

SURVEY OF PSYCHOTROPIC DRUG PRESCRIBING PATTERN FOR LONG STAY PATIENTS

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SUMMARY

This study describes two surveys of psychotropic drug prescribing patterns for long stay patients in a teaching institute at an interval of 4 years. Polypharmacy was found to be at a low key, with minimal use of anticholinergics. The chief difference between the two surveys was in the significantly more use of once a day medication in 1988 compared to two divided doses in 1984. The importance of conducting such surveys periodically as a form of self audit is discussed.

A number of surveys on psychotropic drug prescribing patterns have been carried out in the West. All such surveys have raised concern about widespread irrational prescribing habits (Merlis et al., 1970; Prien et al., 1973; Diamond et al., 1976; Tyrer, 1978; Michel and Kolanowska, 1981; Holden, 1984; Edwards and Kumar, 1984; Clark and Holden, 1987; Muizen and Silverstone, 1987; Holloway, 1988). The chief criticisms relate to the widespread polypharmacy, incorrect dosage, lack of specificity in the choice of drugs, unnecessary divided dosage, excessive use of anticholinergics and hypnotics and prolonged use of drugs.

It has also been pointed out that many of the apparent illogicalities shown in global surveys can be explained by knowledge of the patients symptoms (Prien et al., 1978; Morgan and Gopalaswamy, 1984). However, this does not lessen the value of identifying overprescribing (Clark and Holden, 1987) and many other problems with prescribing habits. Such surveys have been shown to be helpful in improving prescribing habits (Diamond et al., 1976). It is difficult to compare the various surveys as they have looked at divergent patient population. Table I lists the extent of polypharmacy reported in some recent surveys.

So far, there has been no published data on the prescribing habits in Indian psychiatric settings. We carried out this survey to find out the pattern of psychotropic drug prescribing pattern and to investigate any changes in this pattern over a period of four years. Where appropriate we have compared our findings with those of other similar studies.

MATERIAL AND METHODS

This study was carried out in the Central Institute of Psychiatry, Ranchi. It is one of the major post graduate teaching centres in India. However, as yet no separate department of psychopharmacology exists. A reorganization of wards was undertaken in the year 1986. The traditional designation of wards as acute, sub-acute, chronic and geriatric was dispensed with. Most wards have a mixture of old and new patients and five of the thirteen wards serve as admitting wards. Of late, the policy has been to admit the patients for short periods only.

The study was conducted and completed within two weeks of August 1988. All patients continuously hospitalized from 1984 through 1988 were included in the study. The patient characteristics including age, sex, diagnosis, duration of illness,

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TABLE I. Number of psychotropic drugs per patient.

Survey	N	Number of drugs per patient (%)				
		0	1	2	3	4 +
Michel and Kolanowska (1981)	511	19	28	30	18	5
Morgan and Gopaldaswamy (1984)	220	8	26	30	24	12
Clark and Holden (1984)	139	9	17	28	19	27
Clark and Holden (1987)	156	15	17	25	21	19
Muijen and Silver-Stone (1987)	A 89	25	27	35	11	2
	B 57	5	12	40	26	16
	C 104	4	22	30	29	15
Holloway (1988)	109	16	21	29	23	11

duration of hospitalization were recorded from the case record files. July 1, 1984 and 1988 were taken as the census days. Retrospective information on medications received and the frequency of administration was recorded from the medication sheets. As required medication was included, only if it was administered on the census days.

RESULTS

Patient characteristics

A total of 171 patients had continued to stay from 1984 through 1988. They included 146 schizophrenics, 4 manic-depressives, 13 with epileptic psychoses, 5 had mental retardation with psychosis and 3 mental retardation with epilepsy. As about 85% of the total population were schizophrenics and the rest 15% a heterogenous group, further analysis was restricted to the group of patients with schizophrenia. The sex, age, duration of illness and duration of hospitalization are shown in Table II.

Prescribing pattern

Details of psychotropic drug prescribing pattern is shown in Table III. In 1984, 21% of the patients were not receiving any psychotropic drugs and 36% in 1988. 13% of the patients received more than one psychotropic drugs in 1984 and 7% in 1988. In 1984, 77% of the patients were receiving neurolep-

TABLE II. Patient characteristics

	N	%
<i>Sex</i>		
Male	84	58
Female	62	42
<i>Age (in yrs.)</i>		
24-40	30	21
41-55	76	52
56 and above	40	27
<i>Duration of illness (in yrs.)</i>		
upto 10	11	7
11-20	23	16
21-30	58	40
31 and above	51	37
<i>Duration of hospitalization (in yrs.)</i>		
5-10	29	20
11-20	47	32
21-30	52	36
31 and above	13	12

tics; while in 1988 only 56% were prescribed neuroleptics. Of those prescribed neuroleptics, 11% received more than one neuroleptics and 5% in 1988. Depot preparations were used in 28% of those receiving neuroleptics in 1984, 6% having received oral neuroleptics in combination. The use of depot preparations dropped down to just 2% cases in 1988. This was because

of an acute shortage of Fluphenazine decaanoate, the only depot preparation then available in India. 23 out of those on depot preparation in 1984 were receiving oral neuroleptics in 1988, two on diazepam and four not on any psychotropic drugs.

