ASSESSMENT OF THE CURRENT PRACTICE REGARDING DIARRHEA MANAGEMENT BY PHARMACISTS/CHEMIST IN MORADABAD

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ABSTRACT: Diarrhea is one of the GIT disorders that create discomfort of normal life. Diarrhea is defined by the World Health Organization as having 3 or more loose or liquid stools per day or as having more stools than is normal for that person. It may be due to infection by viruses, Bacteria and parasites etc. Generally in small cities large number of diarrheal patients visit chemist shop and took medicine with or without advice/precaution from over the counter. Present study deal with specific aim focus on evaluating the role of Pharmacist/Chemist in management of diarrhea. Pharmacist helped in out in managing diarrhea to some extent by prescribing drugs either in single or combinations form but they don't know about the which patients to test, what tests to order, what accurate medical treatments to use, and what steps to take in case of acute as well as in chronic case of diarrhea.

Key word: *Diarrhea, Pharmacist/Chemist,* GIT disorder.

INTRODUCTION

There are a number of gastrointestinal tract (GIT) problems like, ulcers, acidity, inflammatory bowel diseases constipation, dysentery and diarrhea etc. Diarrhea is one of GIT disorder that creates discomfort of normal life. Diarrhea is defined by the World Health Organization as having 3 or more loose or liquid stools per day or as having more stools than is normal for that person.[1] It is a common cause of death in developing countries and the second most common cause of infant deaths worldwide. In 2009 diarrhea was estimated to have caused 1.1 million deaths in people aged 5 and over.[2] Diarrhea is most commonly due to the bacterium campylobacter salmonellae, shigellae and *Escherichia coli* (E.coli) are frequent[3] and In the elder person, *Clostridium difficile* often causes severe diarrhea.[4] It may be due to infection by viruses, and parasites.[5] Norovirus is the most common cause of viral diarrhea in adults,[6] In sanitary living conditions where there is ample food and a supply of clean water, an otherwise healthy person usually recovers from viral infections in a few days. However, for ill or malnourished individuals, diarrhea can lead to severe dehydration and can become life-threatening.[7] Diarrhea can be caused by chronic ethanol ingestion.[8] and other causes of diarrhea are serious long-term sequelae such as hemolytic uremic syndrome (HUS) with renal failure following STEC infection (also known as enterohemorrhagic *E. coli* infection), Guillain-Barre´ syndrome following *C. jejuni* infection [9], and malnutrition with or without diarrhea following infection with enteroaggregative *E. coli*, *Cryptosporidium* species, or perhaps other enteric infections [10–11].

Generally in small cities large number of diarrheal patients visit chemist shop and took medicine with or without advice/precaution from over the counter.Therefor, the present study was carried out with specific aim focus on evaluating the role of Pharmacist/Chemist in management of diarrhea whether they are providing proper information and dispensing of proper drugs to control diarrhea.

MATERIALS AND METHODS

The study was conducted randomly by buying the drugs for patients of different age. The survey form designed and questionnaires were comprised, open/closed and yes/no questions were asked randomly from selected 90 pharmacist/chemist. The study was conducted among the Pharmacist of Moradabad who cooperated well during this study. The study was conducted in the following step.

Step-1 To buy the drugs from 90 pharmacists for diarrhea
Step-2. The questionnaire was prepared and asked from Pharmacist

1. Whether pharmacist dispend the drugs
2. Whether the patient was referred to Doctor
3. Whether the pharmacist prescribed only ORS with Medicine/ Any other health advice or precaution was given
4. Whether they can asked about the severity/ history of disease

Step- 3. The drugs were categorized and the results were assessed and Interpreted. After collection the data the necessary interpretation was done and the out come of the study was accessed.

Result: A total of 90 Pharmacist were randomly involved in survey.

Table.1 Pharmacist prescribed drug and suggested go to doctor.

S.NO.	Pharmacist	Pharmacist prescribed drugs		Pharmacist suggested to go to the doctor	
		Number	%	Number	%
1	90	84	93.33	6	6.66

Among the 90 pharmacist 93.33% prescribed drugs but 6.66 % pharmacists suggested go to Doctor (Table-1).

Table 2: Pharmacist Given ORS with or without Medicine

S.No.	Pharmacist Given	No. of Pharmacist	%
1	ORS Only	4	4.44
2	Medicine	80	88.88
3	Advise/Precaution Only	6	6.66

In table 2 Showed that most of the pharmacist Prescribed medicine (88.88%) followed by ORS only (4.44%) and given advice/precaution only was (6.66%).

Table3. Pattern of combination of drugs prescribed.

