Any presentation of the clinical aspects of drug addiction cannot fail to put into bold relief the dearth of hard data in the clinical field. This paper will attempt to cover briefly the development of drug addiction in this country, the personality of the addict, current treatment, and some observations concerning the future.

THE DEVELOPMENT OF THE PROBLEM IN THE UNITED KINGDOM

A recent paper by Spear (1969) points out that the start of the disturbing rise in numbers of heroin addicts began in 1960, when a total of 68, the level obtaining since 1954, rose to 94, and by the end of 1967 had reached 1,299, and when the use of cannabis, previously confined to coloured seamen of the East End and to clubs frequented by Negro theatrical performers and others in the West End, began to be of interest and appeal to our own indigenous population. Spear suggests that the activity of one hospital employee, who trafficked drugs in the West End and was sentenced to imprisonment in April 1951, had led to or been connected with 65 cases of heroin addiction and...
that he appeared on the scene when there was little or no heroin circulating in the West End. His appearance, says Spear, 'coincided with the scarcity of cannabis, and suggests that many persons who had been smoking cannabis began to use heroin and cocaine as substitutes'. Be that as it may, it was not until 1960 that the first heroin addict under twenty years of age appeared.

Figures 1 to 4 demonstrate the subsequent developments.

Since 1960, young persons have been increasingly interested in and involved with drug-taking, and in the years 1960 to 1964 the principal drugs used were cannabis, amphetamines or amphetamine barbiturate mixtures.
These drugs were initially taken by young people in the West End, frequenters of all-night coffee bars and clubs, but as time went on, their use spread to suburban areas and to cities and towns other than London (Bewley, 1966; Connell, 1964, 1966, 1968). Now there are few towns where cannabis and amphetamines are not available in the illicit market. This spread has not taken place at equal rates throughout the country, and patterns of drug use can sometimes be noted in terms of the number of years they are behind the London ‘scene’, where multiple drug use is now common. Barbiturates are increasingly used by young persons, often by the intravenous route. Differences in subcultures have been noted (Kosviner et al., 1968; Alarcon
and Rathod, 1968) and the method of spread has been described in an epidemiological study of heroin users in Crawley (Alarcon, 1970) in which sources of data included the examination of case records of patients presenting with jaundice to general practitioners, and hospital records of cases of overdose presenting at casualty departments between the ages of 15 to 25 years.

Towards the end of 1967 an ‘epidemic’ of intravenous methamphetamine use occurred (Hawkes et al., 1969) but this has now disappeared with the voluntary restriction of methedrine ampoules to hospital use. It seems likely that in a subculture of young people where the norm is multiple drug use, escalation is best considered in terms of escalation from oral use to intravenous use rather than from one drug to another. Certainly the intravenous methedrine users were much more difficult to treat and much more dangerous in terms of behaviour than the intravenous heroin users.

**SOURCE OF DRUGS**

Although illicit drug use is so widespread there does not yet appear to be a central criminally organised distribution, either for heroin or other drugs, such as that which exists in the USA. Cannabis certainly comes into the country illegally, but much of it is brought in by amateurs rather than by professional criminals. Heroin was available prior to the Dangerous Drugs Act of 1967, from overprescribing by doctors (Interdepartmental Committee, 1965) in the form of pure British-made 10 mg tablets. Sporadic consignments of Chinese heroin have appeared more recently. Amphetamines come from breaking into chemists’ shops, from warehouses, lorries, overprescribing, mothers’ ‘happiness pills’, forged prescriptions, and perhaps a little from abroad, or, rarely, from illicit manufacture. The use of drugs of dependence by doctors, when they are not really necessary, contributes directly to the problem in terms of prescribing for ‘at risk persons’, and because larger amounts are in circulation through legal channels, diversion to illicit use is made easier.

