Research Article

Self-Medication Among Allopathic Medical Doctors in Karnataka, India.

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Abstract

The aim of the present study was to evaluate the self-medication of self-prescribed antibiotics among government doctors in the Hassan district. A close and open-ended questionnaire was used to collect data from a sample of 160 Government doctors, randomly chosen from Hassan district. Data was collected using a self assessing questionnaire. Data was entered and analyzed using SPSS 14 and the results were presented as a percentage. Out of 160 doctors only 97.5% filled and returned the questionnaires. Self-medication with antibiotics was reported by 53% of doctors during the cross sectional study at a CME programme in Hassan Institute Medical Sciences, Hassan within 6 months prior to the study. The main indication for self-medication with antibiotics was respiratory problems (73.3%) such as the common cold and sore throats. Amoxicillin was the most commonly used antibiotic (40%). The main source of medicines was drugs from medical representatives (47.8%, samples), drug stores (44.8%, self-prescribed) and the government hospital pharmacy (7.4%). Only 26.8% of antibiotic users completed the course. The prevalence of self-medication with antibiotics among doctors is high. Proper prescription writing is an essential skill for doctors in medical profession, as it is the primary intervention that doctors offer to the suffering humanity. Medical students learn the science of prescription from the Medical faculty. Hence educational programs are needed to improve potential problems of self-medication with antibiotics and to minimize the different forms of prescribing errors, by vigorous training programs.

Key words: self-medication, self –prescription, doctors, antibiotics, prescription.

Introduction

Antibiotics serve a very useful therapeutic purpose in eradicating pathogens[1,2]. Unfortunately excessive and inappropriate use of antibiotics results in antibiotic resistance which is a rapidly increasing global problem with a strong impact on morbidity and mortality [3-5.] It is now evident that self-medication is widely practiced in both developing [6-11], as well as developed countries [12-18]. India is also experiencing this problem of inappropriate use of self-medications in significant numbers [19,20].

Unlike the rest of the population, when physicians become ill, they can prescribe medicines for themselves very easily. Medical knowledge and access to prescription of medications increase the potential for self-treatment. Although many warn of the loss of objectivity that can accompany self-prescription, previous studies suggest that self-prescription is common among practicing physicians [21-24]. The purpose of the present study is to evaluate self-prescription and self-care practices among government doctors in the Hassan District of Karnataka.

Materials and methods

A cross section of doctors attending the CME programme at Hassan Institute of Medical Sciences, Hassan, was selected for the project during August 2009. A self –assessment questionnaire was distributed amongst the participants after explaining the purpose of the study and after taking informed oral consent. The study was given prior approval from the institutional ethics committee. A total of 160 doctors (all participants were male) were chosen randomly for participation in the study.

The questionnaire consisted of both closed and open-ended questions. A total of 21 questions were stated concerning the following: Socio-demographic characteristics (like age, sex and personal habits), patterns of self – medication with antibiotics (e.g. type of antibiotics used, frequency, whether the course of antibiotic was completed, and the health condition that lead to self-medication).

After completion of data collection, it was reviewed, organized and evaluated using the Chi-square test and analysis of variance (One-way ANOVA) using the Statistical Package of Social Science (SPSS Inc., Chicago, IL) for windows version 14 and p-value of <0.05 was considered statistically significant.

Results

A total of 160 male doctors agreed to participate in the study. Twenty eight percent of them were postgraduate qualified (e.g. MD, MS in different specialities) and 72% were only MBBS qualified. Eighty six percent of them were aged between 36-45 years.

Fifty three percent of doctors had used self-prescribed antibiotics with self-diagnosis within the last 6 months before the study.

Table – 1 Characteristics of the Respondents	
Variables	**Doctors %**
Used self-medication with antibiotics	53.0
How many times	
Once / day	55.8
Twice / day	10.4
> 3 times	16.1
Completed the course	26.8

Table – 2 Factors that lead to Self-medication	
Conditions	Doctors %
Respiratory Infections	66.7
GI problems	23.4
Systemic Problems	7.7
Skin Problems	2.6
Urinary tract conditions	0

Table – 3 Antibiotics used for self-medication	
Name of the antibiotic	Doctors %
Penicillines	68.0
Amoxicillin	40.0
Flouroquinolones	13.3
Co-amoxiclav	6.8
Macrolides	8.0
Tetracyclines	2.7
Cephalosporins	4.0
Sulphonamides	2.2
Metronidazole	1.2
Tinidazole	2.0

The frequency of antibiotic use was once in 55.8%, twice in 10.4% and thrice or more in 16.1% in the study period (p < 0.05). Only 26.8% of all doctors attended in this study completed the course of antibiotic therapy (p < 0.05) (Table 1).

