

Review of: "The Global Impact on Health of Dental Infections and Antibiotic Resistance:A mini Reveiw"

Juliana Portes de Oliveira¹

¹ Universidade Veiga de Almeida

Potential competing interests: No potential competing interests to declare.

This issue is very relevant, and I think it could be explored in better detail. I think that the abstract is quite too large, and the aim of the review is not clear. Furthermore, I think the subject should be more in-depth; I felt it was too superficial for the importance of the topic. Including the part that covers the microbiota involved in infections and the most commonly used antibiotics, and the resistance mechanisms linked to them. I missed the conclusion of the text and also the description of the paper's selection criteria for the literature review in the material and methods.

Below, I leave some considerations that I consider pertinent:

TITLE: I suggest changing the title to "The global impact of dental infections and antibiotic resistance: a mini-review."

ABSTRACT:

1) "A dental abscess that spreads can have serious implications that result in a high rate of morbidity and death." I suggest writing "*spreads to other anatomic spaces*" to be more clear.

2) "However, antibiotics can also have negative impacts on health, such as promoting antibiotic resistance. Antibiotic resistance refers to the phenomenon where bacteria evolve to become immune to antibiotics, making them harder to treat." I propose to rewrite as "However, antibiotics can also have negative impacts on health, such as promoting antibiotic resistance, *where bacteria become immune to the antibiotics' effects*, making the *infection* harder to treat."

3) "but also pose a significant threat to global health." The word "pose" is more commonly used as a posture or attitude for artistic purposes or character to impress. I suggest replacing this word in the abstract and along the text with "represent," "present," or "indicate."

INTRODUCTION:

4) "The most common dental infections include dental caries, periodontitis, and periapical abscesses." The periapical abscesses develop from an extensive carie lesion or periodontitis, and sometimes due to an occlusal trauma or root fracture. So I suggest rewriting the sentence as "*The most common cause of dental infections and periapical abscesses are due to dental caries and periodontitis.*"

5) "Antibiotics are often used to treat dental infections, especially those caused by bacterial infections." Antibiotics are used only to treat bacterial infections... infections from other types of microorganisms are not treated with antibiotics.

6) "This phenomenon is a global issue that affects the effectiveness of antibiotics in treating various infections." I suggest adding other papers that show the difficulty in the action of antibiotics in bacterial infections in other areas of the body, such as respiratory tract infections (superior and inferior tract) and coronary infections.

7) The 3rd, 4th, and 5th paragraphs of the introduction seem similar to me, and with repeated words. I suggest reading them and rewriting them.

8) "It has been reported that periodontal disease is the leading cause of tooth loss..." Be careful when you use periodontal disease as a synonym of periodontitis. They are not synonyms. Periodontitis is one of the periodontal diseases (always in plural).

9) "The most common type of dental infection is dental caries, which is caused by bacteria that produce acid that erodes the tooth enamel..." Nowadays, we know that there is no specific type of bacteria, but a dysbiosis of the oral microbiota that leads to microorganism selection which is able to manifest the disease. This concept applies also to periodontal diseases.

10) Endodontic lesions are the result of the evolution of caries or endoperiodontal lesions. Be careful not to mention them as a different process.

11) "Risk factors for dental infections include poor oral hygiene, a diet high in sugar and carbohydrates, and a lack of access to dental care." I suggest to look for more information about physical exercise and habits such as tabagism that we also know influence dysbiosis and predispose the development of the disease.

Best regards,