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### Original Article

## Self medication pattern of antibiotics among non practicing allopathic doctors

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#### ABSTRACT

Abstract: Self medication of antibiotics is increasing especially in developing countries due to its easy availability of over-the-counter and has lead to the development of antibiotic resistance, which is global concern. Medical college faculty of basic sciences has the tendency of self medication because of their medical background. This study was conducted among 120 faculty members and found to have significant self medication practice in 83.33%. The most common antibiotic used was azithromycin and the reason being a medical graduate don't need consultation. This perception is alarming to the students and community and needs immediate attention.

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### 1. Introduction

Self medication can be defined as "the use of drugs to treat self diagnosed disorders or symptoms, or the intermittent or continued use of prescribed drug for chronic or recurrent disease or symptoms".<sup>1</sup> This is very common in India and other developing countries due to the availability of over the counter drugs (OTC).<sup>2</sup> Infection is a predominant condition in developing countries which needs antibiotics. Self medication with antibiotics is defined as the acquisition of antibiotics and self administering them (or administering them to the children) with the aim of treating a perceived infection.<sup>5</sup> Excessive and inappropriate use of such antibiotics has led to emergence of antibiotic resistance which is a global problem with a strong impact on morbidity and mortality.<sup>3</sup> It is also observed that many patients fail to complete the prescribed course of antibiotics presuming the symptoms are subsided; and lead to recurrence of illness and antibiotic resistance.<sup>4</sup> Studies have already been conducted among practicing physicians, resident doctors, interns and medical students suggesting widespread practice of self-medication.<sup>(6-9)</sup> Little is known about the

allopathic doctors who have dedicated their profession for teaching basic sciences in medical colleges and grooming future doctors. Since the basic background of these faculties is medical profession there is a strong tendency of self medication. Teachers are the role models for the students and there is a strong tendency to adopt such practices in the early part of their career. Hence this study was initiated to evaluate the self medication practice among faculty who are medical professionals but not practicing.

#### METHODOLOGY:

All the faculty members of basic sciences with a background of medical profession working at Sri Siddhartha Medical College who were willing to participate were enrolled in this study. Post graduates of basic sciences were also included in this study. Due consideration was given to ethical issues in designing of the study. The objective of the study was explained and confidentiality was ensured. Study was conducted in November 2012 in the college council where all the faculty members were assembled. A semi structured questionnaire consisting of twelve questions regarding socio-demographic, self-medication issues were administered to the participants. The researcher and assistants provided

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assistance in filling the questionnaire. Only the duly filled forms were collected and analyzed for statistical significance using EPI 7 version.

### 3. Results:

The total no. of participants enrolled in this study was 120. Out of which, 62 (51.6%) were males and 58 (48.33%) females. Age varied between 27 to 64 yrs (avg. 39.97 Yrs). Doctors with post graduation were 102(85%) and pursuing post graduation were 18(15%). The distribution of participants from various departments were Anatomy 28 (23.33%), physiology 20 (16.67%), biochemistry 6 (5%), pathology 20 (16.67%), microbiology 8 (6.67%), pharmacology 10 (8.33%), forensic medicine 8 (6.67%) and community medicine 20 (16.67%).

Self medication was evident in 100 (83.33%) participants which is very significant.

**Table 1. Symptoms for which doctor's self medicated**

Symptoms	Yes
1.A.Common cold	22.(18.33%)
1.B.Diarrhea	20(16.67%)
1.C.Flu	08(6.67%)
1.D.Sore throat	70(58.33%)
1.E.Tooth Ache	08(6.67%)
1.F.Respiratory condition	56(46.67%)
1.G.urinary Symptoms	08(6.67%)
1.H.Any other condition	06
Furuncle	02(1.67%)
Laryngitis	02(1.67%)
Viral fever	02(1.67%)

The more frequent conditions for which participants self medicated as shown in Table-1 were sore throat 70 (58.33%), Respiratory conditions 56 (46.67%), Common cold 22 (18.33%) and diarrhea 20 (16.67%).

