

SURVEY OF MEDICATION IN A SUBNORMALITY HOSPITAL

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Introduction

The purpose of this study was to define the features of drug prescribing in this population, and the extent to which medication is being used effectively. Factors which appear to influence the prescribing of drugs are discussed.

The population studied included all patients within the children's department (219), as well as children under 16 (50). However, there are a large number (169) of adolescent and adult patients who are included in the survey. They were residents of eight wards containing between 9 and 41 patients each. The younger people tended to be living within the smaller groups.

The survey was carried out on 1st December, 1976, when precise information was collected about the drugs in use, the length of prescription, the dose amounts and frequency. Other less tangible information about patient characteristics and reasons for medication was obtained from the nurse in charge of the ward at the time, and this information was spontaneous and unprepared. Additional information was obtained from the study of case notes.

In this paper, proprietary names of some drugs are used alongside approved names for others, and are thus recorded exactly as they have been prescribed on the wards. Although unconventional, it is hoped that the following observations will be more readily understood by people from the various disciplines involved in this field of work.

Findings

There was an overall total of 381 prescriptions. Of these, the great majority, 360, were for psychotropic drugs, anti-convulsants, Folic Acid and Disipal (95%). The other 5% included preparations such as iron, vitamins and antacids, and are not further discussed.

TABLE 1

Drug compound or Group	% of 360
Anti-convulsants	27
Folic Acid	7.5
Valium	23
Major tranquilisers	30
Disipal	7.5
Anti-depressants	1.0
Sodium Amytal	1.5
Night sedatives	2.5
	<hr/> 100% <hr/>

TABLE 2

		All Wards
Number of patients on	no drug	71 (32%)
	1 drug	32 (15%)
	2 drugs	30 (14%)
	3 drugs	41 (19%)
	4 or more	45 (20%)
Total population		219 (100%)

TABLE 3
Individual Ward Patterns

Ward (Pseudonym)	A	B	C	D	E	F	G	H	All Wards
Numbers	9	24	25	31	41	31	28	30	219
Average age in years	11	13	19	21	37	20	14	26	20 yrs
% of patients on no drugs	45	29	8	45	37	61	18	17	32%
% of patients on 4+ drugs	0	25	28	16	32	10	9	27	20%
% of Epileptics	33	63	40	30	42	33	39	57	44%

Discussion—General Observations

There are three main groups of drugs being prescribed: anti-convulsants, "major" tranquilisers and "minor" tranquilisers (chiefly Valium), together accounting for about 80% of the drugs in use. A further 15% includes Folic Acid and Disipal, given to offset side-effects and not as the primary therapeutic agent. The remaining 5% are for anti-depressants, night sedatives and barbiturates.

68% of this population are receiving medication, and of these nearly one-third are getting four drugs or more. In practice a drug chart of four separate items will almost certainly include a major tranquiliser even allowing for a combination of anti-convulsants.

The individual wards show large variations in prescribing patterns. In considering the patients on four or more drugs, the wards can be divided into those above and below the average figure of 20%. Thus, wards B, C, E and H have a greater proportion of their residents on 4+ drugs. Wards A, D, F and G appear to have a substantially lower proportion on this amount of medication.

It can be seen from the table that there is no simple association of polypharmacy either with increasing age or with the number of residents in a ward. On the other hand the four wards using rather less medication contain age groups of 11, 21, 20 and 14 years, i.e., equal to or less than the overall average. Two of the wards using more medication have considerably older residents, so that the other two wards (B and C) stand out as having young residents (average 13 and 19 years) and yet with a higher proportion of them on several drugs. Notably, C ward has only 8% of its patients on no drugs at all.

Superficially, wards B and C are quite different in character, the former containing multiply handicapped children non-ambulant, with high physical dependency. The latter provides for an ambulant group of severely subnormal adolescents

who present problems of behaviour and communication. It could be said that these two wards share three features in common:

1. A high taxation on staff energy and resources.
2. A low return in terms of development or successful behaviour modification.
3. High expectations of staff performance, imposed from without.

