



A STUDY ON KNOWLEDGE, ATTITUDE AND PRACTICE OF SELF-MEDICATION FOR DIARRHEA AMONG UNDERGRADUATE MEDICAL STUDENTS IN A TERTIARY CARE TEACHING HOSPITAL.

Medical Education

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ABSTRACT

Background: Most of the diarrhea is self-limiting. Mainstay of treatment is supportive in form of ORS, with careful monitoring for any signs of dehydration. Self-medication practices are common in medical students with 50-70% range reported in various studies. Medical students have easy access to both ORS and antibiotics. Current study was undertaken to understand the practice of anti-diarrheal drugs among MBBS students in our setup. **Methods:** A cross-sectional questionnaire-based study was conducted among 100 undergraduate medical students in October-November 2021 in P.D.U. Medical College, Rajkot, Gujarat. **Result:** Total 100 students participated in the study in which 59% males and 41% females were included. 49% students were practicing self-medication. Text books were the major source of information about drugs followed by internet. Commonly chosen therapy for diarrhea was ORS (54%) followed by metronidazole (19%) followed by loperamide (11%) and Fluoroquinolones (10%). 37% students use antibiotics without prescription and 44% of students do not complete the course. **Conclusion:** Our study observed self-medication is commonly practiced among medical students. Purpose behind self-medication is to save the time. Educating these medical students regarding the advantages and disadvantages of self-medication as well as antibiotics resistance is necessary to create awareness among them.

KEYWORDS

Self-medication, Diarrhea, Anti-diarrheal drugs, Medical students

INTRODUCTION

Diarrhea is most common condition reported in pediatric and adult population second to respiratory conditions. It can present as acute or chronic conditions- clinically is associated with nausea, vomiting, fever, abdominal pain, loose formed stool, increased frequency of stool, dehydration, etc. Most diarrheal episodes are self-limiting, but increased frequency of stool might be distressing, that makes individual uncomfortable.

Acute diarrhea without any complication is treated by self-medication, mainly in medical students. It may be due to have quick relief and not to hamper day to day academic and non-academic work.

Self-medication is the treatment of common health problems with medicines especially designed and labelled for a specific use without medical supervision and approval of being safe and effective for what it is being taken for (1). Easy availability of anti-diarrheal drugs make it possible to treat by themselves without visiting health professionals (2).

Self-medication practices develop during undergraduate training of medical students. In hosteller medical students, acute diarrhea is largely related to contaminated food and water.

Most acute diarrhea are viral gastroenteritis, which is self-limiting and it does not require laboratory investigations and stool culture, but treating it by self-medication have some disadvantages like misdiagnosis, drug-drug interaction and drug overdose (3). Prevention and treatment of dehydration should be main stay of therapy in initial acute diarrhea. Oral rehydration therapy (ORS) is the preferred treatment for dehydration (4).

Loperamide has no role in infective diarrhea. Antimicrobial agents must be started in bacterial diarrhea only, in viral gastroenteritis antibiotic has no role. Medical students are more inclined to use Antibiotics as compare to non-medical students. "Irrational" use of pharmaceuticals, in particular self-medication with antibiotics, has been widely reported leading the World Health Organization to call attention on the dangers of self-medication as a cause of antibiotic resistance.

So, the practice of self-medication for diarrhea has steadily increased in medical students not only in India but also in other countries (5-8). Preventable Adverse drug reactions can be missed, which leads to draw medical student in danger plus it may impact hugely on their professional decision in future (9) (10).

Using left over medication, reuse of prescription, getting information

about drug from medical books, friends and seniors, searching it from internet are most commonly practiced by medical students.

Data about self-medication with anti-diarrheal drugs among P. D. U. Medical College (PDUMC), Rajkot, Gujarat is lacking, so the current study was undertaken to describe the Knowledge, attitude and practice of self-medication for diarrhea and anti-diarrheal drugs used among medical students of PDUMC, Rajkot.

MATERIAL AND METHOD

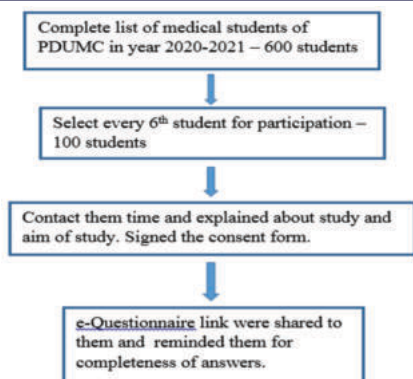
This study was a questionnaire based, cross sectional study conducted among the medical students of PDUMC, Rajkot, Gujarat, India. The study was conducted after obtaining approval from Institutional Ethics Committee.

