The effect of minimal interventions by general practitioners on long-term benzodiazepine use

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SUMMARY. Seventy one long-term users of benzodiazepines were asked by their general practitioners in a letter or short interview to reduce their medication. Twenty two patients were successful in giving up or reducing their consumption to less than 100 tablets per annum. There were no clear predictors of success in terms of patient characteristics, duration of drug use, type of benzodiazepine, reason for drug use or strategy employed to reduce medication. However, patients who were successful at reducing their medication had a significantly lower mean baseline drug consumption than unsuccessful patients. The implications of this study are that a proportion of long-term users who are not in current crisis, especially those with relatively low consumption, can reduce or stop benzodiazepine treatment with minimal difficulty.

Introduction

LONG-TERM use of benzodiazepines is now established as inappropriate and potentially damaging to users. The Committee on the Review of Medicines[1] and, more recently, Tyrer[2] suggest that benzodiazepines should be used only in limited circumstances and for short periods of time. Nonetheless there are large numbers of people who take benzodiazepines regularly for years: Petursson and Lader reported that 1.5% of men and 3.5% of women in south east London take these drugs every day of the year and that an estimated figure of a quarter of a million people in the UK take them for over seven years.[3] Clift showed that 32% of patients prescribed benzodiazepine hypnotics were still requesting regular prescriptions after one year.[4]

Tyrer[5] estimated that one in three patients prescribed benzodiazepines in normal therapeutic doses for six weeks would experience withdrawal symptoms if treatment were withdrawn abruptly. Even with gradual withdrawal, patients would request further prescriptions. Thus, there is a considerable risk of dependence even in comparatively short-term use.

There is evidence of changes in cognitive functioning after long-term use which may not necessarily be reversed on discontinuation of the drugs. Lader and colleagues[6] found that computerized axial tomography scans of long-term benzodiazepine users showed larger ventricles than control subjects, although not as enlarged as the scans of alcoholic patients. Psychological testing with long-term users has demonstrated deficiencies in visio-spatial ability and sustained attention,[7] and in memory function.[8] Thus, preventing long-term use may also prevent cognitive impairment.

A study by Cormack and Sinnott[9] was designed to assess the impact of psychological treatment on benzodiazepine withdrawal in long-term users. Five of the 11 patients who received group treatment were successful in reducing medication, but, surprisingly, 12 of the 31 patients who had no psychological help were also successful in reducing medication to two or less prescriptions in the year of monitoring. It appeared that the introductory letter from their general practitioner, suggesting that they should try to cut down or stop taking their drugs and offering psychological help, had served as sufficient impetus to effect a change in tablet consumption.

Another study by Hopkins and colleagues[10] involved somewhat more input from the general practitioner and produced greater success rates. Weekly interviews with the doctor were arranged to coincide with planned withdrawal of the drugs, the median time taken to withdraw completely or reach a final dosage being three weeks. At follow-up, over 60% of patients in the sample had stopped taking benzodiazepines.

The present study was devised to examine whether long-term users of benzodiazepines could reduce or stop treatment simply on the instruction of their general practitioner.

Method

General practitioners in Mersey region were invited to participate in the study following a presentation at the local faculty research meeting about previous research into long-term use of benzodiazepines. Five practices were selected which were geographically close to M.C.'s base. The patients attending the practices were predominantly working class.

Patients

The patients selected for the study were those who had been taking benzodiazepines on repeat prescriptions for a minimum of one year. As the study was aimed at patients who receive no additional help patients were excluded if they had been referred to a psychologist or psychiatrist within the previous two years. Also excluded were: patients with a known alcohol problem as they might increase their alcohol consumption as a result of reducing benzodiazepine medication; patients over 65 years of age as a previous study[9] had shown poor results with the elderly; and patients whom the general practitioner believed to be in particular need of benzodiazepines at the time of entry to the study.

The patients' age, sex, type of benzodiazepine, and duration of use were obtained from the medical records.

Intervention

Within each practice, patients were divided into three groups: two experimental and one control, matched for age and sex.

Letter group. Patients received a letter from their general practitioner asking them to cut down on the tablets they were taking. The letters were designed to avoid provoking anxiety, and made it clear that prescriptions would not be stopped by the doctor. Advice was given to cut down gradually rather than to stop abruptly.

Interview group. Patients were invited to come to the practice to see the general practitioner, who explained that long-term use of benzodiazepines was not recommended, and asked them to reduce their medication gradually.

