Prescribing psychotropic drugs for children

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SUMMARY. The prescribing of psychotropic drugs was studied in a Scottish general practice of five doctors and 8,300 patients; one third of the patients were aged 12 years or less. In 1971, 336 prescriptions for psychotropic drugs were issued to 172 children and 2,583 to the adults. Most children were given only one prescription, but some needed up to ten in one year.

The drugs consisted of sedatives (43 per cent), tranquillisers (41 per cent), and hypnotics (17 per cent). Most were given for behaviour disorders and enuresis. The analysis of drugs given by each doctor showed that one had given about one third of the total. This demonstration of comparative over-prescribing was useful in discussing self-audit.

Introduction

Considerable interest has been expressed recently in the prescribing of psychotropic drugs in general practice (Parish 1971, *Journal of the Royal College of General Practitioners*, 1973). Reports on drug prescribing in general practice have been largely based on the prescribing of drugs to adults, but there is little information in the literature on the prescribing of psychotropic drugs for children. In view of this it was decided to study the computer-assisted medical records in Livingston New Town to assess the level of psychotropic drug prescribing in children.

Sources and methods

In 1971 there were five practitioners in the practice under review which consisted of 8,290 patients of whom 2,845 were under the age of 12 years. The computer-assisted medical records system in the practice has been described by Gruer and Heasman (1970). At each doctor-patient contact the doctor records the date and site of consultation, and any notes which he may wish to include in the patient's record. The practice secretaries transcribe from doctors' portable dictating machines and maintain a typed medical record. Thereafter diagnoses and treatments are coded, the code which is used for diagnoses and symptoms is the *International Classification of Diseases* (World Health Organisation, 1967), and the Department of Health and Social Security *Drug Index* has been used for the coding of drug treatments.

For the year 1971 a print-out of all psychotropic drug prescriptions for children under the age of 12 years in the practice as a whole, and for individual doctor's practices was obtained from the computer. This information was analysed in terms of categories of drugs and the conditions for which they were issued. The consultations and prescriptions were identified by each doctor's practice, and as 90 per cent of patients were seen by the doctor on whose list they were registered, the results reflected individual doctor's prescribing.

Results

Three hundred and thirty six prescriptions were issued to 172 children (six per cent of the population at risk), and the range of prescriptions varied from one to ten. The majority of prescriptions were for ' once only ' prescriptions, these accounting for 99 out of a total of 172 children receiving these drugs. The total number of prescriptions for psychotropic drugs issued to both adults and children during the year studied was 2,583 and for children alone 336, indicating that 13 per cent of all prescriptions for psychotropic drugs were for children under the age of 12. The majority of children receiving psychotropic drugs were aged between five and 12 years, and the age groups of children receiving these drugs are shown in table 1.

TABLE 1
AGE GROUPS AND DRUG CATEGORIES

Age group	*Number of prescriptions by drug category*			
	Hypnotics	*Sedatives and tranquillisers*	*Anti-depressants*	*Total*
0– 1	13	15	—	28
1 5	25	43	42	120
5 .2	18	79	101	188
Total	56	137	143	336

TABLE 2
DRUGS PRESCRIBED

	Drug	*Number of prescriptions*	*Per cent*	*Total*
Hypnotics	' Triclofos '	33	*9·8*	
	Nitrazepam	21	*6·3*	56 *16·7*
	Dichloralphenazone	2	*0·6*	
Sedatives and tranquillisers	Phenobarbitone*	67	*19·9*	
	Diazepam	33	*9·8*	
	Promazine	18	*5·4*	
	Chlorpromazine	13	*3·9*	137 *40·8*
	Meprobamate	4	*1·2*	
	Chlordiazepoxide	1	*0·3*	
	Trifluoperazine	1	*0·3*	
Anti-depressants	Imipramine	127	*38·8*	
	Amitriptyline	14	*4·2*	143 *42·6*
	Nortriptyline	2	*0·6*	
Total	All drugs			336

*Excludes the use of phenobarbitone as an anti-convulsant

The type of drug prescribed is shown in table 2 where it can be seen that antidepressants accounted for 42·6 per cent sedatives, tranquillisers 40·8 per cent, and hypnotics 16·7 per cent. Table 3 shows the drugs which were prescribed by individual doctors and it can be seen that ' Tricloryl ' was the most common hypnotic, phenobarbitone the most common sedative and tranquilliser, and imipramine ' Tofranil ' the most common antidepressant drug prescribed.