This study was conducted in Department of Pharmacology between November-December, 2021. Students, who participated in the study were explained about the aim of the study, written consent were taken from each student, who were participated and filled given questionnaire form completely. They were ensured about confidentiality of the information collected.

A self-prepared questionnaire regarding the knowledge, attitude and practice of anti-diarrheal drugs was given to them. The questionnaire had questions regarding about knowledge about diarrhea, its causes and symptoms, micro-organism causing diarrhea, ORS, its composition and preparation, indications of anti-amoebic drugs, Role of probiotics in diarrhea, Self-medication by their own for diarrhea, reason in favor of self-medication, Source of information of Anti-diarrheal drugs for self-medication, recommended therapy for initial diarrhea, Discontinuation or completion of antibiotic course, Experienced Adverse Drug Reaction (ADR) during Self-medication, reporting of experienced ADR, ability of diagnosis and treatment of diarrhea as medical student, recommendation of self-medication to others.

100 participants were selected by systematic random sampling from college students list. e-Questionnaire was given to them by link with proper explanation of the aim and confidentiality of this study They were asked to submit after filling it completely.

The process of sequence selection and method is explained in flow chart 1 below. All questions were multiple choice questions and they have to tick only one correct answer. Filled questionnaires were evaluated for their completeness and the data from the completely filled questionnaire was taken for analysis. Data of 100 complete questionnaire was analyzed in the form of percentage.



[Flow chart 1. Sequence of selection of students and method of study]

RESULT

The data of 100 students were filled consistently and completely. 41% of female and 49% of male were participated in this study. Number of students, percentage of self-medication, knowledge about dehydration, ORS, its composition and preparation, practice of self-medication is shown in table no 1.

74% students knew about the complete definition and causes of diarrhea. 53% students selected E.coli, 23% selected Salmonella and 20% selected campylobacter jejuni most common bacterial organism causing acute diarrhea.

Only 24% students responded viral gastroenteritis as most common cause of acute diarrhea. 38% students know that diarrhea may also be caused by antibiotics, 26% students believed that prophylactic antibiotics should be started in viral gastroenteritis. 30% students believed that antibiotics should be started in mild diarrhea. 68% students know the role of probiotics and anti-amoebic drugs in acute diarrhea. 49% of students used self-medication for diarrhea, out of which 57.14% were male and 42.45% were female. 69% students had self-opinion that medical students have ability to diagnose and treat acute diarrhea.

(Table 1. Percentages of self-medication among studying year wise students, their about knowledge about ORS and practice of self-medication)

Studying year	Total no. of students	Self-medication	Percentage (%)
1st	18	7	38.8
2nd	44	21	47.7
3rd- I	21	11	52.2
3rd – II	17	10	58.2
Total	100	49	
Information		Known by student	
All signs of dehydration.		68%	
Correct composition of ORS		63%	
Preparation of ORS		73%	
Practice of self-medication		Yes	No
Self-medication for diarrhea		49%	51%
Completion of antibiotic course		56%	15%
Experienced ADR during self-medication		39.4%	60.6%
Reporting of experienced ADR done		39.4%	83.8%

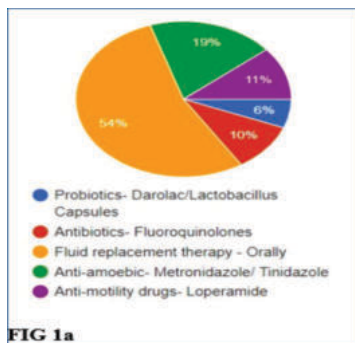


FIG 1a

Fig 1a. Therapy Chosen By Students For Initial Diarrhea

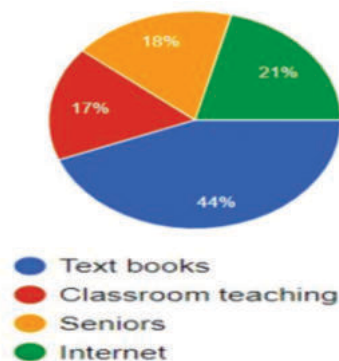


FIG1b

Fig 1b. Source of Anti-diarrheal Drugs For Self-medication

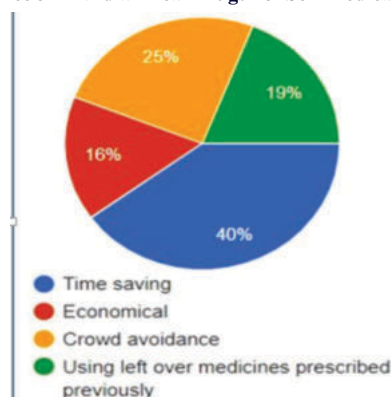


FIG 2.

