

SELF MEDICATION PATTERN AMONG DENTISTS WITH ANTIBIOTICS

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ABSTRACT: AIM: Self medication with antibiotics has become a common practice among people, and more so among those with medical background. Dentists are one group who have knowledge and accessibility to antibiotics. Hence this study was aimed at knowing the prevalence of self medication with antibiotics among dentists reasons for not visiting the physician. **RESULT:** Prevalence rate of self medication among dentist was 78.18%. Most common cause for self medication were common cold, tooth ache and sore throat. Most common antibiotic used was azithromycin next to ampicillin. Most common reason for not visiting doctor was that participants were themselves a doctor. **CONCLUSION:** Though dentists have knowledge about antibiotics, knowledge on appropriate usage of antibiotics is poor. This may have a bad impact on practice. Hence they have to overcome the ego and take proper advice from physician which may help the community in curbing antibiotic resistance The only limitation of the study was small sample size as dentists from only two colleges were considered. There is a need for study in large number of population.

KEY WORDS: Dentists, Teaching faculty, Self medication, Antibiotics

INTRODUCTION: Self medication with antibiotics is defined as "the acquisition of antibiotics and self administering them with the aim of treating a perceived infection". This is very common in India and other developing countries due to the availability of over the counter drugs (OTC). 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.^{1,2} Dentists have a basic background about antibiotics due to their undergraduate curriculum. But awareness about the complete range of antibiotics and pattern of resistance is limited.^{3,4} The most common reason implicated is inappropriate use of antibiotics like prolonged intake, abrupt withdrawal following subsided symptoms, using reserve antibiotics for minor illnesses and also in non-bacterial infections like common cold leading to recurrence of illness and antibiotic resistance.^{5,6} As a result the incidence of untreatable dental infections can increase and sometimes turn out to be fatal especially in diabetics.⁷ This can have an impact on dentist's practice as a doctor and also at risk of not being able to deliver quality care losing patients trust. Several studies have already been conducted among practicing physicians, non-practicing allopathic doctors, resident doctors, interns and medical students suggesting widespread practice of self-medication. Little is known about the dentists. Hence this study was initiated to evaluate the self medication practice among dentists.

METHODOLOGY: All the dentists cum teachers working in various departments of 2 different Dental Colleges participated in this study. Non-willing participants were excluded from the study. After giving due consideration to ethical issues, study design was prepared. The objectives of the study were clearly explained to the participants and confidentiality was ensured.

ORIGINAL ARTICLE

Study was conducted among the dentists of 2 selected dental colleges with both graduates and postgraduates. The faculty members were provided with a semi-structured questionnaire consisting of twelve questions regarding socio-demographic data and self-medication issues. The researcher and assistants helped in resolving the queries in filling the questionnaire. Only the duly filled forms were collected and analyzed for statistical significance.

RESULT: The total no. of participants enrolled in this study was 110. Out of which, 48 (55.81%) were males and 38 (44.19%) females. Average age of the respondents was 29.25yrs. Doctors with basic dental degree were 39(45.35%), specialists 30(34.88%), and post graduates 17(19.77%). The distribution of participants based on specialty were Prosthodontics 20 (23.26%), conservative and endodontics 17 (19.77%), Pedodontics 13 (15.12%), Oral and maxillofacial surgery 17 (19.76%), periodontics 8 (9.30%), orthodontics 7 (8.14%) and oral pathology 4 (4.55%).

Self medication practices among the dentists were seen in 78.18% which is very much significant.

| Symptoms | Yes |
|---------------------------|---------------|
| 1.A .Sore Throat | 38 (44.19%) |
| 1.B. Common cold | 36 (41.86%) |
| 1.C. Tooth Ache | 34 (39.53%) |
| 1.D. Diarrhea | 21 (24.42%) |
| 1.E. Flu | 08 (9.30%%) |
| 1.F.Respiratory condition | 5 (5.81%%) |
| 1.G.urinary Symptoms | Nil |
| 1.H.Any other condition | Nil |
| | Furuncle - |
| | Laryngitis - |
| | Viral fever - |

Table 1: Symptoms for which doctor's self medicated

The most frequent symptoms for which participants self medicated as shown in Table-1 were sore throat 38 (44.19%), Common cold 36 (41.86%), Tooth ache 34 (39.53%), Diarrhea 21 (24.42%), Flu 08 (9.30%) and other respiratory conditions 5 (5.81%).