**THE PERSONALITY OF THE ADDICT**

It seems clear that the vast majority of persons who become dependent on drugs have an unstable personality. Many of the young people have shown features of anti-social behaviour before taking drugs (Connell, 1965). Many attempts to define an ‘addict personality’ have been made without success, and it would seem that the most profitable line of research will be to define personality clusters (Brotman et al., 1965).

It is not true, however, that all normal people—that is people not manifesting personality instability—are necessarily immune from the dangers of
drug dependence. Certainly, in a series of 42 cases manifesting amphetamine psychosis a small number had shown no evidence of instability as measured by the usual criteria (work record, personal relationships, and so on) when they were prescribed or given amphetamines (Connell, 1958). It may well be that these normal personalities with a tendency to a wider than average mood swing are particularly at risk here, as are persons pushed beyond their stress thresholds.

THE DIAGNOSIS OF DRUG ADDICTION

The difficulty of determining the presence of drug-taking, either by sporadic or continuous users, is not generally known. It is relatively easy when the intravenous route is used because of the presence of injection marks, and it is also relatively easy when drugs such as heroin or morphine are used because of the presence of constricted pupils, an effect of the drug to which tolerance does not develop. With amphetamines taken orally it may be impossible to tell whether or not the patient is taking the drug. Dilated pupils, raised blood pressure, tachycardia, and mild tremor are common in individuals seen by a doctor and may be observed in many patients suffering from anxiety states who are not taking amphetamines. Even persons with long experience of amphetamine addiction, who use refined techniques of interview in order to determine the presence of amphetamine-taking, can be hoodwinked. Therefore, an essential part of the diagnostic process is the determination of the presence of drugs in biological fluids (especially urine) by special methods such as thin layer chromatography and gas-liquid chromatography (Marks et al., 1969). But, one positive result does not necessarily mean that the patient’s story concerning daily use is true, and serial assessments are necessary. Some professed heroin addicts who attended the special clinics were found, by the use of serial assessment, to be sporadic users, and some, in fact, were not using it at all and merely wished to obtain the drug to sell to others.

There is, as yet, little help from the laboratory services in assessing the size of the dose the patient may be taking. Even blood morphine estimations in a heroin user are impossible to interpret in terms of size of dose without data concerning the exact time of the injection, previous doses taken, the rate of change of blood levels in time in the individual being examined, and other factors. Assessment of maintenance dose must remain a clinical empirical judgement. When large doses are claimed to be used it is best to have the patient attend for the day and observe him taking the dose claimed, with suitable resuscitation measures handy. It is one of the nightmares of those working in this field that more drug may be supplied to the addict than he is really needing, and diversion to the black market might result.
TREATMENT

General Aspects

Drug dependence is a relapsing disease with serious consequences for the individual, and for public health. Treatment in the widest sense will concern many disciplines, including medical, social, and penal contributions.

Complications affecting society, other than those consequent upon the specific effects of the drug (dangerous driving, aggressive behaviour while psychotic, and so on), are those of ‘epidemic’ spread because the drug-dependent person often has a need to coerce others and to extol the virtues of drug-taking in terms of pleasant feelings and of hierarchical cultural systems in which not to take drugs is a sign of weakness and lack of manliness. Dealing with epidemic spread is a complex matter in which powers are needed to discover the infective agents. The World Health Organisation (1968) has recommended the setting up of mobile multi-disciplinary teams including doctors, psychologists, and sociologists, to go to an area where drug-taking has begun.

Medical complications affecting the individual who takes drugs intravenously have been described (Louria et al., 1967) and include systemic effects, such as hepatitis, septicaemia, endocarditis, bronchopneumonia, cerebral abscesses, as well as local effects such as abscesses, thrombophlebitis, and contractures. These effects are due to the use of unsterile syringes and needles and not to the pharmacological properties of the drugs. Such complications require the usual medical treatment.