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Control group. Patients received no communication from their general practitioner about their treatment. Their prescriptions were monitored over the six months after the intervention for the other groups. The control group was then sent the letter about giving up medication and thus became part of the intervention group.

Monitoring of prescriptions

For all three groups the number of prescriptions noted in the records for the year prior to the start of the study was recorded (baseline year). Although prescriptions issued may not equal number of tablets taken, in this study consumption of the drug has been measured by the prescriptions received, as no other measures were available within the study design.

Prescriptions were monitored for at least six months after the intervention in all groups and continued in all practices until the final practice had completed the intervention for its control group. Thus, follow-up data were available for up to two years after intervention.

To look at change over time, the patients were divided into three equal sized groups defined as low, medium and high rates of tablet consumption in the baseline year, and then looked at after six months.

Success in ceasing medication was divided into two categories:
— Complete success: no prescriptions for benzodiazepines during the final period of monitoring.
— Partial success: prescriptions totalling less than 100 tablets in the last year of monitoring.

Calculation of tablet equivalents

In order to compare patients, some calculation of equivalent doses for the various drugs had to be made. Diazepam 5 mg was considered as one tablet, and equivalents were calculated according to the recommended dosages cited by the manufacturers in the current *Monthly index of medical specialities.*

Interview with the psychologist

Six months after the letter or interview, patients were sent a letter by the doctor giving them feedback on their progress in attempting to stop medication. They were informed that the psychologist conducting the study would like to interview them, whether they had been successful or not. Up to three appointments (day and evening) were offered to each patient and the interviews were conducted in the practices. Patients were asked for their reasons for continuing to take the tablets and the strategies they used to reduce consumption.

Statistical analysis

Statistical analysis of change in tablet taking over time was performed using chi-squared tests for symmetry. Differences between patients who were successful and not successful in stopping medication were examined using chi-squared tests and Student's t-tests.

Results

Patients

Seventy eight patients were selected according to the study criteria and allocated to the three groups. Most of the patients excluded were aged over 65 years. Three subjects were excluded from analysis when a change in their circumstances during the first six months of the study meant that they no longer met the criteria for inclusion. Thus, the initial data analysed refer to 75 patients: 12 men and 63 women (sex ratio 1:5).

The median age of the sample was 51 years. Forty five patients (60% of the sample) were aged between 45 and 59 years, and only one patient was less than 30 years of age. Five patients had taken benzodiazepines for three to four years, 16 patients for five to nine years, 28 patients for 10 to 14 years, 20 patients for 15 to 19 years and five patients for 20 years or more (data were missing for one patient). The median duration of drug taking was 12 years. Most patients had taken more than one form of benzodiazepine at some time, either singly or in combination with other benzodiazepines or other psychotropic drugs. The range of tablet equivalents taken by the patients in the baseline year was 108 to 1536, with a median of 540. There were no significant differences in mean baseline tablet equivalents according to age, sex or practice.

The number of patients allocated to each group were as follows: 47 patients in letter group (18 of whom were formerly controls); 24 patients in interview group; 22 patients in control group. Four of the 22 controls were excluded from the letter group analysis: one was felt by her general practitioner to be in need of her tablets at the time; one patient was discovered to be sharing her prescription with her husband; and a further two left their practices within six months of receiving the letter from the general practitioner. In both the latter cases, the doctors were sure that the letter had not prompted the move. No significant differences between groups were found in terms of patients' age, duration of drug use or baseline number of tablet equivalents.

Changes in tablet taking

In the first six months, there was a significant decrease in consumption of benzodiazepines for both the letter and interview groups (Table 1). There was no change in the control group.

Table 1. Changes in tablet taking over the first six months.

	Consumption in the first six months (number of patients)			
Baseline consumption	Low	Medium	High	Total
Letter group				
Low	17	0	0	17
Medium	6	4	2	12
High	6	3	9	18
Total	29	7	11	47
	χ^2 for symmetry = 12.20; 2 df; $P<0.01$			
Interview group				
Low	5	0	0	5
Medium	8	2	2	12
High	1	1	5	7
Total	14	3	7	24
	χ^2 for symmetry = 9.33; 2 df; $P<0.01$			
Control group				
Low	13	0	0	13
Medium	0	3	0	3
High	0	0	6	6
Total	13	3	6	22

n = number of patients in baseline groups.