Specific Drugs

Anti-convulsants

Through long-established practice great reliance is placed on the three drugs Phenobarbitone, Phenytoin and Mysoline. Polypharmacy has been avoided in the case of anti-convulsants, and blood levels are checked when the need arises. In this population it is acknowledged that epilepsy can be difficult to control and therapeutic ambitions are correspondingly low. The frequency of fits which is considered acceptable is much higher than in a paediatric out-patient department. Probably for these reasons there have been few attempts to try other drugs. Epilim has been introduced in three cases. Beclamide is not in use at all as an anti-convulsant, although it has been found useful in modifying behaviour in a subnormal population. Zarontin is prescribed in three cases, which possibly reflects the true prevalence of petit mal epilepsy. (The recorded incidence of petit mal fits is much higher in this population and is probably being used as a loose term to denote a mild or brief fit.)

Folic Acid

In all but one case prescriptions are long-standing (>1 year). In some of the case notes studied there are reports of a low serum folate (with or without low red cell folate); in other cases there was no history of folate deficiency. In no case was folate deficiency combined with anaemia, and in the single frankly anaemic patient iron-deficiency appeared to be the cause. No case of macrocytosis emerged. It seems that Folic Acid is given routinely in some cases with anti-convulsants, but even this practice is not consistent. In a few instances it might have been given to rectify a laboratory report of folate deficiency, but in no case was it given to treat a clinical symptom.

According to Richens there is evidence that Folic Acid has a convulsant action and antagonises Phenytoin. The routine prescribing of Folic Acid is probably not justifiable and should perhaps only be given for a clear indication such as macrocytic anaemia (folate deficient).

Valium

23% of all the drugs given are for Valium. Of these, about one-third are given for its anxiolytic properties. Two-thirds, however, are for the intramuscular preparation to be given, "PRN" (by the nurse) in order to prevent or control status epilepticus. There is no evidence that this practice is effective. Valium is given intravenously to control status epilepticus by most practitioners because it is absorbed too slowly when given 1/M and reaches a much lower peak serum concentration. A more subtle disadvantage of such "PRN" prescriptions is that a patient suffering an increased frequency of fits may be overlooked because the nurse may believe he is receiving adequate treatment, and not think it necessary to involve the medical staff.

Major Tranquilisers

Two-thirds of these prescriptions are for Largactil or Melleril. The remainder include Haloperidol, Neulactil, Stelazine and Fentazin. There is wide variation in the doses given per 24 hours.

TABLE 4

Drug	Dose/24 hours
Largactil	25 to 300 mg.
Melleril	50 to 400 mg.
Haloperidol	3 to 13.5 mg.
Stelazine	4 to 30 mg.

Out of 105 such prescriptions, 87 were routine (as opposed to "PRN") and most of the latter had been administered daily for more than one year, and many dated back several years. In every case the nurse in charge was asked why the drug was being given. Invariably, the answer was in terms of some unwanted feature of behaviour (Table 5).

TABLE 5

Screaming	Makes him manageable	Noisy
Aggressive	Destructive	Bites
Unreliable	Swearing	Breaks windows
Self-mutilating	Encopretic	Pulls hair
Throws chairs	Attacks staff	Stripping
Violent movements	Scavenges from pigbins	Masturbation
Smears faeces	Violent tendency	Rips clothing

Major tranquilisers are not generally considered to be effective in the long-term control of anti-social or offensive behaviour, and are usually reserved for the treatment of schizophrenic and affective psychoses.

No instance of such underlying psychosis was recorded in this population. Of course it is very difficult to establish such a diagnosis in a severely subnormal person who cannot speak. It is possible that some instances of deviant behaviour may be atypical expressions of depression, or other psychosis that might respond to medication. In many cases deviant behaviour is episodic or very infrequent, and there seems to be no advantage in the daily administration of the drug. In spite of this the idea that the drug might be stopped often arouses anxiety in nursing staff, anxiety which is also shared by other staff such as teachers, and doctors are not immune. However, convincing evidence of benefit to the patient is not often forthcoming, either in terms of symptom relief or of altered behaviour.

