Prescribing barbiturates: drug substitution in general practice

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SEVERAL research projects have convincingly shown that there now exists an effective alternative hypnotic drug to the barbiturates, which, while being of similar potency, does not have a number of their associated disadvantages (Matthew *et al.*, 1969; Donald and Flenley, 1970). This drug is nitrazepam ('Mogadon'). The purpose of this paper is not to underline this fact, but to report an alteration in prescribing which has been successfully implemented in a partnership of three general practitioners in a medium-sized provincial town, to eliminate barbiturates completely except for phenobarbitone in the treatment of convulsions. What has emerged as a development of this policy has been a reduction in the prescribing of hypnotic drugs by one half, using a safer compound in the process.

Following the study of reports of the increasing misuse nationally of oral and intravenous barbiturates by young people (Glatt, 1969), and of the development locally of the misuse of oral barbiturates, our interest was aroused to consider ways in which this pattern might be altered. At the same time, a survey of the cases brought into the Ipswich Hospital Accident and Emergency Department with a final diagnosis of drug overdosage revealed a high proportion of attempted suicides using barbiturates; and a third factor was that we were conscious of the problems of confusion created by using barbiturates in the elderly (Davidson, 1971). Finally, we were well aware that barbiturates are drugs of dependence (Cameron, 1971), and that they have a high degree of toxicity (Wilson and Lister, 1970).

We decided that it would be worthwhile to attempt to reduce the number of barbiturates being prescribed in our practice by substituting nitrazepam wherever possible, except where phenobarbitone was being prescribed for patients with epilepsy.

Method

A note was made of patients who had been prescribed barbiturate sleeping tablets for three months or longer. Out of a practice of 7,500 patients, 116 (1·5 per cent) were thus identified. Several had, not surprisingly, been on barbiturates for longer than three months, the longest being for 26 years (Table 1). The barbiturates concerned included butobarbitone ('Soneryl' and 'Sonalgin') 44 per cent, pentobarbitone sodium ('Nembutal'

TABLE 1
YEARS DURING WHICH BARBITURATES HAD PREVIOUSLY BEEN PRESCRIBED

Years	*Number of patients*
0·3– 1	27
2– 4	30
5– 8	31
9–12	19
over 12	9
Total	116

and 'Carbrital') 32 per cent, and amylobarbitone ('Amytal') or amylobarbitone sodium ('Sodium Amytal') 24 per cent.

To each patient who attended for a repeat prescription it was explained that, for many reasons—most of all in their own interests—we considered it had become desirable for them to be changed from their current sleeping tablet to an alternative one. Without any exception it proved possible to persuade every patient eventually to agree to this change; the fact that we were already known to be interested in controlling patterns of drug abuse undoubtedly helped us to continue to receive such co-operation (Wells, 1970), but we felt this could be achieved by any similar practice.

We explained that the change would be a gradual one, because we were aware of the withdrawal symptoms following the stopping of barbiturates (Cameron, 1971), even in relatively low doses. A gradual withdrawal of barbiturates was then begun, substituting 100 mgm barbiturate with five mgm nitrazepam. This was completed during an average time of seven to eight weeks, but some patients achieved the transition in two weeks, while others took as long as three months (Table 2).

TABLE 2
TIME TAKEN TO SUBSTITUTE BARBITURATE BY NITRAZEPAM

Weeks	*Number of patients*
1	0
2	4
3	2
4	7
5	13
6	26
7	29
8	12
9	4
10	6
11	4
12	4
13	5
Total	116

Throughout the transition period, a close watch was kept on all the patients involved, and a modification of the planned substitution was made according to progress. Thus, patients who experienced no withdrawal symptoms and who slept well on nitrazepam were able to have their programme accelerated, while on the other hand those who developed nightmares or became insomnic for whatever cause had their substitution programme lengthened accordingly. However, even by prolonging the withdrawal of barbiturates to a reduction of one tablet or capsule less per week, no patient had to take more than 13 weeks in all to change over to nitrazepam.