Table 4 shows the different diagnostic categories (of the *I.C.D.*) for all children receiving psychotropic drugs. The majority of cases in group five—' mental diseases '—were for ' behaviour disorders '; namely, 78 cases, 69 per cent of all cases classified as psychiatric in origin. Group 16—' symptoms and ill-defined conditions ' accounted for 42 per cent of all diagnoses mainly became ' enuresis ' was coded under this *I.C.D.* heading, ' enuresis ' accounting for 107 cases in this disease category.

Discussion

The main findings in this study are that six per cent of the child population at risk received one or more prescriptions for psychotropic drugs during a period of one year, and 13 per cent of all psychotropic drugs issued during that year were for children under the age of 12 years.

A study of the literature has not revealed any comparable study with which to compare these results. As expected, the majority of the children receiving psychotropic drugs were over the age of five years, and the large number of prescriptions for tricyclic compounds was due to

TABLE 3

RANGE OF DRUGS PRESCRIBED BY DOCTORS

Drug	*Doctors*					*Total*
	A	*B*	*C*	*D*	*E*	
'Tofranil'	54	11	12	25	25	127
Phenobarbitone	14	8	8	13	24	67
'Tricloryl'	6	9	13	2	3	33
'Valium'	21	–	5	4	3	33
'Mogadon'	1	2	10	3	5	21
'Sparine'	14	2	–	2	–	18
'Tryptizol'	5	6	3	–	–	14
'Largactil'	4	–	5	4	–	13
'Equanil'	–	–	2	2	–	4
'Welldorm'	–	1	–	1	–	2
'Aventyl'	–	–	–	2	–	2
'Librium'	–	–	–	1	–	1
'Stelazine'	–	–	–	1	–	1
Total	120	40	59	57	60	336
Range of drugs	9	7	9	10	5	13

their use in the treatment of enuresis. It was noticeable however that 42 prescriptions for tricyclic compounds were for children under the age of five. Seventeen different preparations were used by five doctors, the range being from nine preparations to five. Four doctors, i.e., doctors B, C, D and E showed little variation in the total number of prescriptions issued, but doctor A had a notably higher number of prescriptions for psychotropic drugs. It was thought that this may have been due to his having a larger list size, but all list sizes were comparable, and as the patients in the new town practice had all recently registered it was unlikely that he had attracted children with specific problems.

Of the 336 prescriptions issued, 251 of the conditions for which they were prescribed were accounted for by 'mental disorders' and 'symptoms and ill-defined conditions'. 'Enuresis' accounted for 107 of these conditions and there is evidence to suggest that tricyclic compounds do have a specific action for this condition. As to 'behaviour disorders' in childhood which accounted for 78 episodes where a psychotropic drug was prescribed, this is an area of childhood illness which is becoming increasingly apparent and where parents are consulting more and more about deviations from normal behaviour and educational failure which impair health. We often do not really know what the answers to these problems are, and at times the family has to be treated rather than the individual child.

The evidence from this study suggests that the families of these children receiving psychotropic drugs for behaviour disorders should be studied more closely.

In the field of self-audit it was particularly noticeable that one of the doctors in the group accounted for 40 per cent of children receiving psychotropic drugs for 'mental disorders' and this could be a reflection of his uncertainty in dealing with this type of child. In addition he was also responsible for the largest number of children receiving treatment for 'enuresis'. Without the evidence from our analysis of drug prescribing we would have been unaware of this and unable to help one of our colleagues in part of his work. The other four doctors did, of course, issue psychotropic drugs to children with 'mental disorders' and 'enuresis' but in smaller numbers.