Disipal

In most cases this drug has been prescribed routinely along with the phenothiazine or other drug, and never discontinued. This cannot be considered good practice, because Disipal has its own side-effects, and in any case the efficacy of Disipal in drug-induced Parkinsonism is in dispute.

Anti-depressants

Reference has already been made to the use of major tranquilisers in the suppression of symptoms, without regard for possible underlying factors. Paradoxically, anti-depressants are hardly used at all, and their use has never been evaluated in this particular population. This is presumably because the diagnosis of depression is rarely considered, and this group of drugs is thought to have no usefulness in controlling problematic behaviour. In the general population, depression is much more common than schizophrenia and often manifests as an alteration of behaviour in the individual. It would not be unreasonable to suppose that "disturbed behaviour" in the subnormal population is more often due to depression than to the rarer forms of manic psychosis or schizophrenia.

Sodium Amytal

There were six prescriptions. The use of barbiturates as sedatives has certainly lessened in recent years, in line with prevailing medical practice.

Night Sedatives

Surprising, only 9 out of 219 patients are given a sedative at night, but this excludes those who are regularly given a sedative with the evening medicine round, such as Largactil. One might infer that even the most troublesome patients do not persist with their activities during the night as well, which suggests that deviant behaviour has less to do with endogenous mental illness than with the difficult problems of communication and other environmental factors.

Comment

A number of proposals have been made here, such as discontinuing Folic Acid and Disipal as routine drugs and the trial of anti-depressants in selected cases. Such innovations, however, would be unlikely to benefit the majority of patients.

It is suggested that fundamental problems exist which are of quite a different order to the pharmacology of drugs or their administration. Staff energies and resources are not chiefly directed towards the evaluation of symptoms and the assessment of behaviour. There is little attempt to consider the possibility of mental illness such as depression. Troublesome symptoms and deviant behaviour tend to be suppressed indiscriminately with drugs. There is no clear association between the drugs prescribed and mental illness, age, degree or type of handicap.

In the analysis of individual ward patterns tentative conclusions were advanced that the extent to which medication is relied on depends on the balance of three factors: investment of staff effort required to produce significant change, and the level of expectations that has been set by a consensus of professional and lay groups, often influenced by parents and other more remote bodies outside the hospital. Thus, staff will work with enthusiasm when progress is apparent, when goals are defined and programmes set up to reach these goals, and when results match up to (or even exceed) expectations. These conditions apply to wards A, D and F which all make less than average use of medication. In the less fortunate wards, changes may be much slower because of increasing age, but here expectations are correspondingly lowered and the balance is stable. Staff can still be seen to achieve their aims, which are, however, less ambitious. Nonetheless, a somewhat higher proportion of residents are put on drugs.

It is the group of younger children with severe multiple handicaps, or with deviant social behaviour, who on the one hand present intractable problems, and

on the other seem to be linked with high expectations that staff will somehow put things right. Wards B, C, and to a lesser extent G, exemplify this situation, in which a high proportion of residents are receiving medication. The evidence presented here suggests that on the whole the doctor responds to these pressures by prescribing, but that the drug itself has little to do with the condition of the patient. It is not clear whether he believes the drug will be beneficial (or harmless) to the patient, or whether medication is justified by the supposed moral support it will give the staff.

