INTERNATIONAL JOURNAL OF MEDICAL AND APPLIED SCIENCES



E-ISSN:2320-3137

RESEARCH ARTICLE

KNOWLEDGE, ATTITUDE AND PRACTICE OF SELF MEDICATION OF ANTIBIOTICS AMONG UNDERGRADUATE MEDICAL STUDENTS IN A TERTIARY CARE TEACHING HOSPITAL OF SOUTH INDIA

Indu M R,Meher BR,Mukherji D

11.Indu M Raja , 3rd year PG students, Department of Pharmacology,SVMCH &RC, Pondicherry
2.Meher Bikash Ranjan, Assistant Professor, Department of Pharmacology,SVMCH &RC, Pondicherry
3.Mukherji Dipali, Professor & HOD, Department of Pharmacology,SVMCH &RC, Pondicherry

Corresponding Author: Dr. Meher Bikash Ranjan, Assistant Professor, Department of Pharmacology, SVMCH &RC,Pondicherry

Abstract

Objectives: To assess the knowledge,attitude and practice of self medication of antibiotics among undergraduate medical students. Methods: A cross sectional questionnaire based study was carried out by using a pretested questionnaire having 25 questions. The knowledge, attitude and practice were assessed by 9, 6 and 10 questions respectively. Results: Questionnaires were distributed to 149 final year and 140 prefinal year students out of which 117 final year and 113 prefinal year student returned the completely filled up questionnaire giving response rate of 89.29% and 83.58% respectively. Mean knowledge score of final and pre-final year student was 4.39 and 3.09 respectively.

Key Words: Self medication, Antibiotic, Undergraduate medical students

INTRODUCTION

According to world health organization (WHO) "Self-medication is defined as the selection and use of medicines by individuals to treat self-recognized illnesses or symptoms'.¹ Self medication is a component of self care². It is like a double edged sword which helps the patient by empowering them to take medicine themselves for commonly treatable condition and saving them from medical expenses and time required for medical consultation where as in other hand it also could cause wrong diagnosis, improper use of medicine and increase adverse effects [2].Antibiotics are the boon and ban of modern day medicine. Indiscriminate and improper use of antibiotics is major contributing factors for emergence of antibiotic resistance³. Increasing resistances of bacterial pathogens to commonly used antibiotics have become a major concern and have posed a serious threat to the treatment of infectious diseases⁴. Rational use of antibiotics is the call of the day to combat antibiotic resistance and prescribing pattern of medical practitioners could play a vital role in curbing antibiotic resistance⁵. Self medication is very

INTERNATIONAL JOURNAL OF MEDICAL AND APPLIED SCIENCES



E-ISSN:2320-3137

common among medical practitioners and same behavior has also been seen with medical students^{6, 7}. This study has been undertaken with an objective of assessing the knowledge attitude and practice of undergraduate medical students about self medication of antibiotics.

MATERIAL AND METHODS

Study Design and Setting

A cross sectional questionnaire based study was conducted during August –September 2013 in a tertiary care teaching hospital in Pondicherry.

Study Population

Study was conducted among undergraduate medical students who had completed pharmacology as per their curriculum and attending ward posting.

Study Tool

Structured questionnaire was prepared by following similar types of preceding studies. A pilot study done was among 30 students to test its content and relevance. Modified questionnaire was administered to participants. Questionnaire was divided in to two segments. First segment contain questions regarding demographic status (age, gender, year of study) of participants. Second segment consists of 25 questions. 9, 6 and 10 questions to evaluate knowledge, attitude and practice respectively. Questionnaire consists of both open and close ended questions.

Study Method

After obtaining permission from dean of the institution pre tested questionnaire were administered to 289 under graduate medical students who were willing to participate in the study and given written informed consent. Investigators explained about the objectives of study to participants.25 minutes were given to fill up the questionnaire. Completely filled up questionnaire were included for statistical analysis.

Ethical Issue

Study was conducted after obtaining permission from institutional research and ethics committee.

Statistical Method

All the data were entered in to Microsoft excel sheet and analyzed.

RESULT

Questionnaires were distributed to 289 participants out of which 149 were final year students and 140 were pre-final year students.133 final year and 117 pre-final year students returned the duly filled questionnaire giving a response rate of 89.29% and 83.58% respectively. Among the respondents, 147(58.8%) were boys and 103 (41.7%) were girls. Mean age of participants was 23.5 years. There were 9 questions to assess participant's knowledge about antibiotics. Mean knowledge score of final and pre-final year student is 4.39 and 3.09 respectively. Prevalence of self medication of antibiotics among participants was 80%. It was more among boys than girls. Minor ailments (28.4%) and lack of time (25.2%) were common reasons for self prescription of antibiotic. 230(92%) students agreed that antibiotic resistance is a major public health problem.170 (68%) students felt the need of a proper investigation before taking antibiotic.145 (58%) students felt that self medication of antibiotics by undergraduate medical students should

INTERNATIONAL JOURNAL OF MEDICAL AND APPLIED SCIENCES E-ISSN:2320-3137 www.carthjournals.org

be avoided. 110(44%) students opined that antibiotic should not be available as an over the counter drugs. The common antimicrobials taken by participants was macrolides (38%) followed by beta lactams (25%), fluroquinolones (23%) and tinidazole (14%). The common clinical conditions for which they had taken antibiotics were upper respiratory tract infections (64.4%), fever (17.6%) and diarrhea (15%). Only 63(25.2%) students ever attended any CME or workshop on rational use of antibiotics. The sources of information about drugs for students were text books, faculties, seniors and internet.

