



## KNOWLEDGE OF DENTAL INTERNS REGARDING DRUG PRESCRIPTIONS: A QUESTIONNAIRE STUDY

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### ABSTRACT

**Background:** Prescription of drugs in correct doses is very important aspect by which a physician including dentist can influence the patient's health. As the different types of drugs may cause significant morbidity and mortality, it also includes risk of causing great harm to the patient. The present study was planned to evaluate the knowledge of the dental interns about prescribing various drugs. **Materials and methods:** Total 78 dental college interns were selected for the study, which were carried out with the help of the specially prepared questionnaire consisting of 10 questions. **Results:** The results showed that there was significant lack of knowledge of the dental interns about prescribing drugs. **Conclusion:** Dental colleges should organize the motivational lectures and training workshops to improve the knowledge of the prescription of drugs in the dental undergraduates students.

**KEYWORDS:** Drug prescription, Antibiotics, Dental interns.

### INTRODUCTION

Drugs including various types of antibiotics are commonly used by the dental practitioners for prevention and treatment of the patients. Indications for the use of systemic antibiotics in dental practice are limited, as most dental diseases are best managed by operative intervention and maintaining oral hygiene measures. However, the dental literature had evidence of inadequate prescribing practices by dental practitioners, due to varied factors ranging from inadequate knowledge to social factors.<sup>[1]</sup> Prescribing correct drug prescriptions is the essential part of physicians and therefore, adequate knowledge on drugs' efficacy, safety, cost, and convenience is important.<sup>[2]</sup>

Dentists usually prescribe medications for the treatment of a number of oral diseases mainly orofacial infections. Although drugs like antibiotics along with analgesics, are the most commonly prescribed medications by the dental practitioners, little is known about the knowledge and understanding of dental practitioners concerning its use in every day clinical practice.<sup>[3]</sup>

Prescription errors are common, especially with newly graduated doctors. The basic problem which contributes to the irrational prescribing is usually that the dental students are not adequately instructed. Antibiotic use may be associated with serious complications that have encouraged studies investigating antibiotic prescribing

practices of dentists. Recent surveys reported that dentists have a tendency towards over prescribing or using lower dosage of antibiotics, using broad spectrum and lack of knowledge of the incidence of adverse reactions. Other surveys showed that dentists have less knowledge about antibiotic prescribing.<sup>[3]</sup>

The present study was done to evaluate the knowledge of the dental interns about the drug prescriptions.

### MATERIALS AND METHODS

Dental college interns were selected for the study. Total of 78 interns were ready to participate in the study. The approval of the ethical committee was taken and informed consent was taken from all the participants.

The study was done with the help of specially prepared questionnaires consisting of 10 questions, which were validated by doing pilot study. The results were tabulated and percentage analysis was done.

### RESULTS

About 68% interns replied that they flow WHO guide for the prescribing drugs. 45% dont know the importance of prophylactic antibiotics in diabetic patients, while 36% don't have appropriate knowledge of the prescribing drugs. 34% do not aware of the various brands available in the market and 61% were unaware of the factors to be considered before administration of the drugs. It was

good to know that about 89% regularly update their knowledge about drugs. (Table 1).

**Table 1: Questionnaires used for the study and the responses by the dental interns.**

S. N.	Questions	Responses by the dental interns
1.	Do you use World Health Organization (WHO) Guide to Prescribing for drug prescription? a) Yes b) No	32% 68%
2.	Do you prescribe prophylactic dose of antibiotic for extraction in diabetic patients? Yes No	45% 55%
3.	Do you have appropriate knowledge about dose of Drug to be Prescribe? Yes No	64% 36%
4.	Do you discontinue antibiotics soon after when patient feel better? a) Yes b) No	23% 77%
5.	Do you aware of the days to prescribe an antibiotic for? a) Yes b) No	78% 22%
6.	Are you aware of the brand names /length of courses/alternatives of different antibiotics? Yes No	66% 34%
7.	Do you know the factors to keep in mind while prescribing an antibiotic? Yes No	39% 61%
8.	Do you know the type of drug administration to prefer in children below 10 years? a) Yes b) No	71% 29%
9.	Do you update yourself regularly about new drugs? Yes No	89% 11%
10.	Did you know the correct route of drug delivery? Yes No	44% 56%

