluntary and at least 50 % introduced to the program never

reach the second stage. Only a small number have been discharged from the program as recovered and even among these, follow-up data are incomplete. This approach must then be considered in its inchoate phases and even preliminary judgements must be held in abeyance.

d. Civil commitment

Both the States of New York and California have such programs. The New York State program is only 18 months old but its potential is enormous. During the initial year, over 250 million dollars was spent on constructing new facilities, rehabilitating existing units, personnel and rehabilitative programs. It is estimated the carrying costs of the program will run to approximately 50 million dollars per year.

The program admits 3 types of addicts,—those arrested for drug offenses (or who are arrested for non-drug offenses but use heroin), volunteers, and addicts committed by the courts at the behest of close relatives. For those who are involuntarily committed without having committed a crime, there are extensive legal guarantees to insure that the individual's civil rights are not abrogated.

Once accepted into the program an addict remains under supervision for 3 years, approximately one year as an in-patient and 2 as an out-patient back in the community. The program includes the following major facets: educational improvement, vocational training and retraining, job placement, group and individual psychotherapy and motivational re-orientation. Additionally, the New York State program includes a massive preventive educational program, a large research program to include methadone maintenance as well as every other promising approach and a rigorous evaluation mechanism to apply to all programs within the state which receive public monies.

Whether this extraordinary attempt at rehabilitation, research, evaluation and prevention will succeed is problematical; but it does stand as the most comprehensive, best funded program ever undertaken. It among the 4 programs discussed here

has the greatest chance of reaching the majority of addicts.

Potent Hallucinogens

Lysergic acid diethylamide (LSD) is the drug most extensively used in this category. The number of users in the United States is unknown. Recent estimates suggest that 300,000 persons in America have used LSD, the majority in the last 2 years and that 1 % of the college population (some 60,000) students have taken the drug on at least one occasion. In certain colleges, especially on the east coast of the United States and in California, the number of users is substantially higher reaching between 5 and 20 % of the student body.

At present LSD is used infrequently in the treatment of human disease, and then only under controlled experimental conditions. The drug is beneficial in the treatment of some cases of severe alcoholism, in certain patients with neuroses (usually compulsions and phobias) and in some persons with terminal malignant disease associated with pain. Although 20—60 % of alcoholics improve strikingly after 1—2 LSD sessions there is a substantial fall off in sobriety 3—6 months later;^{7,8} The effects of LSD given 1—3 times in terminal malignancies is intriguing. In some but not all, persons pain is markedly alleviated and the patient acquires surprising equanimity in the face of imminent death. It is important to emphasize that thus far only a small number of individuals have been so treated. Consequently no firm conclusions can be drawn.

LSD has also been said to be beneficial in the treatment of childhood schizophrenia, psychopaths and sexual deviancy but the data are meagre and inadequate.

Although LSD has few established medical uses, it is often ingested by young people for other alleged benefits. These include increased creativity, augmented aesthetic sensitivity, acquisition of insights occurrence of transcendental experiences and increased capacity to give or receive love. There is no evidence that LSD confers any of these benefits when taken under non-medical aegis. Indeed there is now a careful analysis by Mc

Glothlin of creativity and aesthetic sensitivity under the influence of LSD.⁹ Volunteers were studied prior to and 6 months after a single LSD ingestion both by questionnaire and intensive psychological testing. At the end of the 6 month period, 25 % said their creativity was clearly increased and 62 % reported greater aesthetic sensitivity; yet the more objective psychological tests showed no change at all. Thus the drug produces claims but there has been no substantiation of those claims. The same may be said of insights and "loveability". Regarding mystical experiences, it is clear that many persons taking LSD have hallucinations which center on known religious figures or the deity but there is no evidence these hallucinations per se have any lasting effects on the behavioral pattern of the individual,—thus the LSD experience can not be considered truly transcendental. There is some reason to believe that LSD may add to the religious experience in specially trained persons, notably divinity students.¹⁰ Excepting these religiously trained persons, there is no evidence that valid transcendental experiences have ever occurred under the influence of LSD.

