THE PROGNOSIS IN DRUG ADDICTION

By

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INTRODUCTION

THE problem of drug addiction is numerically a relatively minor one in this country at the present time, although the effects on the patients concerned, particularly as a considerable proportion belong to the medical and allied professions, are profound. The Interdepartmental Committee on Drug Addiction in its Report (1961) attributed our relative freedom from the problem largely to the present attitude of the public towards drugs and to the systematic enforcement of the current Dangerous Drugs legislation. In the U.S.A., on the other hand, drug addiction is a matter of national concern and there the hand of the physician treating drug addiction is controlled by Federal legislation. Tremendous efforts have been made, with only a limited degree of success, to diminish its incidence particularly during the past twenty years. Legislative measures, notably the Harrison Act of 1914, have been introduced; national committees have been set up to discuss the problem; and two hospitals (Lexington, in Kentucky, and Fort Worth) both entirely devoted to the treatment of drug addiction, have been established. As a direct result of these efforts a considerable amount of valuable information concerning drug addiction has become available, particularly as a result of the work of Isbell and his colleagues at Lexington Hospital. The addictive properties of new preparations have been assessed; the metabolic, pharmacological and biochemical aspects of drug addiction have been investigated, and research into the psychological mechanisms underlying drug addiction has been carried out.

To date, however, little information has become available which throws any light on the fate of the treated drug addict. The difficulties of follow-up surveys of patients in the U.S.A., where illicit drug trafficking is active and distances great, are intense. Perusal of the British literature is equally disappointing and gives little help in determining the likely prognosis in patients with this illness, a fact borne out in the Interdepartmental Report which states, "Information about the ultimate prognosis for drug addicts is extremely scanty and so far as we can ascertain the long-term results have hitherto been disappointing."

The nature of the illness itself militates against gaining information—drug addicts are reticent about their consumption of drugs and rarely seek treatment until obliged to do so because of social pressures. Sometimes a feeling of shame or guilt may be present and often there is a hidden fear that possible legal proceedings may be invoked. The relatives of drug addicts do not usually wish to advertise the fact and often endeavour to close their eyes to the problem until it can no longer be hidden.

Accurate information about the incidence of the condition is difficult to obtain. It is not always generally known that there is no register of addicts in this country nor is there any official allocation of drugs to the addict. Many addicts change their employment often, move about the country frequently, are part of a shifting population and are difficult to trace. It is for similar reasons that information about the prognosis in this condition remains scanty and

https://doi.org/10.1192/bjp.108.455.411 Published online by Cambridge University Press

largely dependent on clinical impressions. Despite these difficulties the Interdepartmental Committee's Report noted that the number of addicts to D.D.A. drugs had increased from just over 200 in 1950 to 450 in 1961. The proportion of known addicts who are medically qualified, although remaining low in actual number, is disproportionately high. The medical profession is in a privileged position with regard to drugs, and any deviations from the legal code are of serious import; addiction to drugs is particularly disquieting from both medical and legal spects.

Method

As part of a survey of drug addicts admitted to Crichton Royal, a follow-up study was undertaken. Individuals entering the survey were those whose primary reason for admission was addiction to drugs, complicated as it may have been by psychiatric and physical sequelae. Drug addiction was defined in the terms of the Interdepartmental Committee's Report, namely:

"Drug addiction is a state of periodic or chronic intoxication produced by the repeated consumption of a drug (natural or synthetic).

Its characteristics include:

1. An overpowering desire or need (compulsion) to continue taking the drug and to obtain it by any means.
2. A tendency to increase the dose though some patients may remain indefinitely on a stationary dose.
3. A psychological and physical dependence on the effects of the drug.
4. The appearance of a characteristic abstinence syndrome in a subject from whom the drug is withdrawn.
5. An effect detrimental to the individual and society."

Only those patients whose condition satisfied this definition were included in the survey.