Withdrawal

The withdrawal of the drug from an addict who wishes it to be withdrawn is only a small part of the total treatment, and can easily be done. Although some addicts can be completely withdrawn as outpatients it is the rare outpatient who can tolerate the temptation to go back to higher doses by recourse to illicit sources while a withdrawal regime is being followed.

Withdrawal from heroin may take seven to ten days and is usually carried out by substituting oral methadone for heroin and withdrawing the methadone gradually. In this way discomfort to the patient is minimal, and the withdrawal syndrome which, at its height may include lachrymation, rhinorrhea, perspiration, tremors, hot and cold flushes, aching bones and muscles, anorexia, diarrhoea, vomiting, dehydration, insomnia, restlessness, irritability, and depression, can be avoided.

Barbiturates are withdrawn slowly in order to prevent the development of barbiturate withdrawal convulsions and a withdrawal psychosis similar to delirium tremens (Blachly, 1964). However, Wulff (1959) has advocated a
method in which there is abrupt withdrawal, serious complications being dealt with if they develop.

Amphetamines can be withdrawn abruptly with no physical harm to the patient but a withdrawal depression may supervene and there may be a risk of suicide (Connell, 1966). Excretion of the drug will be more rapid if the urine is acidified (Beckett et al., 1965).

Non-barbiturate hypnotics such as meprobamate, glutethimide, chlordiazepoxide, methaqualone, should also be withdrawn slowly, but controlled trials in man to determine the best method of withdrawal are lacking (Essig, 1964).

The Early Abstinence Phase
It is difficult to make an accurate assessment of the factors underlying psychiatric disorder, relationship problems, or personality disorders while a person is still taking drugs of dependence, since these drugs are changing emotional and intellectual responses. Recognising that body physiology and psychology may still not achieve complete normality for some weeks, or even months, the early abstinent phase is one in which there should be full assessment of such factors so that long-term planning can be instituted. Many addicts, when off the drug, feel that they are cured, and have regarded withdrawal from the drug as the cure itself. It is important to stress that there may be a period after withdrawal in which hospitalisation is still required, and to give the reasons for this, before a patient is admitted to hospital. In some cases treatment of underlying depression or of an anxiety state with appropriate medication, psychotherapy, or social support will be necessary.

Rehabilitation
Rehabilitation of the drug addict has recently been the subject of a report of the Advisory Committee on Drug Dependence (1968). Hostels for the homeless addict, or for the ex-addict no longer taking drugs, are recommended, as are boarding-out schemes, facilities for occupational and industrial therapy at mental illness hospitals and prisons, expansion of social work with addicts and their families, and co-ordination between the treatment and rehabilitation services, on the one hand, and the police and courts, on the other, in order to provide continuous care. It is generally recognised that without comprehensive rehabilitation facilities the efforts made in hospital clinics will often be of no avail in the long term.

Special Methods
Recognising that the ideal goal of treatment, namely an addict off drugs, gainfully employed, no longer criminal, and reintegrated into society, may
be impossible to achieve in many cases, Dole and Nyswander (1967) selected methadone as a useful replacement drug because it had the advantages of being longer acting and effective orally. They then developed a method, termed narcotic blockade, in which doses of up to 120 mg or more a day of methadone were given to addicts, grading the dose so that no euphoria occurred when the addict took his usual dose of heroin. These addicts were maintained on this oral dose once a day, and the published results were highly encouraging (Dole et al., 1968). This method, either by simple substitution or blockade, is being tried in this country but it is too early to say with what success. All registered medical practitioners can prescribe methadone, and it is clear that some are prescribing for addicts. Cases of primary methadone addiction in persons who have never used heroin are now appearing.

Behaviour therapy is being explored as a way of creating aversion to the syringe and needle in the hope that this will prevent relapse (Thomson and Rathod, 1968). Other methods using electric shocks are soon to be tried. It is too early to assess the effectiveness of these methods which, on theoretical grounds, appear to offer hope.