In the case of 'behaviour disorders' in childhood there is no agreement as to the incidence of these conditions. In all cases it is important to discuss the problem properly with the mother, but the general practitioner is often forced into prescribing a sedative or tranquilliser to the

TABLE 4

DIAGNOSTIC CATEGORIES FOR CHILDREN RECEIVING PSYCHOTROPIC DRUGS

I.C.D. group	*I.C.D. code*	*Doctors*					*Total*
		1	*2*	*3*	*4*	*5*	
1	000–136 Infective diseases	1	–	2	–	2	5
5	290–315 Mental diseases	45	14	29	14	11	113
6	320–389 Diseases of nervous system and sense organs	18	–	3	10	8	39
7	390–458 Diseases of circulatory system	2	1	–	–	–	3
8	460–519 Diseases of respiratory system	2	5	5	3	13	28
9	520–577 Diseases of digestive system	2	–	3	2	1	8
12	600–709 Diseases of skin	1	–	–	1	–	2
16	780–796 Symptoms and ill-defined conditions	49	20	17	27	25	138
	Total	120	40	59	57	60	336

disturbed child. It cannot be denied that in the case of the hyperkinetic child successful drug treatment can often turn an unmanageable child into a readily manageable one and this is especially so in the case of poorly functioning disorganised families.

There were 53 occasions when psychotropic drugs were prescribed for a specific disorder of sleep, but on questioning the doctors concerned it transpired that a number of the cases of behaviour disorders of childhood had also specific disorders of sleep where sedatives or tranquillisers had been prescribed. The incidence of sleep problems in childhood is not available in the major text-books, although Seiler (1972) in a study in general practice found that 40 per cent of 234 children under the age of five had a sleep problem. Illingworth (1968) claimed that many sedatives and tranquillisers were used as a substitute for counselling parents about their children's behaviour problems and emphasised that a change in parental attitudes was required. He also stated that a sedative or tranquilliser should not be given for longer than a week, and he considered that this was long enough to break a habit in the case of sleep problems. There is no evidence to suggest that Illingworth's claims are true and in many cases children require a sedative for up to three or four weeks, and counselling alone will not always solve problems where there is incompatability of marriage, where there is a drink problem in the home, or where a young mother cannot cope with her young children.

I do not know whether our results in prescribing of psychotropic drugs in children are comparable with other doctors' findings, and I do not know whether this evidence suggests that we are over-prescribing these drugs. The results, however, do show that the majority of

children received these drugs on only one or two occasions, and there is a small number receiving psychotropic drugs regularly, the majority of whom are either severely disturbed or suffer from persistent enuresis.

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PRESCRIBING IN GENERAL PRACTICE

The general medical practitioner's role was both central and crucial to any successful medical care programme and yet he had only a few minutes with each patient in which to make a treatment decision. One of the most examined and criticised consequences of such decisions was the issuing of a prescription for drugs.

Though some drug treatments had been subjected to randomised controlled trials alternative treatment (for example psychotherapy instead of tranquillisers) had never been costed, examined, and compared. The general practitioner was frequently criticised for not providing sufficient time for his patients, yet if he were to provide 15 minutes for every patient who wished to consult him the service would break down. Also, in some countries where the patient paid and was given more time for consultation the drug prescribing was higher than in Britain.

There were numerous agencies—from the pharmaceutical industry to the patient—involved in and interested in prescribing. The critical link between them was the prescribing doctor who put pen to paper. No wonder the prescribing activity of general practitioners was always under discussion and criticism. Yet the cost of the pharmaceutical service was a small fraction of the total expenditure involved in the process of caring.

Doctors, unfortunately, interpreted examination of their prescribing as a threat to their professional autonomy.

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