Process and Outcome

Drug treatment of psychiatric patients in general practice

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Summary and conclusions

The prescribing of psychotropic drugs by general practitioners was assessed by analysing the drug treatment of all patients referred from general practice to a psychiatric outpatient clinic over four years. Of the 287 patients, 220 were taking one or more of 56 different psychotropic drugs at referral, diazepam being the most common. Benzodiazepines and barbiturates had been taken for significantly longer than other drugs, and, of a total of 342 drugs, 61 had been prescribed regularly for over a year. Half of the drugs were considered to be incorrectly prescribed on pharmacological grounds, the main errors being unnecessarily prolonged regular treatment, incorrect dosage (particularly common with antidepressants), and polypharmacy with drugs of similar pharmacological action.

A basic grounding in the pharmacology of psychotropic drugs might help practitioners to avoid prescribing errors of this kind.

Introduction

Most psychiatric disorders are treated by general practitioners and drug treatment often forms a part of management. Prescriptions for psychotropic drugs now exceed those for any other class of drug,¹ and the rapid increase in their use has recently caused concern.^{2,3} The scale of this increase suggests that unnecessary prescribing is the cause, rather than detection and treatment of hitherto unnoticed illness, but the evidence for this remains largely circumstantial. I thought that a close examination of drug prescription in patients referred to a psychiatric clinic might help in understanding the prescribing habits of general practitioners and illustrate the factors that lie behind the increase in psychotropic drug prescription.

Methods

The drug treatment of all psychiatric patients referred to my outpatient clinic between January 1974 and December 1977 was recorded at initial interviews. Patients referred by other hospital practitioners (including psychiatrists) and those who had received treatment from doctors other than general practitioners within three months of referral were excluded, so that the population reflected

prescribing habits in general practices only. The patients lived in a sectorised catchment area (population 120 000) in west Southampton and its immediate environs, and represented a cross-section of all patients referred for psychiatric treatment. The nature of currently prescribed drug treatment, dosage, and duration of treatment were recorded for all patients. Non-prescribed drugs were excluded, as were non-psychotropic drugs, unless they were mixtures containing a psychotropic adjuvant. The investigation was concerned with prescribing habits rather than patients' drug compliance, so in all instances the dose prescribed by the general practitioner was recorded even when the patient had not adhered to it.

Results and comment

During the four years 287 patients referred by 80 general practitioners were seen. Of these patients, 46 were re-referred to me for a separate episode of disorder during this time, but only the drug treatment at first referral was recorded. The range of diagnoses was typical of a psychiatric outpatient clinic, with an excess of non-psychotic disorders (table I). Patients were taking 56 different drugs, some were taking no drugs, and a few were taking three or more. Men took fewer psychotropic drugs than women (table II). Duration of treatment varied from one week to 14 years. Diazepam was the most commonly prescribed drug, being taken by 80 patients (27.9%). There were significant differences between the durations of prescription of the drugs, benzodiazepines and barbiturates being prescribed for longer periods than antidepressants and major tranquillisers (table III).

Suitability of drug prescription was assessed separately for each patient. This was based on pharmacological knowledge of the drugs,

TABLE I—Range of diagnoses in 287 patients seen in psychiatric outpatient clinic, 1974-7

Diagnosis	No of patients
Neuroses:	
Depressive	80
Anxiety	34
Phobic	27
Psychosomatic	17
Obsessional	4
Psychoses:	
Affective	29
Schizophrenic	10
Organic	5
Personality disorders	32
Other	45
No psychiatric abnormality	4

TABLE II—Number of psychotropic drugs being taken by patients at referral, according to sex of patient

No of drugs:	0	1	2	3	4	Total
Men	35	46	27	4	3	115
Women	32	67	60	11	2	172

$\chi^2 = 5.4$; DF = 4; NS.

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TABLE III—Duration of treatment with psychotropic drugs in psychiatric outpatients at referral

Drug group	Duration of treatment (months)					Total
	<1	1-2	2-6	6-12	≥12	
Benzodiazepines and barbiturates . .	6	46	46	20	40	158
Antidepressants and monoamine oxidase inhibitors	13	54	23	11	14	115
Others	10	30	17	5	7	69
Total	29	130	86	36	61	342

$\chi^2 = 27.5$; DF = 8; $P < 0.001$.

rather than the vexed question of whether drug prescription of any sort was appropriate, which cannot be answered in the present state of knowledge of psychiatric treatment. Since any personal assessment would have been idiosyncratic, the issue was excluded. The major errors in prescription were: unnecessarily prolonged treatment; incorrect dosage for therapeutic action; pointless polypharmacy.