With these criteria a total of 120 individuals were found to have been treated here in the twelve years 1949–1960 inclusive. Of the 120 patients, 65 belonged either to the medical or nursing professions. Although information has been obtained about all of these subjects, the present paper confines itself to reporting the findings on the 65 doctors and nurses. An initial assumption that doctors and nurses would be easier to trace was found to be correct, and sufficient information was obtained about 50 patients (77 per cent.) to allow relatively clear conclusions to be drawn about the prognosis in this condition.

The initial sources used for the follow-up study included the referring general practitioners and consultants. Because of the natural interest of their advisers in the fate of their professional colleagues it was relatively simple to obtain an accurate history of the progress since hospitalization of 50 patients. From this early information it was possible to gain access to further agencies involved in the continuing medical supervision and treatment of patients. Re-admission to other hospitals had been frequent, and hospital case records provided a ready and comparatively accurate source of information.

For the 15 who are not included in the data there was no adequate or confirmed information; often their condition could be identified for some time after leaving hospital but not at the date of follow-up, or alternatively, although some information was available, this was not regarded as being sufficiently detailed or accurate. In terms of any of the variables recorded (age, sex, duration of addiction, etc.) during hospitalization this group of 15 did not significantly differ from the 50 who are discussed. There is no method of determining whether the

https://doi.org/10.1192/bjp.108.455.411 Published online by Cambridge University Press

failure to obtain follow-up information about those was due to their continued addiction on the one hand or their rehabilitation and subsequent anonymity on the other, and consequently they are considered no further in this paper.

RESULTS

In the group under survey there were 34 male patients and 16 female. Their ages ranged from 24–64 at the time of admission and on average their consumption of drugs had commenced four years prior to entering hospital for treatment. The average duration of stay in hospital was three months and the follow-up covered periods of from 2–12 years.

Table I shows the period for which follow-up information was available

TABLE I

Duration of Follow-up in Years

No. of years followed up	Total Group	Patients addicted to D.D.A. drugs	Patients addicted to other drugs
2	8	3	5
3	7	4	3
4	6	2	4
5	10	5	5
6	2	1	1
7	4	4	0
8	1	0	1
9	4	4	0
10	2	0	2
11	1	0	1
12	5	5	0

for each patient. It can be seen that in the total group almost 60 per cent. had been followed up for five years or more and that in the group of 28 addicted to drugs controlled by the D.D. Acts almost 70 per cent. had been followed up for five or more years. Table II shows into which broad division of the profes-

TABLE II

Branch of Profession

Branch of N.H.S.	Total Group	Addicted to D.D.A.'s	Addicted to other drugs
Hospital Service	10 (20%)	3	7
General Practice	30 (60%)	21	9
Nursing Profession	10 (20%)	4	6

sion these patients fall; 20 per cent. of the patients were doctors employed in the hospital service, 60 per cent. were doctors in general practice and 20 per cent. were in the nursing profession.

Differing degrees of severity of addiction arise and there is no doubt that, although addiction by definition may occur with numerous drugs, the most serious addictions arise with those drugs controlled by the D.D. Acts. In this present group 28 patients (56 per cent.) were addicted to these drugs and 22 (44 per cent.) to other drugs. Not infrequently patients were addicted to more than one drug, not always in the same group, and when this arose, for the purpose of this report they were regarded primarily as being addicted to the D.D.A. drug.

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In Table III a summary of the drugs used and the number of patients

TABLE III

Number of Patients addicted to Each Drug

D.D.A. Drugs	No. of Addicts	Other Drugs	No. of Addicts
Morphine	19	Barbiturates	11
Medicinal Opium	2	Amphetamines	17
Heroin	5	Drinamyl	4
Cocaine	2	Preludin	1
Pethidine	10	Persomnia	1
Dromoran	1	Codeine	1

addicted to them is presented. It should be noted that when a patient was addicted to more than one drug he is shown in this table as being an addict to each drug. The amount of drug taken varied markedly from patient to patient and in certain patients extremely high dosages were being consumed. The reliability which can be placed on an addict's own estimate of the amount of drug which he has been taking is extremely limited and no attempt has been made to collate these figures. In each patient, however, the dosage of drug consumed over a varying period of months or years was large enough to produce sufficiently severe symptoms to warrant admission to hospital. It is interesting to note that not infrequently barbiturates and amphetamines were used concomitantly—the stimulant action of one being suppressed when required by the sedative effect of the other.