TABLE III. *Psychotropic prescribing*

		1984		1988	
		N	%	N	%
Total No. of Drugs:	0—	30	21	53	36
	1—	97	66	83	57
	2—	15	10	9	6
	3—	4	3	1	1
Neuroleptics:		112	77	83	57
No. of Neuroleptics:	1—	100	89	79	95
	2—	12	11	4	5
	Oral only—	81	72	81	98
Depot only—	24	22	1	1	
Depot + Oral	7	6	1	1	
Anticholinergics—		9	6	2	1
Benzodiazepines—		6	4	15	10
Frequency of administration—					
Once a day—		23	25	77	84
Twice a day—		61	66	14	15
Thrice a day—		8	9	1	1

In 1984, 6% of the whole group and 8% of those receiving neuroleptics received anticholinergic drugs, dropping down to just two patients in 1988. Benzodiazepines were used for 4% of the patients in 1984 and 10% in 1988. No other psychotropic medication was being used. Drugs for physical problems were prescribed for 26 and 28 patients in 1984 and 1988 respectively. 13% of the patients received nutrients in both years. Use of antihypertensives rose from 3% in 1984 to 6% in 1988. In 1984, 5% of the group received antituberculous drugs, none in 1988.

In 1984 drugs were administered once a day in 25%, twice a day in 66% and thrice a day in 9%. In 1988, most patients (84%) received once a day doses, followed by twice a day for 15% and three divided doses was used for just one patient.

DISCUSSION

In this survey we found some very encouraging results. The number of those prescribed psychotropic drugs fell from 79% in 1984 to 64% in 1988. This is not surprising as the same group of patients have been surveyed at a gap of 4 years, but it does show a positive trend to review the need for continuing drug administration for chronic hospitalized patients. The prescription of two or more neuroleptics already at a low key in 1984 (13%) went further down to just 7% in 1988. Very few patients received anticholinergics in both surveys. The use of benzodiazepines went up from 4% in 1984 to 10% in 1988. This increase was due mainly to their use for distressing tardive dyskinesias. The chief differences between the two surveys was in relation to the frequency of drug administration. In comparison to 1984, when majority (75%) of the drugs were administered in divided doses, in 1988, 84% were administered once a day.

These findings are in sharp contrast to most of the reported drug surveys. However, it would not be fair to compare our results with most other surveys involving acute, chronic, day patients and out patients. The present sample consists largely of old (mean 49.9 ± 10.4) schizophrenics with long duration of illness (mean 27.6 ± 10.4) and prolonged hospitalization (mean 20.01 ± 9.2) and are more likely to be on stable medication. However, Clark and Holden (1987) found extensive polypharmacy in a group of even older patients (mean age over 60) with chronic functional disorders on long stay wards. The use of anticholinergics and divided doses was also very high. They

did not find any significant improvement in the prescribing habits over a two year period. Holloway (1988) has also found overprescribing, particularly of sedative/hypnotic, anticholinergic and antipsychotic drugs, to be common in the drug treatment of long term mentally ill users of a district psychiatric service. The prevalence of polypharmacy has been shown to vary from 45% to 94% in comparative surveys of psychotropic drug prescribing in different types of psychiatric hospitals (Muijen and Silverstone, 1987). Lower rates have been reported from hospitals with departments of psychopharmacology (Michel and Kolanowska, 1984; Muijen and Silverstone, 1987).

This study is in no way representative of a typical psychiatric hospital. In India, with just about 1500 qualified psychiatrists to cater to the needs of over 800 million population, the problem is likely to be quite serious. In fact, irrational pharmacotherapy has been so much of a matter for concern that it has provoked an editorial comment in a recent issue of the *Indian Journal of Psychiatry* (Channabasavanna, 1988). Besides the fears of side effects, rational and ethical issues, financial constraints are also a major problem.

There can be no doubt that similar surveys should be carried out periodically in every hospital. Psychotropic drugs have no doubt helped greatly in rewriting the history of Psychiatry, but these drugs do not help all, and none of them are free from side effects. There is thus a need for cautious optimism and the role of rational pharmacotherapy cannot be overemphasized.

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