PROLONGED DURATION OF TREATMENT

Although good evidence suggests that continuous treatment with antidepressants is beneficial for several months after recovery from depressive illness,^{4,5} long-term treatment with benzodiazepines and barbiturates in regular dosage has no established value in psychiatric disorders. Two-thirds of the 147 patients taking benzodiazepines at referral had been taking them for over two months. Most of these (120, 81.6%) had been prescribed their benzodiazepines in fixed dosage schedules (though many were taking them irregularly), even though the minor affective disturbances for which they are prescribed fluctuate considerably over time. To a lesser extent, tricyclic antidepressants and monoamine oxidase inhibitors had perhaps been prescribed for unnecessarily long periods. Of the 61 patients prescribed drugs regularly for over a year, 20 (32.8%) had their drugs prescribed initially in a psychiatric clinic or hospital, and the prescription had been continued by the general practitioner, often for no clear reason.

INCORRECT DOSAGE

Although response to drug treatment varies greatly,⁶ most psychotropic drugs have an established dosage range for correct treatment. This was used to determine the numbers taking inadequate or excessive dosage (table IV). Five patients were regularly taking

TABLE IV—Numbers of patients taking psychotropic drugs in incorrect dosage

Drug group	Dose too low	Dose too high	% of total prescription of drug group
Benzodiazepines and barbiturates . .		5	3.2
Antidepressants	29		25.2
Neuroleptic drugs	3	4	24.1

excessive doses of diazepam (or an equivalent)—that is, over 40 mg/day—while in 29 the regular daily dosage of an antidepressant such as amitriptyline was too low (50 mg or less). Regular prescription of neuroleptic drugs was inadequate in three patients with psychotic disorders (less than 75 mg chlorpromazine or equivalent daily), and excessive in four with minor affective disturbance (chiefly anxiety), who were taking 400 mg or more of chlorpromazine (or equivalent) daily.

POINTLESS POLYPHARMACY

This category was reserved for patients for whom two or more drugs with almost identical pharmacological actions were prescribed, though it could also be argued that many other psychotropic drug combinations are unnecessary on pharmacological grounds. The major "offenders" were the benzodiazepines, many of which share the same metabolic pathways,⁷ and do not justify being marketed as separate drugs,⁸⁻¹⁰ but antidepressants and major tranquillisers were also

included (table V). Some drugs were inappropriately prescribed in more than one of these three categories, and of the 342 drugs taken by the patients, only 173 (50.6%) were free of any prescribing errors.

TABLE V—Numbers of patients taking two or more similar drugs (and percentage of total number of patients in drug group)

Benzodiazepines	Antidepressants*	Neuroleptic drugs†
20 (16.0)	2 (1.8)	3 (11.5)

*Combined antidepressants and monoamine oxidase inhibitors not included.
†Combined neuroleptic drugs for schizophrenia not included.

Discussion

Although the patients were atypical, in that they were all referred for psychiatric assessment or treatment, there is no reason to suppose that their drug prescription was qualitatively different from that of other patients. The relative proportion of patients taking tranquillisers and antidepressants was similar to the national average,¹¹ though the numbers of patients taking psychotropic drugs was greater, as would be expected in a population with psychiatric symptoms.

Several features of the results are disturbing. The long duration of treatment of many patients, particularly with benzodiazepines and barbiturates, was judged to be often unnecessary. This is in keeping with evidence that more patients in the United Kingdom take tranquillisers regularly for over a month than in other Western countries.³ Barbiturates are of known addictive potential,¹² but although addiction to benzodiazepines with typical withdrawal symptoms has been reported,^{13,14} it is rare. Mild tolerance and psychological dependence, however, often develop with benzodiazepines,¹⁵ and are probably more likely to occur when fixed dosage regimens are followed for long periods. Repeat prescriptions of this nature must form a substantial proportion of all prescriptions, and be an important element in the increased use of tranquillisers. Disturbingly many patients were taking long-term medication originally prescribed in a psychiatric hospital or clinic. The general practitioners apparently continued these prescriptions regardless of whether regular treatment was indicated. Psychiatrists may be criticised for failing to follow up patients receiving powerful drugs on discharge, but pharmacotherapists in general are also implicated for neglecting to study duration of psychotropic drug treatment while concentrating on short-term studies of efficacy. For many psychotropic drugs used in general practice we simply do not know the optimal duration of treatment and the risks, if any, of long-term treatment.