LSD is also reported to be a potent aphrodisiac. If the definition of an aphrodisiac effect is increased interest in physical sexual activity or enhanced performance during love making, then LSD is not an aphrodisiac. Indeed if anything, it reduces performance. Furthermore the images, delusions and hallucinations are frequently enormously erotic but there is ordinarily no physical counterpart thereof, thus establishing it as a mental stimulant of erotic fantasies but a physical anti-aphrodisiac.

The dangers of LSD have gradually become more apparent during the last 2 years. These include: acute, subacute or chronic psychoses; self-mutilation; acting out of homosexual or anti-social impulses; uncontrolled aggression; convulsions, attempts at suicide or homicide; and overwhelming panic.

In one series of persons hospitalized with adverse reactions to LSD 8.6 % had tried either homicide or suicide.¹¹ There are now increasing

numbers of cases of intentional or inadvertent suicide under the influence of the drug.

Any person, no matter how "normal" prior to LSD may experience a psychosis necessitating hospitalization for days, weeks, even months.

In addition to the acute reactions there are several chronic adverse reactions from LSD use.

First, in persons who have personality defects, severe anxiety, neuroses or even compensated psychoses, LSD may precipitate a prolonged psychosis lasting for months or even years.

Second, after a single ingestion of LSD, recurrence of unpleasant hallucinations or feelings of panic can occur intermittently for as long as 1—2 years even if there is no further ingestion of LSD.

Third, an increasing number of individuals who take LSD repeatedly are dropping out of society, withdrawing into an inwardly-directed, non-productive, bewildered cocoon.

Fourth, LSD appears to be unusually dangerous because it induces chromosomal abnormalities including breaks and rearrangement.¹² Eighty percent of LSD users show such abnormalities in circulating blood cells; this is not precisely dose-related,—most have used LSD on several occasions but in some instances LSD has been ingested only once. Once acquired, the changes appear to persist and are probably permanent. If a woman takes LSD during the early months of pregnancy similar chromosomal abnormalities are likely to be found in her offspring. As in the adults, the changes in the infant appear to persist. Whether the chromosomal abnormalities will result in an increased incidence of neoplasms (especially leukemia) in the user or defects (physical or mental) in the offspring is not known. However these are substantial possibilities and hopefully should serve to dissuade young persons from taking this inordinately potent and harmful drug indiscriminately.

The dangers of LSD are so striking that, inevitably society has reacted with legal restrictions. The illicit manufacture, smuggling, sale or distribution of LSD is penalized by a maximum of one year jail sentence if the offender is prosecuted by

the federal government; possession or use of the drug, incurs no penalty. Only about 1/3 of the individual states have passed laws but these in general prescribe more severe penalties for LSD sale and usually have a penalty ranging from 30 days to 2 years in jail for illegal possession. It is likely that if the problem continues to grow, the penalty provisions of federal and state laws will increase.

Additionally some states, led by New York are initiating major campaigns to educate young people to the potential dangers of LSD and other potent hallucinogens.

Marihuana (Cannabis)

In the United States marihuana is considered identically with heroin (in America the form of cannabis used is the relatively mild marihuana, the use of the more potent hashish being far less extensive). Thus the laws almost uniformly mandate 5 or more years for sale or smuggling of marihuana. The penalties for possession are less but still are often severe ranging from a few months to several years in jail. In actuality charges of possession are in the overwhelming majority dismissed before trial; if the offender is convicted, sentences are usually suspended or the individual placed on probation. Of those actually jailed, most receive 1—6 month sentences; only rarely does the jail sentence exceed one year.

Despite the rather stringent laws, use of cannabis is increasing rapidly. No accurate figures are available but estimates range from 1,000,000—12,000,000 users. More accurate studies in colleges indicate 7—15 % of college students use marihuana on one or more occasions; of these perhaps 2/3 use the drug on only 1—4 occasions.

In some colleges, especially in California and on the east coast, the percentage of students who have used cannabis is higher, ranging from 20—40 %. Of those who use repeatedly, an estimated 5 % become potheads, meaning that they smoke virtually incessantly, remain perpetually intoxicated, and center their whole existence around marihuana use.

Whatever the specific figures, all data show

a marked increase in use over the last decade. On many college campuses, students serve as distributors of the drug, selling individual marihuana cigarettes for \$.25—\$1 (approximately 1—5 crowns).