**Special Treatment Clinics**

The rationale of the special treatment clinics in adopting a maintenance approach in which a heroin addict is maintained on heroin has been discussed in detail (Connell, 1969; Edwards, 1969). In brief, it was the hope that by offering such help, as recommended by the Brain Committee, a stabilised addict could be produced who would not need to go to illicit sources for heroin. Thus it was hoped that there would not be a sufficient number of heroin addicts who had to go to illicit sources for organised crime to move in. Furthermore, it was hoped that by attending the clinics weekly, or two-weekly, a relationship with the doctor might be established which, eventually, might lead to withdrawal from the drug. The aim of the clinics is eventual withdrawal from heroin, and this should be stressed.

**RESULTS OF TREATMENT**

There have, as yet, been no long-term follow-up studies of British addicts, because the problem, in a major form, has not been with us for long. Clark (1965) followed-up a group of 28 doctors and nurses admitted to the Crichton Royal Hospital on account of dependence on DDA drugs from 1949 to 1966. Only 14 per cent were off these drugs at follow-up, 61 per cent had continued with intermittent use, and 25 per cent with continuous use. Follow-up of 1,312 cases of heroin addiction indexed by the Home Office from 1954 to 1966 showed that 68 per cent continued and 32 per cent were concluded.
Of those who were concluded, 45 per cent were off heroin, 33 per cent disappeared, and 22 per cent died. This means that 14 per cent came off heroin. However, this study did not examine 'treatment' and many of the cases had been included on the index for only two or three years.

Follow-up studies of American addicts were reviewed by O'Donnell (1965) and the results were not encouraging. However, the studies lacked refinement and definite conclusions could not be drawn. A more recent study (Vaillant, 1966) found that compulsory aftercare of a group of New York heroin addicts produced a 67 per cent one-year abstinent rate. This group, however, was very different from our own addicts and extrapolation would be unwise.

THE FUTURE

Patterns of illicit drug use are changing rapidly and it is not possible to make accurate predictions for the future. The number of offences against the drug laws involving amphetamines is dropping, and the number of prescriptions for amphetamine substances had been reduced from some 4,000,000 in 1967 to about 2,000,000 in 1968. Mandrax abuse has become common, and barbiturates are being used by young persons.

It is hoped that the proposed new drugs legislation will enable quick action to be taken against the grossly overprescribing doctor and will enable tighter controls to be placed on known drugs of dependence.

It is important that all medical practitioners prescribe drugs of dependence with much greater care, including physicians and surgeons who sometimes, for instance, recommend the use of amphetamines too readily for post-operative and post-infective emotional states.

Other hopes for the future lie in the fact that patterns of behaviour in young people change and that they might begin to consider that taking drugs is 'square'. There is hope that research in the fields of basic sciences, epidemiology, and clinical research will enable data to emerge that will help in devising suitable methods of dealing comprehensively with the serious problem of drug dependence which besets us.

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First Catch Your Skink

'The Skink is a kind of small lizard brought to us dried, with the guts and other entrails taken out and usually with the small end of the tail cut off . . . Skinks, distilled in a retort, yield first a small quantity of limpid phlegm, of a faintish smell and insipid to the taste; after that comes over a reddish or brownish liquor impregnated with a volatile salt; and after this a brown oil of a very foetid smell: a quantity of a volatile salt in a dry form in the meantime affixes itself to the sides of the receiver . . . None of these preparations of the Skink are in use but the dried animal is greatly recommended as possessing the virtues of the viper’s flesh, but in a more exalted degree. It is said to do wonders as a restorative and provocative to venery; for the last purpose the belly is preferred to any other part of it.'

Eighteenth century materia medica have a horrible fascination but there appears to be no postscript by the researchers who spent so long distilling Skinks to produce a series of revolting substances that had no use. What a shame that the dried starting material proved more efficacious than the distillates. The only trouble with Skinks subjected to drying was that ‘they were very apt to breed worms, in which case they are of no value'.