Fig 2. Reason For Self-medication Practice

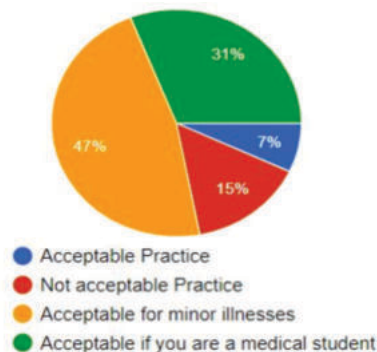


FIG 3.

Fig 3. Idea About Self-medication

DISCUSSION

Self-medication is becoming an important area within healthcare, this study has observed that self-medication is prevalent in medical student, in case of acute diarrhea.

In this study we observed that 49% students have used self-medication for diarrhea, out of which 57.14% were male and 42.45% were female. It is similar to a previous study conducted among medical students of south India(11), it is lower than observed by James H et al(12).

Knowledge about self-medication, diarrhea, role of anti-diarrheal drugs were adequate in participants which was similar to Study of Kumari R et al(1). Though the knowledge about commonest cause and commonest bacterial organism causing acute diarrhea is poor according to World Gastroenterology Association Global Guidelines(13) and a study conducted by Purwar S et al(14). The students have adequate knowledge about ORS, its composition and preparation. Practice of self-medication increases with increasing years of study in medical college. Final year students practice more

self-medication than other medical students which is similar to Kanwal ZG et al study(15).

Only 56% students completed the therapy among those students using antibiotics as self-medication for diarrhea. 39.4% had experienced ADR during self-medication practice for diarrhea, among them only 16.2% students had reported ADR to ADR Monitoring Center (AMC). 69% participants felt that medical students have ability to diagnose and treat acute diarrhea, which is higher than the study of Kanwal ZG et al(15). 54% Students chose ORS as treatment for initial diarrhea, which is similar to study of Kumari K et al(16). ORS was first choice, Anti-amoebic drugs and Anti-motility drugs were preferred by participants as self-medication therapy for acute diarrhea in decreasing order, while Antibiotics was second preference in study of Kumari K et al(16). Student believe they have gained adequate knowledge, but is does not reflect in the practice of self-medication.

Source of information for self-medication as reported by students was text books, internet and advice from senior in decreasing order. This finding is similar to the finding of the study among medical students of RIMS, Ranchi(16) and study of Badiger S et al(11), while in study of Srikanth et al(17), previous prescriptions was the commonest source of information for self-medication. Various sources are used by students to acquire knowledge of medication for self-use.

Common (40%) reason of self-medication is to save the time, which is lesser than study in Dhule by Patil SB et al (42%)(18), but is higher than the study of Kumari K et al(8.03%)(16). Majority participants (47%) felt that self-medication is acceptable in minor illnesses, while only 15% responded that self-medication is not acceptable. This finding is slightly differ from the study of Sujatha et al(19), in which, 48% participants support the self-medication practice and 34% students were against the practice of self-medication.

CONCLUSION

Our result shows that self-medication, especially in acute diarrhea is highly prevalent (Give numbers) in medical students, particularly in senior medical students. Most common reason in favor of self-medication was to save the time and most commonly used therapy was ORS. Medical students have insufficient knowledge about drugs and disease process, so they need to be educated about disease and therapy. Medical students believe that they have gained adequate knowledge to practice self-medication, but observations do not confirm. Mild disease can be managed by self, but consultation with expert is advisable.

Self-medication by medical students represent potential health threats. Proper education of benefit/risk of self-medication from first year onwards, easy accessibility of medical services (Consultant, etc) and frequent counseling should be initiated among UGs.

Ethical Approval: Taken.

Conflict of Interest: Authors declare no conflict of interest.

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