Training medical professionals on the concepts of essential drugs and rational drug use

We read with interest the June 1993 issue and agree that the inhabitants of General Practice Island remain bewildered, and that there is a gulf between Clinical Pharmacology and rational drug prescribing [1]. We describe our experience in bridging this gap by way of informal education.

Irrational drug therapy remains a global phenomenon, and physician participation may be a prerequisite for changes in behaviour [2]. We describe our interaction with medical professionals which had the following objectives:

1. To identify factors which hinder rational drug therapy.
2. To foster the concept of essential drugs in order to reduce the cost of health care delivery.
3. To tailor prescribing to the needs of individual patients.

A one-day workshop was attended by twenty-two medical practitioners working in different government hospitals of Pondicherry. Six were primary health care doctors and the remainder secondary level health care practitioners. The resource persons were specialists from the departments of Pharmacology, Medicine, Surgery, Obstetrics and Gynaecology, Paediatrics and Preventive & Social Medicine who had been promoting the concept of essential drugs for the past several years [3, 4].

In the first session participants were introduced to

the steps required for rational drug therapy. The advantages of an essential drug list were highlighted such as cost-effectiveness, control, management, purchase, storage and distribution. The suitability of the essential drug list in a limited health budget was emphasised, as were enhanced drug safety and easy identification of adverse drug reactions.

The participants were divided into four groups. The first analysed factors responsible for irrational therapy with reference to patient, disease and doctor, and also suggested remedial measures to overcome irrationality at various levels (Table 1). The second group had to consider reasons for the popularity of certain drugs or combined products which are irrational and expensive, and to suggest measures to curb their unethical promotion. The third and fourth groups prepared a list of drugs that would meet most prescribing needs, based on morbidity and mortality data of a primary health centre. The selection of drugs was based on efficacy, safety and the cost of treatment. A model list of essential drugs prepared by the World Health Organisation was provided for reference [5].

Patient, disease and doctor related factors identified as responsible for irrational therapy are shown in Table 1. Remedial measures suggested included patient education; improvement in diagnostic facilities; making essential drugs readily available at all times; continued medical education of physicians;

Table 1 Patient, disease and doctor-related factors that modify prescription

a) Patient related factors:

- i Nature of the patient, e.g. socioeconomic status: demand for multiple drug prescription; inability to buy drugs.
- ii Social taboos and beliefs, e.g. fasts, injections believed to be more efficacious, less acceptance of contraceptives.
- iii Biased information, e.g. information published in lay press or advertised in electronic media.
- iv Demand for immediate relief, e.g. expensive and unsuitable antibiotics for common cold.
- v Changing physician/hospital; simultaneous treatments from different systems of medicine.

b) Disease related factors:

- i Lack of diagnostic facilities.
- ii Chronic illness/incurable disease, e.g. patient insists on change of drug.
- iii Acute illness requiring relief, e.g. use of loperamide rather than oral rehydration solution in diarrhoeas.
- iv Unnecessary antibiotic prescription, e.g. non-specific diarrhoeas, clean surgical wounds.
- v Immediate symptomatic relief, e.g. glucocorticoids in bronchial asthma.

c) Physician related factors:

- i Professional knowledge mainly acquired through medical representatives.
- ii Prescribing irrational drug combinations and formulations, e.g. cough mixtures with multiple ingredients.
- iii Unawareness of cost effectiveness of drugs.
- iv Non-availability of drugs.
- v Incentives for prescribing.
- vi Dumping of non-essential drugs at health centres.
- vii Routine administration of tonics, appetisers etc.
- viii Non-adherence to medical ethics.
- ix Too many patients, too little time.

monitoring and feedback from prescriptions data; reduction of patient load; and critical analysis of promotional material before choosing drugs.

The reasons for use of irrational drugs or combined products included easy availability without prescription; ignorance of harmful effects; misleading advertisements; and attractive incentives for marketing and/or prescribing. The public should be educated about the harmful effects of drugs, and especially of self-medication. More emphasis is needed on preventative aspects of health rather than curative ones. Availability of drug information to all practitioners from independent sources and periodic audit of prescriptions may help to curb misuse of drugs. Medical associations should urge government to ban harmful drugs and irrational combinations, and request a secure supply of essential drugs.

The third and fourth groups drew up a list of 75 drugs essential for primary health care. Follow-up workshops were planned to make the list more comprehensive for presentation to the relevant authorities.

In the second session a questionnaire on antibiotic use was presented to the participants as patient management problems using simulated case histories. These covered patient pressure to prescribe the viral upper respiratory tract infection; the timing and dura-

tion of surgical prophylaxis; the selection of antibiotic therapy in a particular situation; and access to information regarding safety and efficacy. The responses were discussed. A copy of the 'Antibiotic Guidelines' [6] was provided.

The programme was evaluated at the end of the workshop. Participants agreed that the objectives were relevant, that the method used encouraged active participation, and that the topics included were adequate. Many felt that the workshop helped them identify problems and find solutions. They appreciated the art of learning in the context of therapeutic decision making.

We believe that this type of workshop and similar initiatives [7, 8] may help to change prescribing behaviour and to narrow the gap between Clinical Pharmacology and rational drug use.

J. S. BAPNA*, D. G. SHEWADE & S.C. PRADHAN
Clinical Pharmacology Unit, Department of Pharmacology, Jawaharlal Institute of Postgraduate Medical Education and Research, Pondicherry-605006, India.

Received 12 November 1993,
accepted 21 December 1993

References

- 1 Ramsay LE. Bridging the gap between clinical pharmacology and rational drug prescribing. *Br J clin Pharmac* 1993; **35**: 575-576.
- 2 Soumerai SB. Factors influencing prescribing. *Aust J Hosp Pharm* 1988; **18**: 9-16.
- 3 Bapna JS, Shashindran CH, Pradhan SC, Ramaswamy S. Teaching rational drug use: an experience in India. *Essential Drugs Monitor* 1991; **12**: 2.
- 4 Bapna JS, Tekur U, Gitanjali B, Shashindran CH, Pradhan SC, Thulasimani M, Tomson G. Drug utilisation at primary health care level in southern India. *Eur J clin Pharmac* 1992; **43**: 413-415.
- 5 World Health Organization. *The use of essential drugs*. Technical report series no. 770. Third report of the WHO expert committee, Geneva, Switzerland, 1988.
- 6 Health Department of Victoria. *Antibiotic Guidelines* (5th edition). Victorian Medical Postgraduate Foundation, Trawalla, Australia, 1987.
- 7 Bapna JS. Education on the concept of essential drugs and rationalised drug use. *Clin Pharmac Ther* 1989; **45**: 217-219.
- 8 Bapna JS, Shashindran CH. (eds). *Manual for training on concept of essential drugs and rationalised drug use*. Clinical Pharmacology Unit, Jawaharlal Institute of Postgraduate Medical Education and Research, Pondicherry, India, 1988.

*Present address: Department of Pharmacology, Maulana Azad Medical College, New Delhi-110002, India.

Correspondence: Dr S. C. Pradhan, Clinical Pharmacology Unit, Department of Pharmacology, Jawaharlal Institute of Postgraduate Medical Education and Research, Pondicherry-605006, India.