Accurate reasons for the initial yielding to drugs are notoriously difficult to elicit and confirm in the addict and frequently little credence can be given to the explanations offered. There are, however, exceptions to this general rule and in this particular group under survey, whom one might expect to show more insight into their illness, it was felt justifiable to classify in general terms the reasons given by them. Most patients gave more than one reason for commencing drug taking and these are separately classified in Table IV.

TABLE IV

Reasons for Commencing Drugs

Stated Reasons for Commencing Drugs	Patients addicted to D.D.A. Drugs	Patients addicted to other drugs
Persistent physical pain	14	2
Pressure of work	19	14
Marital difficulties	9	8
Psychiatric illness	7	19
Financial difficulties	1	0

The major differences between the two groups (those addicted to D.D.A. drugs and the others) are that a significantly higher proportion of the former attribute their addiction to persistent physical pain and a higher proportion of the latter regard psychiatric illness as the cause of their addiction. Bearing this in mind the potential dangers of iatrogenic addiction require careful consideration in any patient to whom drugs with possible addictive properties require to be given for any length of time.

Prognostic Findings

From the information obtained three broad headings emerged which taken in conjunction with each other give a general impression of the prognosis in this condition. These were (*a*) whether the further consumption of drugs had taken place, (*b*) whether further hospitalization had occurred and (*c*) whether full working capacity had been reached following discharge.

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(a) *Further Addiction*

On this criterion analysis showed (Table V) that, following discharge from

TABLE V
Further Addiction

Condition since discharge	Total Group	Group addicted to D.D.A.'s	Group addicted to other drugs
No drugs since discharge	14	4	10
Drugs at intervals since discharge	27	17	10
Drugs continuously since discharge	9	7	2

hospital, patients had broadly followed one of three possible courses. Firstly, there were those patients who had never had any more addictive drugs and who could be regarded as totally abstinent. In another group drugs had been taken continuously since leaving hospital and their clinical condition was either unchanged or in some had worsened. The third and largest group of patients was comprised of those who had resorted to drugs for varying periods of time and in varying dosages since returning home. Further recourse to drugs had not necessarily resulted in further admission to hospital. Included in the middle group are a few patients who had become stabilized on a regular dose of drug and who appeared to manage their lives relatively satisfactorily provided this dosage was maintained. These patients, stabilized addicts, conformed to the pattern described in the Interdepartmental Report. Their existence in a state of comparative well-being confirms various reports that in certain patients continuation of a maintenance dosage of the drug of addiction, given under expert medical supervision, and only after attempts at withdrawal had failed, may for lack of a more effective method of treatment be of some value in controlling the condition. Of the nine patients in this group seven were addicted to D.D.A. drugs and of these seven, five could be regarded as stabilized addicts in terms of the comments just made. In their case introduction to the drug of addiction arose as the result of a painful illness and dependence on the drug had continued.

As might have been predicted, in view of the tolerance to the barbiturate and amphetamine drugs, there had been an appreciable increase in the quantity of drugs consumed in six of the ten patients who had been taking these at intervals since their discharge.