The increasing use and inordinately severe penalties have resulted in a vigorous and sustained attack on the marihuana laws. It is clearly incongruous to have severe penalties for marihuana, a mild hallucinogen, and much milder penalties for LSD, a far more potent and dangerous hallucinogen. In 4 states (New York, Colorado, Rhode Island, Massachusetts) the marihuana possession laws are being or have been challenged. Those who would sunder those laws maintain that cannabis is innocuous, a conclusion which to me appears unwarranted by the data. Since marihuana, although not innocuous, obviously has only limited dangers and since most legal and public health authorities recognize this, it seems likely that in the near future the penalties for marihuana possession will be strikingly reduced; it seems equally likely that there will be no major change in the penalties for sale or smuggling.

Central stimulants

In the United States the drugs used are oral amphetamine tablets or intravenously administered methamphetamine (called methedrine or desoxyn). The material for injection comes either in liquid form (diverted from legal sources) or in adulterated crystalline form (manufactured by illegal chemists). The latter is diluted in water and injected. Ritalin and preludin are not used nor are the oral tablets dissolved in water and the suspension injected. As in Sweden, the amount used by vein is at least 5—10 times that used by mouth.

The amphetamines result in excessive physical activity, sleeplessness, irritability and decreased appetite. Sexual activity is often, but not always, markedly increased and repeated excessive use characteristically produces a profound paranoia. Among inherently aggressive persons, the amphetamines, due to a combination of hyperactivity and paranoia, can produce violent behavior.

The number of amphetamine users in the

United States is not known but it is clear the prevalence of abuse is increasing among the following groups.

a. Heroin users who use intravenous methamphetamine to increase or prolong the kick of the opiate. In point of fact, they get mainly the amphetamine effect and many eventually turn almost completely to the stimulant.

b. Delinquent youths especially rowdy motorcycle gangs who use amphetamine pills, often in large quantity.

c. Hippies: The so-called flower movement has spread from its American genesis to involve many cities around the world. Superficially this is a movement rejecting society as presently constituted embracing instead spontaneity, individuality and love of ones fellow man. Beneath the facade, the hippie movement is for the most part devoted to group living in filthy hovels, promiscuity (instead of love), and use of drugs. Most hippies, both hard core and fringe types, will ingest, sniff or inject almost any drug available so long as intoxication is promised. Initially hippies were primarily cannabis and LSD users but more recently it has become clear that large numbers use substantial amounts of central stimulants either by tablet or injection.

The illicit manufacture, distribution or sale of central stimulants is prohibited at a federal level but penalties are small and possession itself is not a punishable offense. Some of the individual states have adopted legislation providing penalties both for illicit possession and sale. As this problem increases, there is likely to be a progressive escalation in the severity of the penalties.

Other drugs

The extent of barbiturate abuse is unknown but does not seem to be either increasing or a major problem. Some heroin addicts (up to 22 %) are simultaneously dependent on barbiturates. In these withdrawal from opiates is far easier than the barbiturate withdrawal.

Glue or gas sniffing and ingestion of large amounts of codeine containing cough syrups are found among teenagers but these abuses are con-

finned for the most part to delinquent youngsters and there is no evidence these problems are becoming more serious.

Aside from LSD, other potent hallucinogens used include psilocybin, dimethyltryptamine (DMT), mescaline and STP. The last named is an amphetamine derivate. Initially trumpeted as non-toxic, it produces atropine-like respiratory difficulties (including respiratory paralysis) and severe manic psychoses.

Summary

In the United States during the last decade, the heroin problem has persisted and the prevalence of use of cannabis, potent hallucinogens and central stimulants has strikingly increased. Vigorous therapeutic and educational programs should reduce the heroin problem and LSD use should diminish as the undeniable dangers become better recognized. It seems likely that in the next decade the cannabis problem will grow as will use of oral and intravenous central stimulants and experimentation with newer hallucinogens. Reducing penalties for marihuana possession may, paradoxically, diminish the severity of the problem whereas the growing abuse of stimulants and newer hallucinogens will have to be met with a multifaceted attack, including control of drug supply, restrictive laws and preventive education.

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