

Antibiotics in dentistry: Be responsible!



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Antibiotics are being increasingly used in dentistry as well as in general medicine in many parts of the globe. They are a fast-acting and quick resource in our toolkit to help treat various oral ailments. Antibiotics are effective as a prophylactic agent, against acute infections related to endodontic or periodontal diseases, abscesses, and in chronic inflammatory conditions such as certain periodontal diseases. However, with increasing numbers of prescriptions written for antibiotics, we are also seeing a rapid rise in antibiotic resistance in many areas around the world.

The first line antibiotics that are commonly prescribed are penicillin based. When these are not effective, or even in some cases as a first line, there is often no hesitation in prescribing more advanced antibiotic regimens, with little consideration that this process is contributing to systemic and global drug resistance. Antibiotic resistance is a worldwide increasing concern that should play an important role in our prescription habits. The fact that new antibiotics are not available at the moment, together with the consistently increasing resistance rates, should serve as a red light when considering antibiotics as a dental treatment.

It is vital to review and consider several factors before prescribing antibiotics. Dental professionals should be aware of the recent guidelines regarding the need for antibiotic prophylaxis; these have been changed in the last decade to represent the global concern regarding antibiotic resistance and adverse effects. Antibiotic misuse has not developed overnight, and, therefore, strong efforts are being made to establish and continually update standards and guidelines

that justify their use. It is best practice to be aware of these changing guidelines, and to practice dentistry that ensures patient safety.

Antibiotic treatment should be restricted to the indicated conditions, such as cases that require prophylaxis, acute abscess treatment, and aggressive periodontal diseases. It should also be accompanied by the proper treatment to solve the problem from the dental and periodontal aspects. In most dental cases antibiotics will not be the definitive solution to the problem, and thus, a comprehensive treatment plan should follow, in conjunction with the prescription of the antibiotic agent.

In addition to prescribing antibiotics in avoidable situations, incorrect duration of prescription can have an equally negative effect. Awareness is needed of the shortest duration of antibiotic therapy required to have the desired effect. Administering the dose for too short or too long a time is not advisable, for the same reason of contributing to antibiotic resistance.

Even with good knowledge of the use of antibiotics and practicing safe dentistry, antibiotic misuse can occur. Patient compliance when using antibiotic therapy is a very important but neglected aspect of practice. Common antibiotic prescriptions are administered for about 1 week, with several doses per day. It is not rare for patients to forget or incorrectly ingest this regimen, further contributing to antibiotic resistance. Our role does not end when we pass the prescription to the patient; we are also responsible for educating our patients to ensure that they follow the prescribed antibiotic regimen. Any deviation from the prescribed plan should be documented.



The justified use of antibiotics and adequate dosing is crucial for effective and safe treatment. It is important to understand the repercussions of antibiotic treatment in our patients' overall health. Comprehensive understanding of disease pathogenesis, host response, and the latest evidence-based research is vital. This means taking into consideration not only our patients' oral health, but also their overall health, and our global health as well.

The medical world is constantly fighting bacterial species that are resistant to multiple antibiotics. It is in our hands to help slow this global concern, for the future of us all.

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