**Table 2: Commonly used medications for self-medication**

Medication	Yes
Azithromycin 500 mg-BD 3 days	40 (33.3%)
Levofloxacin OD 5 Days	22(18.33%)
Amoxicillin 500 mg TID -5 Days	18(15.00%)
Amoxicillin+clavulanic Acid BD 5 Days	12(10.0%)
Cefixime BD- 5 Days	12(10.00%)
Ciprofloxacin-500 BD- 5 Days	12(10.00%)
Norfloxacin 400 mg BD-5 days	08(6.67%)
Ofloxacin-500 mg BD- 5 days	04(4.33%)
Cefpodoxime BD 5 Days	04(4.33%)
Sparfloxacin 500 mg OD -5 Days	02(1.67%)
Gatefloxacin-400 mg OD-5 days	02(1.67%)
Roxithromycin-500 mg	02(1.67%)
Ampicillin + cloxacillin	02(1.67%)
Doxycycline 100 mg For 3 days	02(1.67%)

As shown in Table-2 self medication with Azithromycin was seen in 40 (33.3%), followed by levofloxacin 22(18.33%), and amoxicillin 18 (15%). There was a switch over of antibiotics in-between in 28 (28%) of the participants considering as delay in recovery in 24 and development

of resistance in 4. Antibiotics were stopped abruptly in 28 (28%) participants as that they felt better in 14, resistance in 10 and noncompliance in 4.

The side effects was encountered in 14 (14%) of participants like gastritis, fatigue, metallic taste, headache and diarrhea.

**Table: 3. Reasons for not visiting doctor.**

		%
Doctors don't need to consult another doctor	40	40%
Symptoms subsided by self prescription	27	27%
Consider it as minor conditions /common problems	11	11%
No reason/No time	10	10%
Previous prescription was used for the present condition	6	6%
Could not contact physician	6	6%
Total	100	100

When enquired to find the reasons for not visiting the doctor, 40 (40%) of the participants felt that they were also doctors and 27(27%) participants' symptoms subsided with self prescription.

### 4. DISCUSSION

This study shows a significant number of doctors who are working as faculty in basic sciences are on self medication practice which may be a strong risk factor of development of antibiotic resistance. The basic idea is to prevent occurrence of antibiotic resistance which is prevalent in many countries.<sup>10,11</sup>

The choice of antibiotics was based on their medical knowledge among and previous prescriptions. Intended storage of antibiotics is considered to be predictor of self medication.<sup>12</sup>

The most common condition for self medication in this study are Respiratory conditions and common cold which are usually viral in origin, need no antibiotics and can lead to resistance.<sup>13, 14</sup>

The most commonly used antibiotic, amoxicillin in other studies has been replaced by azithromycin<sup>15,16</sup> which has better compliance due to less frequency of administration. The participants being doctors were of the opinion of not approaching the physicians. This attitude among the doctors can hamper the professional ethics and can be reduced by mandatory consultation and OTC drugs as in western countries. Relief of symptoms by drugs previously prescribed to them or their family members has encouraged them to self medicate which could be dangerous. The change of antibiotics in between considering delay in recovery can be attributed to inappropriate choice of antibiotic. Although the side effects experienced by them were minor could have been prevented or aborted by adjuvant medications or appropriate choice of antibiotics.

In this study the participants being faculty of basic sciences had sound knowledge about the medical profession but lacked practicing experience. Such higher levels of education tends to provide personal autonomy in decisions about their own health leading to self medication practices.<sup>17,18</sup>

Inappropriate and irrational use of antibiotics can lead to development of antibiotic resistance which is a global threat to the community. To curb this practice at the gross root level educational interventions like CME, educational campaigns, newsletters should be given a top priority in medical colleges. Consultation should be made mandatory for all including doctors and prioritization of consultation to the professional colleagues. The govt. also should formulate a policy for antibiotic dispensing which can reduce the OTC consumption of antibiotics. Since many organisms have developed resistance and no antibiotics are in the pipeline can be a serious concern of the future.

#### 4. CONCLUSION:

The present study demonstrated that the teaching faculty in basic sciences of medical college has opted for self-medication practices with antibiotics due to several reasons. The knowledge about the profession, their high education level and lack of time are implicated as the strong reasons. This is a serious issue which needs attention from all the medical fraternity. Good clinical practice should be inculcated from the foundation year and good governance by the government in curbing the over-the-counter antibiotic dispensing can reduce the development of antibiotic drug resistance. Prioritization of consultation for the medical fraternity if implemented can reduce the self medication practices.

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