The results also suggest that general practitioners are using antidepressant drugs in inadequate dosage on a large scale. Most antidepressants have sedative effects in low dosage, and these may be beneficial in the short term, particularly in treating patients in general practice.^{16,17} Using a drug primarily for its side effects when other effective agents are available is a questionable practice, and many general practitioners were unaware that their prescriptions were insufficient to produce true antidepressant effects. Apparently general practitioners may have heeded warnings not to prescribe too many barbiturates, and are prescribing benzodiazepines and antidepressants in their place. Between 1973 and 1975 the national prescription of barbiturates fell by 23.5%, but the prescription of non-barbiturate hypnotics, tranquillisers, and antidepressants increased (20.9%, 7.3%, and 10.3%, respectively).^{11,18} If antidepressant drugs are being prescribed nationally in similar dosage to those in this study they are being given as sedatives rather than antidepressants.

Polyparmacy is common with psychotropic drugs, and the results show that it is often unnecessary, particularly with benzodiazepines. Simultaneously prescribing virtually identical compounds is likely to increase unless greater control of the

introduction of "me-too" drugs can be achieved.¹⁹ Polypharmacy is common in psychiatric practice,²⁰ and reflects a disturbing level of ignorance of pharmacological action among those who prescribe drugs for psychiatric problems. Most of the other unnecessary prescribing could also be avoided if practitioners had a basic grounding in the pharmacology of these drugs, similar to that received with other therapeutic agents. At present this seems to be deficient,^{21 22} and doctors remain vulnerable to the seductive advertising of pharmaceutical companies, which is becoming increasingly clever as sales of psychotropic drugs rise rapidly. Every doctor now needs an independent source of knowledge before deciding whether to prescribe a drug. If this knowledge is not available a disturbingly large slice of the budget of the National Health Service will continue to be squandered on unnecessary prescribing of psychotropic drugs.

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How to do it

Be a dictator

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My qualifications for writing about dictators are nine horrifying years of being dictated to by some 200 to 250 men (most of my employers *were* men). The reasons for this high turnover were sometimes because I had to fit the jobs in between children's holidays and half terms; sometimes because the jobs were boring; and sometimes because the men were insufferable. During this time I encountered practically every known characteristic in man, typewriter, and tape-recorder, and many different machines (for which I have little natural aptitude). My sympathies, therefore, are primarily with the person being dictated to, so I was encouraged to hear that at least one consultant wanted tips on how to better his technique. The other side is not completely foreign to me: when I was 21 I had a secretary of my own but she was so formidable and reluctant to work for a girl half her age that I was too scared to dictate to her.

Generally speaking, there are two ways to dictate—to a secretary or shorthand-typist, or into a machine for transcription by an audiotypist. Unless you type yourself (which, on the whole, doctors don't), or your writing is legible (again, unlikely) some day you will have to dictate letters, reports, speeches, or

articles. There are advantages and disadvantages in both methods, but some things are common to both.

The girl you dictate to (usually it is a girl) should be handled kindly. Don't, please, call her "the typist"—she has a name, and for the purpose of this article I shall call her Mary. Once a tycoon said to me, "What's your name, or are you temporary?" I didn't tell him my name, and I stayed only a week. Mary won't be a doctor but she may be just as bright as you are, and her English will probably be better; for all you know, she may have translated *The Golden Bough* into Serbo-Croat, or be a member of Mensa. A mixture of shorthand and dictating machine often helps a busy doctor who wants to set his thoughts down quickly after seeing patients out of normal office hours.

Mary is probably capable of writing at least a few letters herself if you give her a rough outline of what you want. Let her do as much as she is capable of, because this will retain her interest more than routine dictation will. She will do much for you if you treat her right—as well as correcting your grammar, she may remind you to write letters you've forgotten about, or point out mistakes you're making in other ways. She will lie for you if she likes you, but, if you suspect that she will die for you too, stick to your tape recorder.

Shorthand

The great advantages of shorthand are that you don't need a recording machine and neither does Mary; you or she can change letters easily if you realise you are getting long-winded or talking