Rational Drug use and Essential Drug Concepts

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Rational drug therapy is defined as "administration of the right drug indicated for the disease, in right dose through an appropriate route for a right duration"following are the reasons for irrational use of drugs:[1,2,3,4,5,6]

- Lack of information about drugs
- faulty training of medical graduates
- Absence of role models
- Lack of diagnostic facilities
- Demand from patient – prompt and quick
- Patient load
- Promotional activities of drug companies
- Exaggerated claims by drug companies
- Lack of patient doctor communication
- Ineffective rules and regulations

There are so manyhazards of irrational useof drugs, some of these hazards are given below:[7,8,9]

- Ineffective and unsafe treatment
- Over treatment
- Under treatment
- Prolongation of ailment
- Loss of patient doctor confidence

Following are examples of some common types of irrational uses:

Type I Drug	Type II Drug used for same[8]
Chlorpheniramine Paisa = 00.05	Terfenadine Rs = 08.00
Nalidixic Acid Rs = 02.32	Norfloxacin Rs = 11.00
Bandrofluzaide Paisa = 00.12	Indapamide Rs = 03.00
Cimetidin Rs= 06.05	Ranitidine Rs = 10.50
Aspirin Paisa = 00.05	Piroxicam Rs = 03.75
Diazepam Paisa =00.20	Bromazepam Rs = 02.07

Some general principles for rational prescribing are [6,7,8,10]

- Need for drug therapy
- Choice of drug:
  - Efficacy of drug
  - Safety of drug
- Cost effectiveness
- Mono drug therapy
- Drug combinations (only if essential e.g chemotherapy of cancerT.B.etc)
- Dose of the drug (optimum doses should be used)
- Dosage form/route of administration (parenteral route should only be used when
- required and in emergencies)
- Duration of therapy(not so long and not too short)
- Patient's compliance

Following are some suggestion for developing national strategies for promoting rational use of drugs.[11,12,13,14]

- EBM guidelines to be developed
- Essential drug lists / treatment of choice should be published by MoH.
- Auditing of prescription by drug and therapeutic comittees of MoH.
- Subject should be taught at UG level at medical colleges
- Continuing medical education (CME) for doctors.
- Public education through family physicians / PMDC/medical institutes.
- Avoidance of perverse financial incentives by drug marketing companies.
- Appropriate and strict drug regulations by MoH.

Doctor's participation should be a pre requisite for changes in behaviour of irrational Prescribing andthe objectives should be:

- To identify factors which hinder rational drug therapy
- To foster the concept of essential drugs in order to reduce the cost of health caredelivery
- To tailor prescribing to the needs of individual patients
- They should know the advantages of an essential drug list, such as cost effectiveness control, management, purchase, storage and distribution
- Factor responsible for irrational therapy with

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reference to patients such as his socioeconomic status, social taboos and beliefs, simultaneous treatment form different systems of medicine.

- Prescribing irrational drug combinations & formulationby physicians.

There is a need to find remedial measures to overcome irrationality at various levelsthat what is the reason for the popularity of certain drugs orcombined products which are irrational & expensive, & to find out/suggest measures to curb their unethicalpromotion. Remedial measures suggested include:[14,15]

- Patient education.
- Improvement in diagnostic facilities.
- Making essential drugs readily available at all times.
- Continued medical educations of physicians/ monitoring and feedback from prescription data
- Training at undergraduate and graduate level

The public should be educated about the harmful effects of drugs, especially of self-medication. Patient education is the responsibility of the prescriber/members of health team. Patient should be explained about the drug prescribed, dose, and duration of therapy, possible side effects, implications of missing dose/ or discontinuation of therapy.[16]Emphasis is needed on preventive aspects of health rather than curatives one.

Some reasons for use of irrational drugs include:[14]

- Easy availability without prescription
- Ignorance of harmful effects.
- Misleading advertisements.
- Attractive incentives for marketing / prescribing.

Advertisement for a drug influence young doctor a lot, some prescribers will look to advertisements for science on which to base their choice and marketers will provide it. The most important step in preserving the profession's integrity is to explain at under graduate/postgraduatelevels how marketing works. Doctors themselves can be taught to look at advertisement critically.[4,5]

Conclusion:

The profession needs to be alert not subverted.

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