

RATIONAL DRUG THERAPY AS EVALUATED FROM STUDENT'S CLINICAL CASE REPORTS

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(Received on May 22, 1993)

Abstract: 210 prescriptions selected by students from Sucheta Kriplani and R.M.L. Hospitals were subjected to audit prescription in a group discussion with faculty members in the Department of Pharmacology of Lady Hardinge Medical College, New Delhi. It was observed that inadequate treatment was prescribed to the patients suffering from common diseases like amoebiasis, tuberculosis and typhoid fever. Indiscriminate use of antibiotics, antihistaminics, NSAID, vitamins and haematinics was a common observation.

Key words: rational drug therapy undergraduate teaching

INTRODUCTION

Rational therapy is an outcome of rational prescription which itself is a product of rational education (1). Hence in order to make the teaching of pharmacology as relevant, undergraduate medical students were assigned to observe and evaluate the clinical cases especially from the view point of rational drug therapy.

METHODS

Students were asked to follow the drug therapy of clinical cases from the day of admission to the day of discharge. They were asked to correlate the therapy with the condition of patient and to comment on prescription regarding under/over prescription, unwanted use of drug combinations, misuse of antibiotics, unnecessary repeat and wrong prescription, drug interactions, influence of promotional advertisements from drug companies, unnecessary use of so-called tonics and other drugs and callousness in the name of 'clinical freedom/experience'.

RESULTS

The number of patients included in the study were 210. Rationality of therapy and

remedial measures to be taken in various important clinical conditions are listed in Table I.

DISCUSSION

Misuse of drugs in the form of over and under use is the common observation in this study. Antiamoebic drugs were given in inadequate dosage for insufficient time. The typhoid patients were treated with low dose of chloramphenicol/ciprofloxacin. Similarly, low dose of streptomycin was administered in a case of pulmonary tuberculosis. Patients with *Enterobius vermicularis* infestation received anthelmintics for inadequate duration. In a patient of pemphigus vulgaris along with *Staph. aureus* infection, corticosteroids and drug/s of choice for *Staph. aureus* were not administered and patient was given ampicillin, erythromycin and cephalixin. Hence it is an example of incorrect prescription. Interacting drugs were prescribed in patients suffering from duodenal ulcer. The deviation from the therapeutic norms seems mainly due to physicians own experience. Over and under prescription may be due to early symptomatic relief and apprehension respectively.

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TABLE I : Drug prescribing pattern as evaluated from student's clinical case reports.

Disease	No. of patients	Treatment prescribed	Prescription		Duration		Dose		Unwanted drugs	Interacting drugs
			Adeq-quate	Inade-quate	Adeq-uate	Inade-quate	Adeq-uate	Inad-uate		
Amoebiasis	36	Metronidazole-400 mg TDS - 3 days	4	32	18	18	18	18	Ampicillin, Pethidine, Phenargan, Ibuprofen, Cotrimoxazole	—
Typhoid fever	8	Choloramphenicol 250-500 mg QID-(6 pts)	All	—	All	—	3	3	—	—
		Ciprofloxacin-250 mg BD-(2-pts)	—	—	—	—	—	2	—	—
Duodenal ulcer	8	Ranitidine-300 mg HS Gelusil-1 tab TDS Ferrous sulfate 200 mg TDS	—	All	3	5	5	3	—	Ferrous sulfate
Pulmonary tuberculosis	10	Streptomycin-250 mg 1 g IM OD INH-300 mg OD Rifampicin-600 mg OD Ciprofloxacin-250 mg OD (1 pt)	All	—	All	—	9	1	—	—
Angina pectoris	1	Glyceryl trinitrate-0.5 mg Sublingually Furosemide-40 mg OD	All	—	All	—	All	—	Furosemide	—
Myocardial infarction	1	Morphine-10 mg im Hydrocortisone-100 mg iv TDS	All	—	All	—	All	—	Hydrocortisone	—
Bronchial asthma	2	Inj. Aminophylline-250 mg slow iv Inj. furosemide-200 mg iv Pot. chloride-16 mmol BD	All	—	All	—	All	—	Furosemide, Pot. chloride	—
Allergic rhinitis	2	Terfenadine-40 mg BD Ibuprofen-400 mg TDS	All	—	All	—	All	—	Ibuprofen	—
Acute pharyngitis	2	Ibuprofen-400 mg TDS Cephalexin-500 mg TDS	—	All	—	All	—	All	Ibuprofen, Cephalexin	—
Psychosis	3	Chlorpromazine-200 mg BD Haloperidol-4 mg BD	—	3	All	—	All	—	Haloperidol	—
Taenia capitis	1	Ketoconazole-200 mg BD Ampicillin-250 mg QID	—	1	All	—	All	—	Ampicillin	—
Pemphigus vulgaris with Staph. aureus	1	Ampicillin-250 mg QID Erythromycin-250 mg QID Cephalexin-250 mg QID	Incorrect prescription	—	—	—	—	—	—	—

High consumption of drugs in the form of nutritional products, antimicrobials and analgesics have been reported (2). Similarly in another study, high consumption of antimicrobial agents, specially cotrimoxazole and ampicillin followed by antidiarrhoeals, nutritional products, analgesics and steroids have been reported (3).

The present study shows that there is a tendency of using many unwanted drugs. Misuse of antibiotics will definitely lead to drug resistance, drug toxicity and false sense of security.

The II Prof. M.B.B.S. students who were assigned the clinical cases are more suited for learning the importance of rational drug therapy. This is the right platform to propagate the importance of rational drug therapy, 'P' drugs, adverse drug reactions and drug interactions as the students showed a great enthusiasm to discuss these points with teachers. Such exercises are advocated for teaching pharmacology to create awareness of rational drug therapy.

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