Evaluation of Knowledge for Rational Use of Drug

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Abstract:
Background*: The aim of this study was to make a research about the antibiotic prescribing practices and knowledge of dentists in Kahramanmaras province and to reach some information that can shed some light on the solution of the problems related to excessive antibiotic use and irration use of antibiotics.*
Materials and Methods*: In this study, a survey was conducted with 80 dentists (Female: 44; Male: 36) working in Kahramanmaras. Data were gathered through a questionnaire adapted to evaluate the sociodemographic characteristics (e.g. age, gender, length of professional experience etc.) and dentists' knowledge of antibiotic use. Their responses to the questionnaire items were statistically analysed.*
Results*: The results of our study showed that a significant number of dentists prescribe antibiotics even in chronic, local dentoalveolar infections. Most of the physicians prefered amoxicillin + clavulanic acid (98.7%) derivative antibiotic as the first choice. The most prescribed analgesic group was paracetamol. The reason it was prescribed so often is that it was mainly effective (86.8%), had a rapid effect (46.1%), was safer (44.7%) and caused less GIS complaints (39.5%), less (30.3%), ease of access (14.5%) was. In our study, it was observed that most of the dentists (84.8%) didn't prescribe drugs to patients without examination.The results showed that a high antibiotic prescribing rate among dentists. This extremely high prescribing rate reflects the irrational use of antibiotics by Turkish dentists. Training programs on rational antibiotic use are required for dentists to reduce prescription rate.*
Key Word*:Dental, antibiotic usage, prescribing practice.*

I. Introduction

Antimicrobial drugs, especially antibiotics are the most widely prescribed drug groups in dentistry. Following the general principles of rational use of medicine (RUM) is guide to treatment and prophylaxis of dental infections. World Health Organization (WHO) is defined as "patients receive medications appropriate to their clinical needs, in doses that meet their own individual requirements, for an adequate period of time, and at the lowest cost to them and their community. [1]. Accurate diagnosis, appropriate prescription, correct preparation of the drug, proper packaging and patient compliance are five important criteria for rational drug use. One of the problems of drug use in Turkey and in the world is found irration use of medicine. The irrational use of antibiotics in Turkey, especially in the field of Dentistry is a very common problem.[2].

Antibiotic consumption is increasing despite the studies in the literature, which indicate that the use of antibiotics is unnecessary in odontogenic infections with no symptoms of systemic spread of infection, only pain or local swelling3. Following the clinical examination of the patient, tooth extraction, root canal treatment and drainage can be successfully treated, while treatment failures due to irration use of antibiotics, resistance to certain medications, exacerbation or spread of existing disease, inconvenience of malpractice and limited resources, waste of occupational satisfaction , communication and loss of confidence. [1-4]. Therefore, rational use of antibiotics is important in reducing the development of resistance and drug side effects in oral pathogens while increasing treatment efficacy.

The aim of this study is to make a research about the antibiotic prescribing practices and knowledge of dentists in Kahramanmaras province and to reach some information that can shed some light on the solution of the problems related to excessive antibiotic use and irritation use of antibiotics.

II. Material And Methods

A survey was conducted with 80 dentists (Female: 44; Male: 36) working in Kahramanmaras and the names of the physicians were not included in the questionnaire form. . Based on the research objective, data were gathered through a questionnaire adapted to evaluate the sociodemographic characteristics (e.g. age, gender, length of professional experience etc.) and dentists' knowledge of antibiotic use. Various opinions shared by physicians without expressing them in the questionnaire were also included in the discussion section of the study without specifying names. All the questions in the physician questionnaires are shown in the Table.

The participants were informed about the general principles of rational use of medicine after the data collection during a seminar. Subsequently, their responses to the questionnaire items were statistically analysed and the relevant results were presented in the following section. It is noteworthy that the ethical standards of the Ethics Committee of KahramanmarasSütcü Imam University Faculty of Medicine were considered during the data collection procedure.

III. Result

The responses of 80 dentists who participated in our survey to the questionnaire are shown in Table 4 and Figure 3. In the dentist questionnaire, the answers to the question of what antibiotics you prescribe the most are amoxicillin + clavulanic acid (98.7%), clindamycin (53.8%), amoxicillin (51.3%), metronidazole (26.9%), cephalosporin (19.2%), ampicillin (11.5%), ornidazole (11.5%), tetracycline (6.4%), azithromycin (6.4%), rifampicin (1.3%). It was seen that 88.8% of the dentists had previously received training on drug use. respectively, while most Internet Prescribing (62%), the vademecum (51.9%) good, other colleagues of information (41.8%), pharmacology books (27.8%), Turkey Medication Klavuzunu- TIC (12% , 7%), Research and promotion of pharmaceutical companies (17.7%), Diagnosis and Treatment Guidelines (10.1%), Drug Information Software Programs (10.1%).