## DISCUSSION

Prescribing medications is the act of indicating one or more drugs to be administered to or taken by the patient, its dosage, and the duration of the treatment. It is a dynamic and individualized clinical process. Prescription has certain unique characteristics, but it may be inclined by cultural, social, economic and promotional factors.<sup>[4]</sup>

There is evidence of widespread concern about the exaggerated use of antibiotics in dental practice and the emergence of resistant bacterial strains. In recent years, dentists have reported a shift from narrow spectrum to broad-spectrum antibiotic prescriptions due to increasing antibiotic resistance. There are evidences which suggest that antibiotic prescriptions by dental practitioners for therapeutic purpose differ significantly and prophylactic antibiotics are prescribed inappropriately, both for surgical procedures and for patients at risk from endocarditic.<sup>[1]</sup>

In general practice, Drug therapy is the mainly used method of any disease treatment. Rational drug prescription is defined as using the least number of drugs to obtain the best possible effect in the shortest period and at a reasonable cost.<sup>[5]</sup> Precise diagnosis, appropriate prescription, accurate dispensing, apt packing and patient devotion are the five essential criteria to attain the balanced drug use. Inapt drug prescription is an occurrence around the world. Its penalty comprises exacerbation or persistence of illness, ineffective and unsafe treatment, anguish and damage to the patient, and elevated costs.<sup>[4]</sup>

The rational prescription process given by World Health Organization (WHO) recommends the following steps such as<sup>[6]</sup>:

1. Defining the patient's problem (diagnosis),
2. Specifying the therapeutic objective, considering the different alternatives,
3. Choosing a treatment with proven efficacy and safety,
4. Initiating the treatment,
5. Providing the clear information, instructions and warnings,
6. Stopping treatment, if the problem has been resolved or reexamining each step, if the problem persists.

Dental graduate is expected to learn clinical skills, perform some clinical procedures and demonstrate a good clinical judgment to arrive at patient management decisions. The ability to prescribe commonly used drugs safely and effectively is a core competency of a newly qualified doctor.<sup>[6]</sup>

Dental practitioners regularly prescribe antibiotics for therapeutic or prophylactic purposes to manage oral and dental infections. However, inappropriate prescribing and excessive use of antibiotics have been identified as major factors in the emergence of antibiotic resistance, which is an ongoing challenge ever since the discovery

of antimicrobial agents. There are other issues too, such as possible adverse events and additional costs of prescribing. Consequently, surveillance of antimicrobial resistance, monitoring of antibiotic usage and attempts to improve prescribing attitudes have become crucial.<sup>[1]</sup>

Adverse effect of a drug may be uncommon (but very serious) and many patients may be affected or subjected to a potential risk before the relationship with the drug is established. According to Barker, there are three possible actions of drug: the one you want, the one you don't want, and the one you don't know about.<sup>[7]</sup>

The current instructional method for teaching in various dental colleges, in India, is problem-based learning as it has been recognized worldwide. Prescription writing ability, a part of rational prescribing of medicine is being educated in zero unit. It is the just teaching program associated to the subject.

### CONCLUSION

Lack of knowledge of the dental interns related to WHO guidelines and drug usage. The knowledge of the prescribing drugs is very essential for the good dental clinical practice. Most of the dental interns had poor to moderate knowledge in prescribing basic drugs which are used in dentistry. Undergraduate training, therefore, must train graduates to be able to prescribe safely not just by lectures on basic pharmacology and clinical pharmacology, but also incorporating more practical sessions using clinical examples. Additional provision of teaching about drugs across all learning styles like prescribing workshops, tutorials, problem-based learning, and e-learning would also be beneficial.

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