| Medication | Yes |
|---------------|-------------|
| Amoxicillin | 61 (70.93%) |
| Azithromycin | 25 (20.06%) |
| Ciprofloxacin | 7 (8.14%) |
| Metronidazole | 5 (5.81%) |
| Ofloxacin | 4 (4.65%) |
| Cephalexin | 2(2.33%) |
| Doxycycline | 2 (2.33%) |
| Norfloxacin | 1 (1.16%) |

ORIGINAL ARTICLE

| | |
|---------------|-----------|
| Levofloxacin | 1(1.16%) |
| Gatifloxacin | 1 (1.16%) |
| Roxithromycin | 1 (1.16%) |

Table 2: Commonly used antibiotics for self-medication

As shown in Table-2, self medication with Amoxycillin topped the list with 61 (70.93%), followed by Azithromycin 25 (20.06%), and Ciprofloxacin 7 (8.14%).

There was also variation in the dosage and duration of intake of antibiotics. It was noted that the duration was reduced by themselves and did not complete the full course of antibiotics. Switch over of antibiotics in-between was seen in 10 (12.79%) and abrupt stoppage in 13 (15.12%) participants.

The side effects was encountered in 10 (11.90%) of participants like gastritis, diarrhea, abdominal cramps and Nausea.

| | yes | % |
|---|-----|---------|
| Doctor myself | 40 | 48.19% |
| Previous prescription and availability of medicine at home/clinic | 14 | 16.87% |
| Minor symptoms dont' need physician consultation | 12 | 14.46% |
| I have knowledge about drugs | 5 | 6.02% |
| I prescribe these drugs to patients | 5 | 6.02% |
| Confident in my treatment | 4 | 4.82% |
| Personal inconvenience and long waiting time in clinic | 3 | 3.61 |
| Total | 83 | 100.00% |

Table 3: Reasons for not visiting doctor

Being a doctor themselves were one of the important reason for not visiting the doctor in 40 (40%) of the participants. Availability of medicines at home/ clinic through previous prescription and considering the symptoms as minor in 14 (16.87%) and 12 (14.46%) respectively were the reasons.

DISCUSSION: The present study on self medication with antibiotics among the dentists who are a teaching faculty have a high prevalence rate of 78.18% which is very significant and similar to another study.⁵ There were no much difference between participants with postgraduate degree and with basic undergraduate degree. Since antimicrobials are the most widely purchased drugs all over the world ² a correlation between antibiotic use and development of antibiotic resistance has been proved for many drugs.⁷ Hence there is a need to stop irrational use of antibiotics.⁸

Similar to other studies the Common conditions for which antibiotics were used are sore throat, common cold and tooth ache. ^{9,10} It is known worldwide that sore throat can be treated with mild salt water gargle, common cold a self limiting viral condition and toothache needs treat the cause. Antibiotic usage in these conditions is of questionable value and reflects on the irrational system which can be attributed to certain extent for their inadequate knowledge. ⁷ Among the antibiotics, ampicillin and azithromycin were the most commonly used drugs as it is known that the common causative organism is gram positive in the oral cavity.⁸

ORIGINAL ARTICLE

The participants followed irregular frequency and duration of antibiotics not adhering to the standard recommendations. Some stopped abruptly when symptoms subsided and also there was switching over leading to the rapid development of resistance.^{12,13} Participants' being doctor themselves was the commonest reason for not visiting the doctor.¹⁴

Although dentists use limited number of antibiotics in their practice, the literature provides evidence of irrational prescribing practices due to varying reason from inadequate knowledge to social factors. A good knowledge about antibiotics and its resistance pattern is necessary for rational prescription which can be achieved with continuing professional development (CPD).^{11,15} Very few antibiotics are in the pipeline of development and H. Hence there is an urgent need to raise professional awareness regarding the rational use of antibiotics and prevent resistance.¹⁶

CONCLUSION: The present study demonstrated that the dentists have a higher rate of self medication practice. The knowledge about antibiotic usage was low due to their limited use. Being a doctor needs updating through regular professional development program. Since newer antibiotics are not in the production, the existing drugs need to be prevented from resistance. The need for good governance by the government in curbing the over-the-counter antibiotic dispensing can reduce the development of antibiotic drug resistance.

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ORIGINAL ARTICLE

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