Sir,

Sarma (Indian J. Psychiatry, April 1996) has presented an intriguing study of psychotropic drug sales in Warrangal during 1993-94; I wish to suggest that his findings and conclusion may need to be reconsidered from at least three viewpoints.

First, higher utilization of a drug is a measure of its popularity. Dr. Sarma has commented upon the popularity of different drugs based upon their sales, with sale units expressed in kilogrammes (kg), or in lakhs of rupees. As Dr. Sarma has himself stated, such units do not allow meaningful comparisons; costly drugs will have inflated rupee sales, while drugs used in low milligram (mg) strengths will have low sales in kg.

I suggest a construct, average patient days of therapy, as a possible comparison unit. The sales of a drug in units of average days is given by actual sales (in mg) divided by the average dose (in mg) prescribed for the most common indication for the drug.

Applying this formula to the fluoxetine data presented by Sarma in Table 1: the sales of fluoxetine were 7.3x1000x1000mg; the average dose of fluoxetine is 20mg/day for its most common indication (depression). Therefore, fluoxetine sales amounted to (7.3x1000x1000mg) / (20mg/day), or 365,000 patient days.

Dopamine receptor antagonists were expressed in chlorpromazine (CPZ) equivalents. If an average patient receives 400mg of CPZ daily, sales of this group of drugs amounted to (98.1x1000x1000mg) / (400mg/day), or 245,250 patients days of sales.

If the average patient receives 100mg of tricyclic antidepressant (TCA) daily, sales of these drugs amounted to (25.2x1000x1000mg) / (100mg/day), or 252,000 patient days of sales.

These data show that fluoxetine was used to a greater extent than the antipsychotics or TCA. Thus, using the unit of patient days, sales of drugs can be computed and compared both within and across drugs categories.

Disagreement may arise about the value of the average dose; the value of the patient day unit is also diminished for drugs with multiple indication. Nevertheless, this is the only method to realistically compare sales of different categories of drugs.

Second, higher utilization of drug may reflect the prevalence of the disorder for which the drug is prescribed, and the facility with which this disorder is diagnosed. Fluoxetine and benzodiazepines are more highly utilized than antipsychotics because depression and anxiety are common than psychoses, are more easily diagnosed by non-psychiatric medical practitioners, and are more confidently treated by such physicians.

Third, higher utilization of a drug may reflect the range of indications for which the drug is used. Dopamine receptor antagonists are used virtually only in psychoses; fluoxetine is used for depression, obsessive compulsive disorder, eating disorders, obesity, alcoholism, drug dependence, chronic pain syndromes, etc.

Re-evaluation of the data from these three perspectives may result in a different set of conclusions.

Here are some data, presented without interpretation or conversion into patient day units, that may interest readers: from October 1994 to September 1995, the total sales in India for different categories of drugs, expressed in crores of rupees, were as follows: tranquilizers, 74 (including alprazolam, 36); antidepressants, 43 (including fluoxetine, 10); antipsychotics, 26; antiepileptics, 62. These...
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Data were released by the Operations Research Group, a market research organization based in Baroda.

REFERENCE

Sarma, P.G. (1996) Psychotropic drug sales in Warangal. Indian Journal of Psychiatry, 38 (2), 93-95

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