(b) *Further Admission to Hospital*

Although re-admission to hospital invariably indicates a deterioration in a drug addict's condition and is a meaningful index of how successfully the addiction has been controlled, by itself it gives little indication of the severity of the relapse. The majority of drug addicts are unwilling to enter hospital until a situation intolerable to themselves, or more frequently to their relatives, has been reached. In the total group the number of re-admissions to hospital were added together to form a crude rating scale which helped to give an estimate of how they had fared although obviously the varying lengths of time of follow-up will affect the issue here. The patients were grouped (Table VI) under those who had never returned to hospital, those who had had up to three admissions since discharge, and those who had had four or more admissions. Taking the 50 patients as a whole 52 per cent. had at some stage during their follow-up period been re-admitted to hospital for varying periods of time. Rarely had

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TABLE VI

Further Admission to Hospital

	Total Group	Group addicted to D.D.A. drugs	Group addicted to other drugs
No admission to hospital since discharge ..	24	11	13
Occasional (1–3) admissions to hospital since discharge	19	13	6
Frequent (4–8) admissions to hospital since discharge	7	4	3

admission to the psychiatric wards of a general hospital occurred and almost without exception it had been to a mental hospital. This is of interest in view of the recommendation of the Interdepartmental Committee that admission to general hospitals is advisable in the initial treatment of drug addiction.

The average duration of stay in hospital was three months but the initial and later periods of hospitalization varied considerably in their duration for the individual patients. The period of time which an addict will spend in hospital is not infrequently as dependent on his own assessment of his condition as on his physician's estimate. There is a strong tendency for patients to leave hospital at the termination of their period of withdrawal from the drug. Few patients are prepared to accept the necessity for a period of prolonged convalescence and rehabilitation and in this way they resemble closely the recovering alcoholic. As had been anticipated frequent re-admissions to hospital were seen in those patients addicted to the D.D.A. drugs.

(c) *Working Capacity and Employability*

Of the 50 patients 15 have successfully overcome their addiction and have returned to their previous employment, remaining well up to the present time. Included in these 15 are four patients, who, on leaving hospital, sought and obtained posts in which the availability of drugs for personal use was considerably lessened. 18 patients have continued at the same profession but have had varying periods of relapse when they have been unable to carry on with their professional work. These intervals have been irregular both in length and severity. In every one of these patients, however, a further return to professional work has been attempted and in this group there have been no patients who have withdrawn from their profession or have been consistently unable to earn their livelihood. Two patients gave up medical work to commence other

TABLE VII

Working Capacity or Employability

	Total Group	Group addicted to D.D.A. drugs	Group addicted to other drugs
Continued without interruption at same profession ..	15 (30%)	5 (18%)	10 (45%)
Continued at same profession with periods of relapse since leaving hospital	18 (36%)	12 (43%)	6 (27%)
No gainful employment since discharge from hospital	13 (26%)	8 (29%)	5 (23%)
Others (retired or changed occupation)	4 (8%)	3 (10%)	1 (5%)

https://doi.org/10.1192/bjp.108.455.411 Published online by Cambridge University Press

occupations, in which one has been successful. Two elderly patients retired from medical work following their discharge and since have fared successfully. 13 patients have not succeeded in doing any useful work, medical or otherwise, since their discharge and remain apparently unemployable. (Table VII).

Discussion

Addiction to drugs remains in this country at a fairly stable level at the present time. With the increasing manufacture of synthetic narcotics, however, potential dangers multiply and a possible increase in our present addicted population must be borne in mind. Investigation of the personality of the drug addict and his classification into the appropriate psychiatric group has been adequately performed by Kolb (1925) and later modified by Felix (1944). In the 50 patients under survey, 20 showed evidence of psychiatric illness either preceding or accompanying the addiction. In 13 of these patients previous sociopathic behaviour was evident. In the remaining 30 patients no previous evidence of psychological disorder could be determined. Our findings on this matter would tend to confirm Partridge's (1960) statement that almost anyone can become addicted and that drugs can be described as "detectors of psychic weakness". There is little doubt that drug addiction is not a disease *per se* but that it is the manifestation of an individual's personality difficulties.

