Irrational Use of Antibiotics in Dentistry
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Editorial

The mortality rate due to infectious diseases was high ages ago. Millions and millions of lives were saved owing to the discovery of antibiotics. In fact, antibiotics can be called as “life-saving drugs”. However, antibiotic prescribing may be associated with unfavorable side effects ranging from gastrointestinal disturbances to fatal anaphylactic shock [1]. The WHO [2] theme on World Health day 2011 states “Combat Antimicrobial Resistance: No Action Today, No Cure Tomorrow.” It is the duty of every dentist to arrive at the correct diagnosis in order to avoid the indispensable overuse and abuse of antibiotics leading to its resistance.

The relatively relaxed regulation on antibiotics without prescription (over-the-counter) worsens the scenario. Knowledge, attitude, and practice among dental specialists towards antibiotics have to be analyzed in order to decrease the incidence of antibiotic resistance. Gowri et al. [3] found that 86.6% of the dentist admitted to the frequent antibiotic use besides 4.1% not knowing the existence of antibiotic resistance. The development of resistance to antibiotics is on the rise with irrational antibiotic use. Antibiotics were prescribed for dental abscesses, post root canal treatment, post dental extraction and after most minor surgical procedures with no mention on the systemic counterpart. Various guidelines have been laid down which intended to provide guidance over judicious antibiotic use but the fact that these guidelines are not being followed. However, none of the national bodies have laid down specific dental guidelines for antibiotic use even though general guidelines have been framed by Government of India. It has been reported that 20% to 50% of the total medication used are antibiotics in the United States. According to survey done by Gowri et al. [3], 37% of Dental practitioners in India believed that antibiotics are effective for viral infections also. Konde et al. [4] stated that 88% BDS practitioners and 66% pediatric dentists prescribed antibiotics for pediatric periodontal conditions, which was not routinely required this further highlights the overuse and abuse of antibiotics leading to its resistance.

Odontogenic infections commonly arise due to aerobic and anaerobic micro-organisms and are frequently community-acquired and it was reported that the anaerobic population is three to four times more than the aerobes. Common antibiotics which are effective against odontogenic infections comprise penicillin, clindamycin, erythromycin, cefadroxil, metronidazole, and tetracyclines. According to Karibasappa and Sujatha [5] and Gowri et al. [3] majority of dentists prescribed amoxicillin as their first choice of antibiotic followed by ofloxacin with ornidazole, cephalaxin and amoxicillin with clavulanic acid.

According to Karibasappa and Sujatha [5], transient bacteremia occurs in 5% to 80% of extractions & 30% to 88% in periodontal surgeries. It also occurs in the perspective of tooth brushing or while chewing gum, and is proportional to the trauma caused and to the number of germs colonizing the affected zone [6]. Hence to conclude dental diseases are mainly because of local factors, simple removal of the local causative factors reduces the need for prescribing antibiotics significantly. In spite of the attentiveness on antibiotic resistance, dentists show lack of concern in reducing this crucial public health problem. Immediate constitution of hospital antibiotic committee should be done and inspecting the prescription of antibiotics are mandatory in dental hospitals and at the same time public needs to be educated at mass level against self-medication with antibiotics.

References