Sixteen patients achieved complete success in ceasing medication, while six achieved partial success, making a total of 22 patients. Therefore, nearly one-third of the 71 patients in the study were able to reduce consumption either to zero or to less than 100 tablets per year. Twelve of the 31 patients taking diazepam alone and three out of the nine patients taking lorazepam alone were successful in stopping medication.

It is interesting to note that overall the intervention resulted in a reduction of medication for most subjects, even though only 22 reached the criteria of success. Of the sample, only five patients increased medication over the monitoring period, and two remained on the same medication. Reduction in medication continued after the first six months of monitoring. Sixty patients were followed up for a year and their consumption in the second six month period was significantly less than in the first six months after intervention (chi-squared for symmetry = 9.67; 2 df; $P<0.01$).

Results of interview with the psychologist

Forty patients agreed to be interviewed about their drug use. No significant differences were found between those who did and those who did not attend the interview with respect to age, sex, duration of drug use, baseline number of tablet equivalents or success in stopping medication.

The most important reasons given by 38 patients for continuing to take tablets over the years were: psychological distress (including anxiety, depression and emotional problems), 15 patients; habitual use, seven patients; insomnia, five patients; chronic stress (most often involved looking after sick relatives), five patients; somatic symptoms (including tension, lacking energy and pain in the abdomen), four patients; physical illness, one patient; doctor's instruction, one patient.

The strategies employed to reduce medication fell into four broad categories:

1. Alternative consumption, such as drinking more tea, eating or smoking more (three patients, only one patient increased smoking).
2. Stopping suddenly, although this had not been advised by the doctor (seven patients).
3. Gradual reduction (13 patients).
4. Gradual reduction plus alternative therapy, such as yoga, breathing exercises and so on (four patients).

Thirteen patients were unable to describe their strategies for reducing their medication.

Differences between the successful and unsuccessful patients

There were no significant differences between patients who were successful and unsuccessful in reducing medication in terms of age, sex, duration of use, intervention received, practice, type of benzodiazepine or strategy for reduction. Those who were successful in reducing medication had a lower mean baseline tablet consumption: 488 tablets per year compared with 680 for the unsuccessful patients ($t = 2.23$, 69 df, $P<0.05$). It should, however, be remembered that failure to find statistically significant differences may have been an artefact of small subject numbers in particular categories. All of the successful subjects were taking only one benzodiazepine, not a combination.

Discussion

The results of this study showed that some success in stopping benzodiazepine use had been effected by brief intervention by the general practitioner. Some indications of why the intervention should have been successful were given by patients who attended interview. Eight patients had fallen into a habit of taking tablets, or else felt that the general practitioner wished them to continue medication, and the instruction from the doctor made them reassess their need for the tablets. Other patients took the request to cut down or stop the medication very seriously and were also aware of the concern about benzodiazepine dependence from the media. Being sent a letter or an invitation to come for interview was unusual and may have heightened the importance of the message. The impact of these special communications may have been greater than that of discussions between the doctor and patient during a consultation. It is interesting to note that in general these patients were infrequent attenders in the surgery, mostly receiving their prescriptions from reception.

A number of patients suggested that they did not really want to take benzodiazepines and the letter or interview had been the impetus that was needed for them to start to make changes. In general, patients held a negative view of drug dependence and any thought that they might be labelled as drug addicts was of considerable concern.

It has been suggested that shorter acting benzodiazepines (particularly lorazepam) tend to produce more severe withdrawal reactions.[11] However, as 12 out of the 31 patients taking diazepam alone and three out of the nine patients taking lorazepam alone were successful in stopping medication there was no indication that it was more difficult to withdraw from lorazepam.

Given the evidence of cross-tolerance of some benzodiazepines with alcohol[12] it might have been expected that subjects would have sought alcoholic alternatives when deprived of their usual drug. However, this was not the case according to the interview data and only one patient reported an increase in cigarette consumption. This parallels Ashton's finding that none of her subjects replaced benzodiazepines with other drugs or alcohol.[13]

No single strategy emerged as being associated with success, suggesting that an intention to reduce was more important than the specific approach to reduction adopted by patients. It was interesting to note that a sudden cessation of medication, although not advised by the doctors, was not significantly less successful than the recommended gradual reduction.

