PSYCHOTROPIC DRUG SALES IN WARANGAL

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An analysis of sales of psychotropic drugs in 1 year in Warangal district showed maximum sales of Fluoxetine. Total dopamine receptor antagonists sales, by the amount of money spent, were less than that of Fluoxetine. Older antipsychotics and newer antidepressants and anxiolytics were accepted by the local profession.

Key Words: Psychotropics - Sales - Acceptance

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Drugs constitute the single largest component of cost of psychiatric care. Prescribing practice varies from individual to individual, area to area and time to time. This is true not only of a particular brand but also the type of drug. This may be due to a variety of reasons - changing pattern of diagnoses, demographic changes, introduction of newer drugs, training of the treating doctor and sales pitch of various pharmaceutical companies are some of them.

Generally by the time patients come to a psychiatrist, most of them have consulted many non-psychiatrists and collected quite a handful of prescriptions. Nowadays one does not come across a prescription without a psychotropic drug. With the introduction of newer psychotropic drugs in recent times and with greater awareness of psychiatric diseases and treatment modalities, the consumption of psychiatric drugs is very high. Psychotropic drugs worth Rs.120.98 crores were sold in India, in 1993-94, as per ORG Data, supplied by a pharmaceutical company. The actual amount spent by psychiatric patients on drugs will be much more if the cost of B-blockers, anticholinergic drugs, calcium channel inhibitors etc. are also taken into consideration.

So far no study has been reported in the literature about sales pattern, preferred drugs etc. Keeping the above in view it was decided to compile and analyse the sales of psychotropic drugs in Warangal district in the financial year 1993-94.

Warangal district had a population of 29.47 lakhs in the index period, calculated on the basis of 1991 census, with the presumption that the same growth rate was maintained. About 20% of the population live in urban areas. (District Planning Officer, Warangal district, (1992)). There are about 750 medical officers as per IMA sources. There are 2 psychiatrists in the district. Literacy rate is less than the state average. Warangal town, district headquarters, is about 2 hrs. journey by rail from the state capital, Hyderabad. A total of 1040 medical shops are there in the district, of which about 400 alone are in Warangal town.

METHODOLOGY

Sales of psychotropic drugs by distributors in the district in the year 1993-94 were collected. To these, the purchase by the hospital attached to the medical college, done from other sources were added. All these drugs were grouped into:

1. Dopamine receptor antagonists (DA)
2. Tricyclics (TCA)
3. Benzodiazepines (BDZ)
4. Specific serotonin re-uptake inhibitors (Fluoxetine)
5. Lithium
6. Carbamazepine
7. Others

After grouping the drugs as above, the total sales of a particular drug was computed by multiplying the sale quantity with the milligram component of each strength and adding them. For eg. Haloperidol 'X' no of 1.5 mg tablets, 'Y'
no. of 5 mg, tablet etc. were sold. The computation was done as 
$\text{mg.}$

This was done for various companies and added up to obtain the total mg, sales for that drug. This was converted into kgs.

The sale quantity was converted into sale amount by multiplying it with retail price of individual formulations of different companies and adding them up.

Basic chemical equivalent was calculated whenever it was possible eg. DA drugs were converted into chlorpromazine (CPZ) equivalent basing on their equivalent potency (Davis et al. 1989), tricyclics into imipramine equivalent and benzodiazepines into diazepam equivalent (Kaplan and Sadock, 1993)

Acceptance:

If the individual drug in the group had its due sales either by amount or quantity, then it was considered as being accepted by the local profession. For e.g. in DA group, nine drugs had sales. The due sales for each drug is 100/9% of total CPZ equivalent sales of DA either by quantity or amount.

RESULTS:

Total sales during the period were Rs. 61. lakhs. Nine drugs in DA group, four in tricyclic group, six in benzodiazepines, three in other category had sales apart from fluoxetine, lithium and carbamazepine.

TABLE I

| Drug                          | Quantity | Amount |
|-------------------------------|----------|--------|
| Dopamine Receptor Antagonists | 98.1     | 8.27   |
| Tricyclics                    | 25.2     | 7.97   |
| Benzodiazepines               | 11.3     | 19.38  |
| Serotonin specific re-uptake inhibitors (Fluoxetine) | 7.3 | 8.38 |
| Lithium                       | 28.7     | 0.56   |
| Carbamazepine                 | 13.4     | 14.09  |
| Others                        | -        | 2.35   |

Table 1 gives the details of sales of various groups in quantity and amount.

| Group                      | Order of Preference |
|----------------------------|---------------------|
| A) Dopamine Receptor Antagonists | 1. Trifluoperazine 2. Haloperidol |
| 3. Chlorpromazine 4. Thioridazine |
| B) Tricyclics              | 1. Amitriptyline 2. Imipramine |
| C) Benzodiazepines         | 1. Alprazolam 2. Diazepam |
| D) Serotonin specific re-uptake inhibitor | 1. Fluoxetine |

Table II shows the accepted drugs in order of preference, in different groups.

DISCUSSION:

The rationale of inclusion of carbamazepine is that its main use in these parts is confined to psychiatric patients. While comparing the sales of various groups, one has to go necessarily by their sale amount as quantities cannot be compared, as group equivalents are not available. The recording of lowest sales by lithium is not surprising as there are only two psychiatrists and nonpsychiatrists do not prescribe this drug.

The highest sales of benzodiazepines was mainly due to the sale of alprazolam. Fluoxetine occupied second rank in sales, if sales of carbamazepine are excluded. Fluoxetine as a single drug had sales more than those of all the conventional antipsychotics (DA). The sales pattern reveals the popularity of alprazolam and fluoxetine. This may be mainly due to many companies manufacturing these two drugs and consequent high sales pitch.

The traditional antipsychotics or D.A. drugs having less sales than the single antidepressant fluoxetine may be due to the fact that there are only two psychiatrists and most of the nonpsychiatrists do not feel comfortable with
antipsychotics because of their side effects. In addition most of the non-psychiatrists do not recognize the entity of psychosis. Most of them see either depression or anxiety neurosis in all psychiatric cases.

The newer introductions in psychiatry, except for fluoxetine and alprazolam, did not have their due sales when assessed by amount of money spent. This becomes more real if the cost of these drugs is taken into consideration. Even with high cost, they could not reach their due share, which means that their sales are very much less. Most of the sales of D.A. are mainly due to the habit, among a majority of patients and their attendants, of using the initial prescription for years. They visit again when the particular brand of drug is not available in the market / it is no more working and / or occasionally when the druggist insists on a fresh prescription. Thus most of the sales of this group is to "No second visit" / "No follow up" patient.

The amount spent, Rs.61.00 lakhs may not look high for a population of 21.47 lakhs, which comes to about Rs.2.84 per individual. But viewed in another way, each medical officer prescribed psychiatric drugs worth Rs.8115/- per annum, which can purchase about 2610 gm. CPZ equivalent of Trifluperazine. When viewed thus the prescription of psychiatric drugs by medical officers in this area looks appears to be high.

The over-enthusiasm with which pharmaceutical companies compete with each other in promoting fluoxetine and alprazolam has resulted in their high sales and it is unusual to come across a prescription without these.

The study has shown that traditional antipsychotics and newer antidepressants and anxiolytics were accepted by the local profession, consisting mostly of non-psychiatrists.

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