Table -1 General information of participants

Year of MBBS	No. of students
Pre-final year	133
Final year	117
Gender	
Male	147
Female	103

Table -2 Mean Knowledge score

	Final Year	Pre-final Year
Mean Score	4.39	3.09

Figure-1 Commonly taken antimicrobial agents



INTERNATIONAL JOURNAL OF MEDICAL AND APPLIED SCIENCES E-ISSN:2320-3137

Figure-2 indication for self medication



DISCUSSION

Present study was conducted to assess the awareness about self prescription of antibiotics among the medical students .The prevalence of self medication of antibiotics in our study was 80% which is very high in comparison to some other studies ^{8,9}.This suggest that antibiotic use is very high and it may be due to easy access of the drugs. In this present study prevalence of self medication was more common among boys than girls.

In our study the most common reason for self medication as told by majority of participants was trivial ailments which corroborates with finding of other studies^{7, 8,9}.

Macrolides were the common class of antibiotics self medicated by maximum number of participants. However in other studies beta lactam group was the commonly self medicated antibiotic ^{8, 10}. The most common reason for antibiotic use in our study was respiratory tract infection. Similar observations were found in other studies as well, where as gastrointestinal tract infection was the common reason for antimicrobial uses in some other studies¹⁰. In our study student felt that indiscriminate use of antibiotics is a major public health problem. From our study it was cleared that more educational intervention and exposure is required to increase their awareness regarding rational use of antibiotics. In our study common source of drugs information was text book which corroborates with the finding of other studies^{11,12}.

Acknowledgements

The authors are grateful to undergraduate medical students of Sri Venkateshwaraa Medical College Hospital and Research Centre who participated in this study. Authors are also grateful to the management of SVMCH&RC for their cooperation and help.

REFERENCES

- 1. Guidelines for the regulatory assessment of medicinal products for use in Self medication, WHO 2000. Available: http://aap.who.int/medicine docs/pdf.Accessed:2014 Dec 15
- 2. Hughes CM, McElnay JC, Fleming GF. Benefits and risks of self medication. Drug Saf 2001; 24:1027-37

INTERNATIONAL JOURNAL OF MEDICAL AND APPLIED SCIENCES



E-ISSN:2320-3137

- 3. Varghese RT, Das R. Antimicrobial drug resistance in India, Possible causes. Asian Stud Med J 2010; 1:151-54.
- 4. Harbarth, S.; Samore, M.H. Antimicrobial resistance determinants and future control. *Emerg. Infect. Dis.* 2005, *11*, 794-801.
- 5. 5.National Policy for Containment of Antimicrobial Resistance, Directorate of General Health Services, Ministry of Health&Family Welfare, India 2011
- Self-medication popular among medical students: AIIMS study. Available: http://www.livemint.com/Politics/XcN44QD5g8aW4dwltcUdtI/Selfmedicationpopular-among-medicalstudents-AIIMS
- 7. Banerjee I, Bhadury T (2012) Self-medication practice among undergraduate medical students in a tertiary care medical college, West Bengal J Postgrad Med 58(2):127–131.
- 8. Kumar N, Kanchan T, Unnikrishnan B, Rekha T, Mithra P, et al. (2013) Perceptions and Practices of Self-Medication among Medical Students in Coastal South India. PLoS ONE 8(8): e72247
- 9. Fadare, J.O.; Tamuno, I. Antibiotic self-medication among university medical undergraduates in Northern Nigeria. J. Public Health Epidemiol. 2011, 3, 217–220
- Olayemi, O.J.; Olayinka, B.O.; Musa, A.I. Evaluation of antibiotic self-medication pattern amongst undergraduate students of Ahmadu Bello University (Main Campus), Zaria. Res. J. Appl. Sci. Eng. Technol. 2010, 2, 35–38
- 11. Badiger S, Kundapur R, Jain A, Kumar A, Pattanshetty S, et al. (2012) Self medication patterns among medical students in South India. Australas Med J 5(4):217–220.
- 12. Abay SM, Amelo W (2010) Assessment of self-medication practices among medical, pharmacy, and health science students in Gondar University, Ethiopia. J Young Pharm 2(3):306–31