

## A CALM LOOK AT THE COST OF DRUGS IN PSYCHIATRIC PRACTICE

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*Cost consideration has special relevance in psychiatric practice, where the drug treatment has to be continued for long duration. On evaluating, the cost of different brand names, of the same generic drug using CIMS and MIMS (India, 1991), it was found that Cost Range and Cost Ratio varies considerably. The Cost Ratio is more than 3 for Tab. Thioridazone 100 mg and Cap. Doxepin 75 mg. Since, the superiority of any costlier brand over the others has never been reported, and keeping in view the financial aspect of prescribing, the cheapest of the brand available should be prescribed, whenever possible.*

The use of drugs with well-demonstrated efficacy in psychiatric disorder has become widespread since mid-1950s. Today, about 10 to 20% of prescriptions written in the United States are of medications intended to affect mental process, namely, to sedate, stimulate or otherwise change mood, thinking or behaviour (Baldessarini, 1990). In India, also, the situation is equally bad and psychiatric medications are prescribed substantially.

Although, the drugs in psychiatric practice have a revolutionary, beneficial impact, the cost consideration is of special relevance in this field because the majority of the drugs have to be taken for appreciably long duration. The patient's illness, as such, by preventing their gainful employments creates an additional burden on the patients. Over and above this, the physician's lack of knowledge regarding the cost of drugs, affect the patient's finances severely (Kaine and O'Connell, 1972; Lowy *et al.*, 1972). So, while treating a patient, it is our moral duty to consider the economic feature of prescribing as well.

This problem can be tackled to some extent by prescribing in generic names, as some studies document that generic drug cost less than the branded ones (Horvitz *et al.*, 1975). Whereas other studies say that there is no difference in the cost of generic and branded drugs (Ritch *et al.*, 1978; Kass and Gordon, 1981).

At the same time, as there are different brands, of the same generic drug, it might be expected, that their cost also varies but it has not been investigated so far. The present study was planned to investigate the cost difference in different brands of the same generic drug, so that whenever possible a cheaper brand can be prescribed, since the inferiority of any cheaper brand over the other, of the same generic drug, has not been reported.

### MATERIAL AND METHOD

The cost in Rupees among different brand names of the same generic drugs was evaluated using CIMS (30: May-August, 1991, India) and MIMS (11: July, 1991, India). The cost of 10 tablets, 10 capsule or 1 injection of all the brands of various drugs e.g. barbiturates (phenobarbitone), benzodiazepines (diazepam, nitrazepam, lorazepam, alprazolam and chlordiazepoxide), butyrophenones (haloperidol), phenothiazines (chlorpromazine, thioridazine, fluphenazine, trifluoperazine), diphenyl butylpiperidines (pimozide, penfluridol), atypical agents (buspirone), tricyclic antidepressants (amitriptyline, nortriptyline, imipramine, doxepin), atypical antidepressants (trazodone and fluoxetine), lithium and others (mianserin) was evaluated.

To get some idea of the difference in the cost between the costliest and cheapest brand, the cost range, which is range in the cost from cheapest to costliest brand of the same generic drug was calculated. The cost ratio, the ratio of the cost of the costliest to cheapest brand of the same generic drug was also calculated. This tells, how many times the costliest brand costs more than the cheapest one in each generic drug.

### RESULTS

The cost range varies widely in the different drugs (Table 1, 2 and 3). The cost ratio is highest for thioridazones, doxepin, alprazolam, haloperidol, trazodone, chlorpromazine, diazepam, imipramine, lithium and amitriptyline, whereas it is low for phenobarbitone, nortriptyline, mianserin, chlordiazepoxide, lorazepam and pimozide (Table 1, 2, 3).

Table 1. Cost Range, Cost Ratio, Number of brands available and strength of each preparation of barbiturates and benzodiazepines.

Drugs	Strength	No. of brands	Cost Range (in Rs.)	Cost Ratio
<b>I. Barbiturates:</b> Tab Phencobarbitone	30 mg	2	1.19-1.21	1.02
<b>II. Benzodiazepines:</b>				
a.) Tab Diazepam	2mg	4	1.56-2.20	1.41
	5mg	9	1.87-3.29	1.76
	10mg	5	2.73-4.92	1.80
Inj Diazepam (2ml)	5mg/ml	5	1.47-2.14	1.46
b.) Tab Nitrazepam	5mg	5	3.5-5.5	1.5
	10mg	5	5-7.5	
c.) Tab Lorazepam	1mg	3	2.80-3.06	1.09
	2mg	3	3.90-4.08	1.05
d.) Tab Alprazolam	0.25mg	7	2.20-6.0	2.73
	0.50mg	7	3.90-11.0	2.82
	1mg	7	7.25-14.0	1.93
e.) Tab Chlordiazepoxide	10mg	2	3.39-3.56	1.05

Table 2. Cost Range, Cost Ratio, number of brands and strength of each preparation of butyrophenones, phenothiazines, diphenyl butylpiperidines and atypical agents.