At this point it may be pertinent to reflect on the contrasting procedures surrounding medication in, say, a general medical ward of a district hospital, and a psychiatric hospital (whether mental illness or handicap). In the former, a prescription is closely linked to a diagnosis, e.g., Iron for anaemia, Insulin for diabetes; and there is minimal discussion between medical and nursing staff about the treatment which is prescribed by one party, accepted and administered by the other. On the whole the staff groups have mutual confidence and respect for each other's rôles. In psychiatry it is different. Nurses are more involved in the total treatment of patients, and furthermore their judgement and experience may be sought and co-operation enlisted, in deciding between one drug and another. Again, this works well on the whole, and the close working relationships thus engendered in the members of a team is beneficial, at least in a situation where results are readily apparent. If this process goes further, however, the doctor discovers that she has lost any serious claim to special knowledge or expertise with drugs, whilst the nurse realises his superior experience in "treating" patients and observing directly the effects of medication. It is this situation which now pertains in the field of mental handicap. A doctor is seldom invited to advise on a particular problem, but quite frequently asked to prescribe a particular drug. An example of this is the request for the drug Anquil for a person who (on enquiry) is said to be masturbating excessively. Usually the prescription is provided as any other response would be regarded as a confrontation; an assertion of medical omniscience for which there is no foundation. Inevitably in this situation, doctors tend to withdraw from the task of evaluating and monitoring the effectiveness of drugs which are being given irrationally, and on the insistence of those who claim, fairly, that they are the ones who have to spend all day with these difficult patients (or pupils).

On the other hand, it may be that nurses, doctors and also teachers and parents, have an unwarranted faith in the effectiveness of drugs in the management of individual patients. It may also be relevant that to leave a person on "no" treatment has implications for the rôle of doctor or nurse, and indeed calls into question the status of the retarded person as a "patient." It can be emotionally difficult to consider such implications, and this itself could explain the extreme conservatism surrounding the whole business of medication. Reid has drawn attention to the paucity of psychiatric training of both medical and nursing staff in subnormality hospitals, and as a consequence there is both a failure to recognise psychiatric disorder and a misuse of psychotropic drugs.

Kirman found, in a review of medication in two hospitals for the mentally handicapped, similar patterns of drug prescribing as is reported here. He found also a high proportion of patients on anti-convulsants, major and minor tranquilisers, and wide variations in prescribing practices. There has evidently been little change over the last decade.

Conclusions

The patterns of prescribing in a subnormality hospital (children's department) have been defined and some of the factors influencing these patterns discussed. Although a tendency to over-prescribe has been demonstrated, it is not suggested that

the solution is simply to use less drugs. Indeed, in the case of anti-convulsants and anti-depressants a more vigorous exploration of their potential might be rewarding. No drug should be given empirically. There should always be a reasonable expectation of benefit to the patient, accompanied by clearly defined treatment aims. If these aims are not realised the drug should be changed or omitted in the course of regular reviews and monitoring. In this connection "PRN" prescriptions ought to be abandoned as they preclude any serious attempt at controlled therapy.

What seems to be lacking is a basic confidence in our capacity, as staff, to look after handicapped people, and especially in the case of a person for whom, it seems, we can do little or nothing we say, "There must be a drug." Perhaps it is easier for us to witness the ineffectiveness of a drug than to experience and accept our own inadequacy. There are no easy answers. One approach would be to introduce suitably constructed group meetings for staff, precisely not to discuss the needs of the patients, but to look at our own needs, strengths and limitations. In my experience such meetings are resisted; as if we would be neglecting the work we are paid to do. The psychology department in the hospital might take the lead here.

These problems need to be overcome, not simply because in many cases drug treatment is demonstrably ineffective. More seriously, harmful effects of long-term administration of phenothiazines such as damage to the eye and irreversible dyskinesia have been described. Although such specific complications are probably uncommon, in general it is surely indefensible to give sedative drugs over long periods to people who are already retarded, slow in thought and clumsy in movement. To do so is to subordinate the needs of the mentally handicapped to the needs of the institution.

Finally, in these days of restricted budgets, it is not irrelevant to consider the cost. On a conservative estimate, to give 300 mgm of Largactil a day to someone for one year costs £15. To provide this for 87 people (the number routinely receiving major tranquilisers) costs £1,305 p.a. This estimate can be safely doubled as Largactil is by far the cheapest drug of this group. Thus, £2,000—£3,000 p.a. is being spent on major tranquilisers alone within a department of just over 200 patients. If this money could be spent instead on suitable toys and other occupational equipment, of which there is a persistent shortage, the rewards might be considerable for all concerned.

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