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Prescribing Habits of Pediatricians for Gastroenteritis

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Indiscriminate use of drugs by qualified doctors is getting more and more attention all over the world(1,2). For improvement in prescribing habits the various suggested methods include administrative directions, continued medical education (CME), medical audit of prescriptions, etc. In many situations administrative directions and restriction are not likely to be effective but regular medical audit and more attention

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to CME with emphasis on persuasive education may be more beneficial(3). For formulation of CME; prescribing habit of target population is required. The present study was aimed to know the prescribing habits of qualified Pediatricians in children suffering from acute gastroenteritis which is a common disease.

Material and Methods

The study was carried out at Pediatrics Outpatient Departments (OPDs) of V.S. General Hospital and Civil Hospital, Ahmedabad. Prescriptions written by private practitioners for acute gastroenteritis were collected from the records and files available with patients who were attending the OPDs for problem other than gastroenteritis. The criteria for inclusion of prescription in the study were (i) prescription was written by a qualified Pediatrician, who holds degree of atleast DCH/D Ped or MD; (ii) patient had suffered from acute gastroenteritis in past and did not require hospitalization for the same. Patients who had recurrent diarrhea and who changed their pediatrician in the same episode of illness were excluded from the study.

Maximum possible details were recorded from each prescription. When a prescription included a medicine with multiple drug combinations then each active ingredient was recorded separately as far as possible.

Results

Of 100 prescriptions written by 90 pediatricians; 60 were having qualification of MD, 30 were MD, D Ped, and 10 were D Ped alone. History and physical examination were written in 50 prescriptions (50%) only. Diagnosis of acute gastroenteritis was mentioned in 30 prescriptions (30%) and neither history nor diagnosis was written in

20 prescriptions (20%). The diagnosis of acute gastroenteritis was entertained in latter cases by seeing the drugs prescribed and by asking the parents. The number of active ingredients prescribed varied from 3 to 7. Three, four, five and more than five drugs were prescribed in 40, 50, 6 and 4 prescriptions, respectively. The drugs prescribed varied from antibacterials to corti-

costeroids. The common drugs prescribed in newborns included binding agents, lactobacilli preparations, enzyme preparations, systemic antibacterials and injectable antibiotics. No definite pattern of medications prescribed was observed for other age groups (*Table I*). Instructions for administration were written in local language or symbols in 92 prescriptions. The dura-

TABLE—Drugs Prescribed for Acute Gastroenteritis

Name of drug	Total No. of patients (n = 100)	Newborns (n = 10)	Age of patients		
			1 mo-1 yr (n = 70)	1-2 yr (n = 10)	>2 yr (n = 10)
Domperidone/ Metoclopramide	76	6 (60)	66 (94)	2 (20)	2 (20)
Nalidixic Acid	72	—	58 (80)	8 (80)	6 (60)
Metronidazole	60	2 (20)	50 (70)	4 (40)	4 (40)
Binding agents	60	8 (80)	42 (60)	6 (60)	4 (40)
ORS	60	1 (10)	50 (70)	5 (50)	4 (40)
Diloxanide fuorate	40	2 (20)	31 (44)	3 (30)	4 (40)
Furazolidone	56	1 (10)	45 (64)	4 (40)	6 (60)
Cotrimoxazole/ Cotrimazine	48	2 (20)	40 (57)	4 (40)	2 (20)
Streptomycin (Oral)	36	6 (60)	25 (36)	5 (50)	—
Lactobacilli	36	8 (80)	24 (34)	3 (30)	1 (10)
Loperamide/Diphenoxylate	34	—	30 (43)	4 (40)	—
Cephalosporins (oral)	24	6 (60)	15 (21)	—	3 (30)
Colistin sulphate	16	5 (50)	11 (16)	—	—
Enzyme preparation	12	6 (60)	6 (9)	—	—
Gentamicin (inj.)	10	3 (30)	7 (10)	—	—
Antispasmodics	8	—	2 (3)	2 (20)	4 (40)
Betamethasone	6	3 (30)	3 (4)	—	—
Cephalosporins (inj.)	6	2 (20)	4 (6)	—	—
Nystatin	4	—	3 (4)	—	1 (10)
Dietary modifications	20	—	12 (17)	4 (40)	4 (40)

Note: All patients received multiple drugs.

tion for which the drugs are to be administered was written in 40 prescriptions.

Ten patients were in the neonatal period, 70 were between one month to 12 months of age, 10 were between one to two years of age and 10 were more than two years of age. The weight record was available in 80 prescriptions, out of which 6 were having PEM Grade I and 12 were having PEM Grade II. The remaining were not having any malnutrition according to IAP classification of PEM. There was no mention of stool examination or any other investigations in any of the prescriptions.

Discussion

The standard recommendation for use of various drugs in the treatment of acute gastroenteritis is well known. In the present study, majority of Pediatricians were using antibacterials, binding agents, antimotility drugs and other unnecessary medications. All these drugs do not have much role in treatment of acute gastroenteritis and perhaps in many circumstances might be causing increased morbidity(4-6). In 40% of prescriptions there was no mention of ORS which has a vital role in treatment of acute gastroenteritis(7).

'Knowledge is not practice' was amply proved in this study. For improvement of prescriptions, confidence of the doctors needs to be built up and this is possible only by training. The suggested measures for better prescriptions include initial group audit followed by individual audit of prescriptions by peer group(8). An alternative method of self audit has also been suggested for rationalized medical treatment(9). In USA and Canada another method of brief face to face educational outreach visits conducted by either specially trained clinical pharmacists or physi-

cian "Counsellor" and opinion leaders have proved to be effective in prescribing inefficient or contraindicated drugs in pediatric and adult primary care setting(10).

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