Drugs	Strength	No. of brands	Cost Range (inRs.)	Cost Ratio
<b>Butyrophenones</b>				
Tab Haloperidol	0.25mg	3	2.25 - 3.02	1.34
	1.5mg	6	3.88 - 9.58	2.47
	5.0mg	7	8.20 - 21.47	2.62
	10mg	5	15.0 - 27.97	1.86
	20mg	3	28.0 - 30.00	1.07
Inj Haloperidol (1ml)	5mg 1ml	3	3.5 - 4.00	1.14
<b>Phenothiazines</b>				
Tab Chlorpromazines	25mg	3	2.24 - 4.64	2.07
	50mg	3	3.70 - 6.63	1.79
	100mg	3	5.50 - 9.90	1.64
	200mg	2	10.5 - 14.00	1.33
Inj Chlopromazine	2mg/ml	3	3.50 - 3.73	1.06
Tab Thioridazine	10mg	4	3.50 - 5.08	1.45
	25mg	5	7.40 - 11.20	1.51
	50mg	4	13.80 - 16.00	1.16
	100mg	5	12.50 - 44.72	3.58
Inj Fluphenazines (1ml)	25mg/ml	2	12.0 - 15.00	1.25
Tab Trifluoperazine	5mg	2	3.50 - 3.90	1.11
<b>Diphenyl butylpiperidines</b>				
Tab Pimozide	2mg	4	9.60 - 10.50	1.09
	4mg	5	15.0 - 16.00	1.07
Tab Penfluridol	20mg	2	48.12 - 65.00	1.37
<b>Atypical Agents</b>				
Tab Burpirone	5mg	3	5.40 - 6.64	1.23
Tab Propranolol	10mg	3	9.60 - 10.50	1.09

**Table 3. Cost Range, Cost Ratio, number of brands and strength of each preparation of tricyclic antidepressants, atypical antidepressants, lithium and others.**

Drugs	Strength	No. of brands	Cost Range	Cost Ratio
Tricyclic Antidepressants:	10mg	5	2.00 - 3.15	1.57
	25mg	7	4.20 - 5.65	1.35
	75mg	5	9.50 - 13.35	1.41
Tab Nortriptyline	25mg	2	4.20 - 4.40	1.05
Tab Imipramine	25mg	5	3.80 - 6.03	1.59
	75mg	5	9.50 - 13.33	1.40
Cap Doxepin	10mg	4	4.50 - 8.24	1.83
	25mg	4	8.09 - 19.54	2.42
	75mg	3	10.11 - 31.54	3.12
<b>Atypical Antidepressants:</b>				
Tab Trazodone	25mg	7	8.00 - 11.00	1.37
	50mg	8	14.00 - 21.00	1.50
	100mg	6	16.00 - 38.00	2.38
	20mg	3	26.00 - 39.00	1.50
Tab Fluoxetine				
Tab Lithium Carbonate	150	2	3.30-5.22	1.58
	300	4	4.80-5.40	1.12
<b>Other Agents:</b>				
Tab Mianserin	10mg	3	14.25 - 15.00	1.05
	20mg	2	27.50 - 29.00	1.05

## DISCUSSION

The results indicate that there exists a considerable difference in the Cost Range and Cost Ratio among different generic drug. We have only calculated the Cost Range for 10 tablets, 10 capsule or 1 injection for each drug. However, in psychiatric practice the treatment has to be given for long duration and in some cases for many years. So in that case, the Cost Range would be quite wide and the difference in the cost of treatment would be appreciably high. The Cost Ratio is 3.58 for Tab thioridazine 100 mg indicating, that the costliest brand is 3.58 time costlier than the cheapest one. Since, the superiority or inferiority of any costliest brand over the inferior one, of the same generic drug, has never been scientifically established, a conscientious prescriber should always choose the cheapest brand, available while prescribing.

At the same time, as the physicians have generally suboptimal awareness of the drug cost (Kaine and O'Connell, 1972, Lowy *et al.*, 1972), the situation can be improved, if drug price is given greater emphasis during medical training programme (Brody and Stokes, 1970). The medication cost should be another property of the drug and the average cost per specified dose should be listed in medical literature, drug advertisement. The

drug cost mentioned in our study is of ethical pharmaceutical preparations, appearing in CIMS and MIMS (India). The cheapest brand among the ethical preparations should be preferred while prescribing, whereas, the cheapest brand from unethical and unstandard preparation should be discouraged.

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