Considerable importance revolves round the ultimate fate of these addicts. Is the condition a chronic one which usually leads to destitution or can it be totally overcome, never to return? Is our present treatment of the condition successful either in its short or long term aspects? What advice can we give to the patient who has been freed of his addiction in hospital, about his future prospects and what he can best do to avoid relapse? What can we tell a patient's relatives about the likelihood of relapse and what progress can they expect in the future? By and large these pertinent questions remained unanswered except in the general terms of an individual's own limited personal experience of patients with drug addiction. Pescor (1941) recorded his experiences at Lexington with a group of just over 1,000 addicts and found that after about two years 30 per cent. had recovered, 31 per cent. had relapsed and 28 per cent. could not be traced. Knight and Prunt (1951) noted that in a group of 75 addicts 15 remained abstinent for periods lasting from 1–14 years and that 12 had some control over their addiction. Kielholz (1952) in a three-year follow-up of 39 patients found that 38 per cent. no longer took drugs, 34 per cent. were doubtfully abstinent and that 26 per cent. had relapsed. In the present survey, taking the group as a whole, 28 per cent. of the patients had successfully overcome their addiction. As had been anticipated the prognosis for those addicted to drugs controlled by the D.D. Acts was considerably poorer, and only 14 per cent. of those patients had remained free of further addiction.

In the light of these results it is evident that our present treatment of this condition remains unsatisfactory. It should be borne in mind, however, that the majority of the patients in this survey did not have prolonged periods of rehabilitation—in fact this was the exception, and it is possible that if more prolonged periods of rehabilitation had been advocated and had been accepted by the patients, then the long-term results might have shown some improvement. The current treatment of drug addiction, particularly as seen in the U.S.A., stresses the advisability of prolonged convalescence and rehabilitation. The wisdom of this measure is seldom in doubt but there is equally little doubt that few addicts would voluntarily enter hospital if faced with this possibility. It is an established clinical observation that following the successful withdrawal of

https://doi.org/10.1192/bjp.108.455.411 Published online by Cambridge University Press

the addicting drug the addict often then feels that his treatment has been completed. There is no doubt that at this stage of his treatment every effort must be made to persuade the patient to remain in hospital and to continue with his further therapy.

The medical victims of this illness meet unique problems when they leave hospital and in the absence of continued therapeutic support it is not surprising that frequently insuperable difficulties arise and further relapse occurs. In the absence of any known aetiology or effective treatment for this condition and in the light of the prognosis as revealed by this survey it behoves one to ask whether, particularly in those addicted to the D.D.A. drugs, a change of profession or at least a change to a branch of the profession in which the availability of drugs for personal use is lessened, should not be seriously considered in every case of professional addiction.

Summary

120 patients diagnosed as suffering from addiction to drugs have been admitted to this hospital between 1949–1960. Of these 120 patients, 65 belonged either to the medical or nursing professions and a follow-up survey of these 65 is described. Sufficient information has been obtained about 50 (77 per cent.) of these patients to make broad generalizations about the prognosis in this condition. Three main criteria were used, namely whether further consumption of drugs had taken place, whether further hospitalization had occurred and whether full working capacity had been reached following discharge. The results obtained show that in the total group 28 per cent. of the patients had overcome their addiction and that in the group of patients addicted to drugs controlled by the D.D. Acts only 14 per cent. had remained drug free. 52 per cent. of the total group of patients had required further admission to hospital during the follow-up period and almost without exception they had been admitted to mental hospitals. In the whole group 30 per cent. of the patients had continued without interruption at their profession since discharge but of these addicted to D.D.A. drugs only 18 per cent. have been able to continue. 26 per cent. of the patients have had no gainful employment since discharge from hospital. The advantages of prolonged rehabilitation are discussed and the advisability of a change of profession is suggested as a possible means of improving the long term prognosis.

Acknowledgment

I wish to acknowledge the help and advice given me by Dr. A. C. Tait in the preparation of this paper.

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https://doi.org/10.1192/bjp.108.455.411 Published online by Cambridge University Press