In ten per cent of patients, it was necessary to add a daytime sedative (diazepam two mgm) to the nocturnal nitrazepam, but this was only a temporary measure, and was able to be stopped within the transition period. A similar number of patients found they could not sleep as well on ten mgm nitrazepam as they had on 200 mgm barbiturate, and for these 11 patients 25 mgm chloropromazine ('Largactil') was added at night time, and this effectively restored a satisfactory sleep pattern.

An interesting observation was that a few patients who did not sleep well with nitrazepam tablets did so on capsules of the same drug—which has tempted us to try a placebo capsule in such patients, although this has not yet been done.

Results

One year after the scheme of prescribing nitrazepam instead of barbiturates was started, we are able to report an overall reduction in the prescribing of hypnotics to the original 116 patients of 50 per cent (Table 3). Furthermore, 41 per cent of the patients, some of

TABLE 3

DOSAGE OF HYPNOTIC DRUGS, ONE YEAR AFTER SUBSTITUTION BY NITRAZEPAM

Dose		*Number of patients*
NIL		47
5 mgm nitrazepam		34
10 mgm nitrazepam		23
15 mgm nitrazepam		7
10 mgm nitrazepam	25 mgm chlorpromazine	5
Total		116

whom were those longest on barbiturates, are sleeping well on no sedation at all. A further 29 per cent are sleeping well on one five-mgm nitrazepam tablet or capsule—an equivalent reduction in dosage of one half of the original 200 mgm barbiturate dose. Twenty per cent of our group of patients are on an equivalent dosage of ten mgm nitrazepam at night, while the remaining ten per cent require an additional five mgm nitrazepam or 25 mgm chlorpromazine. No new patients have begun barbiturate treatment, but a number have required and received short courses of nitrazepam. None of them have remained on them for more than three months.

Discussion

What has been achieved? At the end of the first three months, all that had happened was the substitution of a cheap, effective, hazardous, and toxic hypnotic, by an expensive, effective, safer, alternative. The number of barbiturates dispensed during the course of three months had been reduced by 12,000, only to be replaced by a similar number of nitrazepam tablets or capsules.

However, one of the objects in doing this exercise was to substitute a known habit-forming drug by one which was known not to produce dependence, and to restore a normal sleep pattern to these patients without the need to rely on sleeping tablets for ever. One of the first and most important points to consider when initiating treatment with hypnotics is the length of time for which such drugs are going to be prescribed; grief, pain, and anxiety are all justifiable indications for using sleeping tablets—but when the grief, pain, or anxiety are gone, so should the need for the sleeping tablets. So often in the past, because we have had to use an addictive drug, it has been difficult to stop the prescribing of barbiturates at the right time, and a state of true drug dependence has been created. With a non-habit-forming hypnotic, such difficulties are far less.

Thus, without a great deal of effort, other than during the transition stage, we have found it possible to reduce hypnotic prescribing to half its former level, and this reduction is still progressing further. An equally effective, non-habit-forming, non-toxic drug, the cost of which is now little greater than the original, is being used instead of a far more potentially dangerous drug. Parish (1971) has reported an increase in the number of prescriptions for nitrazepam. However, an even greater rise in the prescribing of methaqualone-diphenydramine complex ('Mandrax') has also been reported, and we have not prescribed this because it may be misused. Parish has reported a fall in barbiturate prescribing but this has not been equivalent to the increase in the number of prescriptions for non-barbiturate hypnotics. A greater fall in barbiturate prescribing than a rise in the prescribing of any alternative hypnotic drug must be a paramount objective.

If this policy is able to be repeated in other practices and hospitals, it is likely that the circulation and availability of a drug of abuse will be cut down, and that a means of self-poisoning using a prescribed drug could be eliminated. The advantages to the community of moving with the advances in therapeutics in this particular field appear to us to be considerable. Barbiturates have had many impressive attributes in the past; but their usefulness has now been usurped by a safer drug, and it is because of this that we believe the days of their free availability are numbered.

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