The factors that lead to self-medication among respondents were perceived respiratory infections in 66.7%, gastrointestinal diseases in 23.4%, systemic diseases in 7.7% and skin diseases in 2.6% (Table 2).

Table 3 shows the antibiotics that were most frequently used for self-medication. Penicillins were ranked highest (68%) and in this group Amoxicillin was most frequently used (40%). Next were the flouroquinolones with 13.3% followed by Macrolides 8%. Other relatively lesser used drugs were co-amoxiclav, cephalosporins, tetracyclines, sulphonamides, Tinidazole and Metronidazole.

Discussion

The current study examined antibiotic self-medication among government medical doctors in Hassan district. They were attending a CME programme at HIMS, Hassan. Studies on factors associated with antibiotic use are important to prevent the occurrence of antibiotic resistance [9], which is a well known problem in many countries [7-18]. Antibiotic use in different diseases was always empirical without proper opinion and laboratory investigation in self- medication.

The source of the antibiotics was from medical representatives (47.8%), from drug stores (44.8%) without prescription, even though antibiotics are prescription only medicines. The fact that the violation of this law is subject to financial penalty and is not strictly implemented in case of doctors, has resulted in the continuation of this practice. Self-medication with antibiotics may increase the risk of inappropriate use and the

selection of resistant bacterial strains [25,26]. There have been several reports addressing the extent of self-medication practices with antibiotics among university students in other countries [27,28], but few about doctors. This should be further analyzed.

In this study, more than 53% of the respondents practiced self-medication with antibiotics within the last 6 months before the study. This rate is similar to the findings of a study in Turkey with 45.8% of self-medication with antibiotics [29] and also a recent study in Jordan (40.7%) [9] and other studies in Sudan (48%) [7], Lithuania (39.9%) [30] and also in USA (43%) [17].

Higher rates of self-medication are reported from China (59.4%) and Greece (74.6%) [14]. Lower rates are reported from Palestinian students (19.9) [27], Mexico (5%) [31], Malta (19.2%) [18] and Finland (28%) [12]. It seems that the lower rates of self-medication in these cases were due to respiratory diseases being treated symptomatically rather that with antibiotics.

Only 26.8% of respondents completed the course of antibiotic therapy. This is similar to the result of study in Jordan (37.6%) [9].

The most common disease treated by antibiotics was respiratory tract infections (common cold, sore throat, and sinusitis). Such diseases were also reported to be the common cause for self-medicated in Jordan [9], Palestine [27], Turkey [28] and European countries [16]. The above conditions are known to be of viral origin [32], requiring no antibiotic treatment.

The main antibiotics used in self-medication were penicillins in general, and particularly Amoxicillin. Similar results are reported by other studies from different parts of the world [8,33]. This may be due to the low cost of broad spectrum penicillin throughout the world [8].

It is agreed by some researchers that adverse effects due to inadequate and inappropriate use of antibiotics without prescription can be minimized by proper education [34.] This can be effectively done through national awareness programmes, educational programmes (Rational Drug Use, Intensive Medical Monitoring of Prescription, evidence based practice, and essential drug use) and CME programmes.

We also suggest specific education about antibiotics in all educational and research institutions.

There are a few limitations in this study for all doctors irrespective of gender. First, is its reliance on self-reported data about self-medication with antibiotics. Secondly, it refers to any previous use of self-medication with antibiotics (retrospective study). Another limitation is that our population sample may not be representative of the doctors' population in the entire district. National education programmes about the dangers of irrational antibiotic use and restriction of antibiotics without prescriptions should be the priority. This study indicated that with reference to doctors, knowledge regarding antibiotics

cannot be evaluated alone since it did not always correlate with behaviour.

Conclusion

Almost all medical doctors practice self-treatment when they are ill. Although they prefer to be treated by a physician, due to complex reasons including ego and a busy professional work pattern, there is a certain amount of hesitation in consulting professional colleagues when they need medical help.

The prevalence of self medication practices is alarmingly high in the medical profession, despite the majority knowing that it is incorrect. We recommend that a holistic approach must be taken to prevent this problem from escalating, which would involve: (i) awareness and education regarding the implications of self medication (ii) strategies to prevent the supply of medicines without prescription by pharmacies (iii) strict rules regarding pharmaceutical advertising; and (iv) strategies to make receiving health care much less difficult.

Our study has also opened gateways for further research on this issue, besides showing that it is a real problem and should not be ignored in and around Karnataka, India and all over the world.

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