Within the scope of the dentist surveys, if your patients do not have a special condition, what are the most preferred analgesic groups?: Paracetamol (77.9%), Ibuprofen (50.6%), Naproxen sodium (31.2%), Diclofenac (28.6%), Flurbiprofen (28.6%), Etodolac (14.3%), Paracetamol + codeine phosphate (10.4%), Aseclofenac (5.2%), BenzidamineHCl (Hydrochloride) (2.6%), Acetylsalicylic acid (3.9%), Metamisole (1.3%).

IV. Discussion

Rational use of medicine, as defined by the World Health Organization, requires the patient to take appropriate doses of medication at the lowest cost, at the appropriate time, according to the clinical condition of the patient. Safe and effective drug treatment is only possible if patients are well informed about drugs and their use. [4, 5].

Antibiotic treatment alone is ineffective for pulp-related dental problems. Most chronic and acute dental infections can be successfully treated without the use of antibiotics by eliminating the agent by interventional procedures such as pulp extirpation, abscess drainage or tooth extraction. Although prophylaxis (58.2%) was the most preferred reason for antibiotics, the prescription of the physicians was due to pain (38%), endodontic treatment (36.7%) and periodontal diseases (12.7%) remedies were observed. The effectiveness of dentists in the development of antimicrobial resistance is unknown. It is seen that there is a lack of information about the use of broad-spectrum antibiotics in dentistry due to the poor history of the patient and the prescription of medication in line with the patient's demand. In some countries, 84% of dentists appear to prescribe antibiotics even when there are no clinical indications.[6]. The results of our study show that a significant number of dentists prescribe antibiotics even in chronic, local dentoalveolar infections.

In dentistry; infections are polymicrobial since various types of bacteria are observed and antibiotic selection is largely empirical. In the literature, when antibiotics prescribed by dentists are examined, amoxicillin is generally the first antibiotic choice .[7, 8]. In the study of Gupta et al., Cephalosporins (39.99%) were preferred most in patients without drug allergy [9]. In the studies of Jayadev et al. [7] and Roda et al. [10], the most preferred antibiotic was amoxicillin + clavulanic acid. According to the results of our study, most of the physicians prefer amoxicillin + clavulanic acid (98.7%) derivative antibiotic as the first choice. It should also be noted that the use of narrow-spectrum preparations for the treatment of bacteria to be effective will result in smaller changes in the natural microflora. However, the diagnosis and antibiogram of the disease agent in dentistry is not available long enough. Therefore, amoxicillin + clavulanic acid is considered to be preferred because of its broad spectrum and low incidence of resistance development. Furthermore, another advantage of using broad-spectrum antibiotics is that it reduces the likelihood of developing superinfection.

The results of the study are the most prescribed analgesic group paracetamol. The reason it is prescribed so often is that it is mainly effective (86.8%), has a rapid effect (46.1%), is safer (44.7%) and causes less GIS complaints (39.5%), less (30.3%), ease of access (14.5%).

In our study, it was observed that most of the dentists (84.8%) do not prescribe drugs to patients without examination. A small number of patients reported unnecessary antibiotics because of the patient's pressure.61.8% of the dentists provide adequate information to the patient about the drugs they prescribe to provide effective treatment; 54.4% stated that they questioned whether the patient understood this. The unconscious use of antibiotics poses a serious threat to our country both for economic burden and human health. Broad spectrum antibiotics seem to be preferred by doctors because they are more effective and reliable in the treatment of many different infections. When prescribing antibiotics to your patients, half of the physicians ignore the economic dimension (cost to the state, individuals and institutions) of the antibiotic. This increases the rates of resistance to these antibiotics, the majority of which are used unnecessarily. The good use of

antibiotics also leads to the emergence of antibiotic resistant bacteria. It should not be overlooked that unnecessary antibiotic prescription may cause undesirable side effects such as GIS disorders and anaphylactic shock. [11].

V. Conclusion

As a result of the study, it is seen that although most dentists participate in post-graduate vocational training, further studies are needed to inform rational drug use.

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