S.No.	Combination	No. of Pharmacist	%
1	Single drug	32	38.09
2	Two drug combination	38	42.87
3	Three drug combnation	16	19.04

In table 3 illustrated the most common used combination drugs by the Pharmacist is two drug combinations

Table 4: Most frequently used combination

S.No.	Drug combinations	%
1	Norfloxazine + Tinidazole	50.95
2	Metronidazole + Enteroquinol	5.14
3	Norflox TZ + Ronispas (Ranitidine+Dicyclomine)	7.14
4	Norflox TZ + Antacid	1.76
5	Norflox TZ + Loperamide	2.38
6	Enteroquinol + Loperamide	6.14
7	Metronidazole + Loperamide	7.14
8	Metronidazole + Ronispas (Ranitidine+Dicyclomine)	6.52
9	Metronidazole + Antacid	2.76
10	Norflox TZ + Redole (Analgesic) + Antacid	3.14
11	Metronidazole + Antacid + Redole	2.76
12	Enteroquinol + Ronispas + Antacid	4.76
13	Norflox TZ + Ranitidine + Enteroquinol	2.38

In table 4 Showed that Pharmacist Most frequently used combinations are Norfloxazine + Tinidazole which comprise of (50.95 %) followed by Metronidazole + Loperamide, Norflox TZ + Ronispas (Ranitidine+Dicyclomine) (7.14 %) and less frequently used combination is Norflox TZ + Antacid (1.76%).

Table 5: Most frequently prescribed drugs

S.No.	Drugs	No. of Pharmacist	%
1	Enteroquinol(Quinidochlore)	14	15.4
2	Metrogyl (Metronidazole)	10	11.11
3	Norflox TZ (Norfloxazine+Tinidazole)	48	52.8
4	Lomophane(Diphenoxylate + Atropine)	18	20

Table 5 showed that pharmacist most commonly used Norflox TZ (52.8%) followed by Lomophane (20%), Enteroquinol (15.4%) and then Metrogyl (11.11%).

Discussion:
A total number of 90 pharmacists were enrolled into the study. In this study it was observed that Among the 90 pharmacist, 93.33% of them prescribed drugs but 6.66 % pharmacists suggested go to the Doctor. It was also observed that most of the pharmacist prescribed medicine 88.88% followed by ORS only 4.44% and 6.66% were given advice/precaution only. Most of the pharmacist prescribed drugs in number of cases and very few sent the patient to the doctor and given only advice without taking the much information about the type and cause of the diarrhea. They simply dispensed the drugs either in single or in double and triple drugs combination but double drugs combination was frequently used compare to single and triple drugs combination. Most frequently prescribed combination were Norfloxacine + Tinidazole followed by Metronidazole + Loperamide and Enteroquinol + Loperamide.

Pharmacist most frequently used Norfloxacine in treatment of diarrhea it would be because this drug is good for bacterial diarrheas, because high concentration are present in the gut and anaerobic flora is not disturbed. Lomophane also contain Diphenoxylate + Atropine which are are used as antimotilty agent reduces frequency of passing stools.[12] In less number of cases Pharmacist prescribed only ORS. But many cases of diarrhea, replacing lost fluid and salts are the only treatment needed. This is usually by mouth – oral rehydration therapy – or, in severe cases, intravenously.[13] The WHO Meeting of Experts concluded in 2001 that there are programmatic advantages of using a single rehydrating solution globally for all causes of diarrhea in all ages.

Evidence from large, well conducted, randomized controlled trials including those in India, showed that low osmolarity ORS with 75 mEq/L of sodium and 75 mmol/L of glucose, osmolarity of 245 osmol/L is effective in children with non cholera diarrhea and in adults and children with cholera[14]. This new improved ORS was recommended by the WHO/UNICEF as the universal solution for all ages and all types of diarrhea [15]. A number of trials in India and other low middle income countries have documented faster recovery and reduced severity from zinc supplementation during acute diarrhea [16, 17]. Prevalence and hospitalization for diarrhea decreased significantly in the villages that received low osmolarity ORS and zinc as compared to the control villages. It is important to note that the prescriptions for antibiotics by care providers and use of unwarranted injections were significantly less, and the ORS use rates significantly higher in the intervention villages. Additionally, zinc given during an episode of diarrhea reduced subsequent diarrheal morbidity. Similar benefits on reduction of antibiotic use during diarrhea were seen in a large multicentre study done across India, Brazil, Ethiopia, Egypt, and the Philippines [18].

Some other drugs were used for diarrhea may or may not be crucial because in the management of acute diarrhea by addressing which patients to test, what tests to order, what medical treatments to use, and what steps to take to ensure that appropriate public health actions are implemented. So Pharmacist some what play a important role in case of diarrhea because in developing countries most of the people are poor and were not able to pay high amount of consultant fee of Doctors. So that most of the people used to take drugs from over the counter.

CONCLUSION:

Pharmacist some what helped in prescribing the accurate remedy for treating the diarrhea but they don't know about the which patients to test, what tests to order, what accurate medical treatments to use, and what steps to take in case of acute as well as in chronic case of diarrhea.

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