Implications of the study

The evidence of the detrimental effects of benzodiazepines on cognitive and psychomotor performance following long-term use,[7,8] suggest that people may perform better in a number of ways without the drugs. If the drugs prevent adequate problem solving, then patients may be caught in a situation of having to continue drug taking because they cannot find another way of dealing with their symptoms. Attempts to tackle the causes of the symptoms may not be initiated or may fail through decreased problem solving skills. Helping people to cease or reduce benzodiazepine consumption may open up avenues to other coping strategies. Anecdotal evidence from patients seen by one of the authors (M.C.) and other workers in the field supports the view that people feel that their capacities have been dulled by the drugs and that a new, or forgotten, self emerges when the drugs are discontinued.

In Mersey region, in 1984, the net ingredient cost of prescriptions for hypnotics, sedatives and tranquillizers issued by family practitioner services was £2 650 000.[14] The majority of these drugs would be benzodiazepine compounds. If, as a conservative estimate, one quarter of these prescriptions were for long-term users similar to those identified in this study, then with a success rate for stopping medication of one in four the saving could be around £160 000. For England as a whole, this saving could be nearly £3 million in one year. Against this must be set the doctor's time to write the letter or conduct the interview, and postage and secretarial costs. However, these costs need not exceed those of issuing repeat prescriptions over several years. The saving on drugs would continue as long as no further patients became long-term users.

In the future it could be worthwhile investigating ways of improving the effectiveness of the intervention. Strategies employed by patients for reducing medication were found to be vague and unsophisticated. Thus there could be advantages in giving patients literature about possible alternatives to the use of benzodiazepines.

Future work by psychologists in the field of long-term benzodiazepine use should perhaps be directed in other ways. It is important that work on long-term use should look not only at reducing medication after some years, but also at preventing the initial prescription. Helping general practitioners to enhance their consultation skills and to attempt alternatives to benzodiazepine treatment could prevent unnecessary prescribing.[15]

The success of this study should not detract from the difficulties that some patients experience when reducing benzodiazepine intake. The painful process of withdrawal should not be minimized for these individuals, and support from general practitioners and possibly self-help groups can be very helpful. Psychologists can have a role both in direct work with patients and as a resource for support groups.

References

1. Committee on the Review of Medicines. Systematic review of the benzodiazepines. *Br Med J* 1980; **280:** 910-912.
2. Tyrer PJ. Benzodiazepines on trial. *Br Med J* 1984; **288:** 1101-1102.
3. Petursson H, Lader M. *Dependence on tranquillizers. Maudsley monographs 28.* Oxford University Press, 1984.
4. Clift AD. Factors leading to dependence on hypnotic drugs. *Br Med J* 1972; **3:** 614-617.
5. Tyrer PJ. Dependence as a limiting factor in the clinical use of minor tranquillisers. *Pharmacol Ther* 1988; **36:** 173-188.
6. Lader MH, Ron M, Petursson H. Computed axial brain tomography in long-term benzodiazepine users. *Psychol Med* 1984; **14:** 203-206.
7. Golombok S, Moodley P, Lader M. Cognitive impairment in long-term benzodiazepine users. *Psychol Med* 1988; **18:** 365-374.
8. Hendler N, Cimini C, Long T, Long D. A comparison of cognitive impairment due to benzodiazepines and narcotics. *Am J Psychiatry* 1980; **137:** 828-830.
9. Cormack MA, Sinnott A. Psychological alternatives to long-term benzodiazepine use. *J R Coll Gen Pract* 1983; **33:** 279-281.
10. Hopkins DR, Sethi KBS, Mucklow JC. Benzodiazepine withdrawal in general practice. *J R Coll Gen Pract* 1982; **32:** 758-762.
11. Tyrer P, Seivewright N. Identification and management of benzodiazepine dependence. *Postgrad Med J* 1984; **60** (Supplement 2): 41-46.
12. Greenblatt DJ, Shader RI. *Benzodiazepines in clinical practice.* New York: Raven Press, 1974.
13. Ashton H. Benzodiazepine withdrawal: an unfinished story. *Br Med J* 1984; **288:** 1135-1140.
14. Department of Health and Social Security. *Health and personal social services statistics for England. Family practitioner committee services.* London: HMSO, 1986.
15. Cormack MA, Forrest M. The working relationship between general practitioners and the clinical psychologist. *The British Psychological Society Division of Clinical Psychology Newsletter* 1985; **48:** 33-36.

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