

Assessment of Aspirin and Periodontal Issues

Azheen Mohamad Mohamad Kharib*

Oral Medicine and Oral Surgery Department, Faculty of Dentistry (MedOralRes Group), University of Santiago de Compostela, Spain.

Corresponding Author: Mohamad Kharib AM

Oral Medicine and Oral Surgery Department, Faculty of Dentistry (MedOralRes Group), University of Santiago de Compostela, Spain.

Email: azheenmohamad@yahoo.com & azheenmohamad.mohamad@rai.usc.es

Article Information

Received: Jul 03, 2024

Accepted: Aug 27, 2024

Published: Sep 03, 2024

SciBase Dentistry and Oral Sciences - scibasejournals.org
Kharib AMM et al. © All rights are reserved

Citation: Mohamad Kharib AM. Assessment of Aspirin and Periodontal Issues. SciBase Dent Oral Sci. 2024; 2(2): 1014.

Abstract

An infection of the tissues that support teeth is known as periodontitis. Numerous systemic disorders can affect the periodontium in the same way that periodontitis can affect systemic health. Numerous systemic diseases, such as diabetes, hypertension, and heart problems, can affect the periodontium and, in certain cases, the oral health of the affected person.

The process by which these systemic disorders might negatively impact the periodontium should be thoroughly understood by the practitioner. As a result, in treating periodontal conditions in these individuals, additional precautions must be taken. Aspirin is a non-steroidal anti-inflammatory medication that is also used as a blood thinner by patients with polycythemia, heart bypass surgery patients, and angioplasty patients. Speaking about the dental aspects, bleeding is a common side effect of periodontal therapy treatments such as tooth scaling and flap surgeries, so extra care must be taken when treating these patients to prevent any needless complications due to excessive bleeding. The purpose of this study is to provide guidance to clinical practitioners regarding the relationship between aspirin and periodontal health and the factors that should be taken into account when treating patients with aspirin-related periodontal disease.

Keywords: Aspirin; Hemorrhage; Periodontitis; Cardiac.

Introduction

The two most prevalent pathological conditions in the fields of periodontology are gingivitis and periodontitis. An irritation that is restricted to the gingiva alone is called gingivitis; however, periodontitis is the name given to this disease entity when the gingiva's inflammation spreads to the tissues that support the teeth. Many forms of periodontitis have been recognized, including aggressive and chronic forms, as well as periodontitis as a symptom of any systemic disease [1]. Any pathogenesis that occurs in one compartment has a detrimental influence on another compartment as well, as has been the well-established confirmed fact over the years about the relationship between periodontitis and systemic disorders. Regarding the systemic manifestations of periodontal disease, it is important to note that a number of systemic conditions, such as diabetes patients taking aspirin therapy, antihypertensives, immunosuppressants, or antiepileptic medications, can affect the condition ei-

ther before, during, or after periodontal treatment [2,3]. Aspirin and Heart Problems Aspirin is the name for a class of Nonsteroidal Anti-Inflammatory Medications (NSAIDs) that are used as a blood thinner and to treat fever and mild pains. Aspirin's primary function is that of a blood thinner [4]. In previous centuries, aging has been a major contributor to the development of compromised cardiac health in older persons. However, considering the present day, sedentary lifestyles play a significant role in the poor cardiac health of many young patients. Arrhythmias and angina are heart conditions that might cause a person to go into cardiac arrest. These disorders arise from the heart's inability to supply the body with the oxygen it needs as required is unable to pump enough blood, which causes the blood to thicken. This ultimately leads to the creation of a clot, which obstructs the heart's arteries, causing a myocardial infarction, which in turn causes full cardiac arrest [5]. When a patient receives a heart problem diagnosis, the primary goal is to prevent the worst-case scenario, which can only be done by using blood thinners

to stop clots from forming. As a result, aspirin functions as a key medication due to its blood-thinning ability and is utilized as a blood thinner to stop blood clots and subsequent total cardiac arrest [6,7].

Treatment for periodontal disease and aspirin

Due to aspirin's weakening of blood flow, cardiac patients taking this medication run a serious risk of bleeding during and after periodontal therapy. Therefore, more care must be given to these patients in order to safeguard them from potentially fatal situations. Given that the care of periodontal disease includes both surgical and non-surgical procedures (such as flap surgery, regenerative surgery, resection surgery, and mucogingival surgery), hence the most frequent factor to be taken into account during this therapy is the possibility of bleeding both during and after surgery. Gingival inflammation can induce bleeding, or it can be systemic due to a number of medical diseases such as diabetes mellitus, hypertension, angioplasty, and heart bypass surgery (because most of these patients are on aspirin, a blood thinner) [8,9]. Speaking specifically to aspirin users, there is a significant risk of bleeding during or after surgery if the aspirin dosage is not changed or if the aspirin is not stopped before receiving treatment. For people taking aspirin, successful periodontal therapy requires additional precautions to ensure that the patient is not jeopardizing their life [10,11]. Therefore, a few factors need to be kept in mind when planning the periodontal therapy, such as: A proper physician's consent must be obtained after a thorough medical history regarding the patient's cardiac condition and use of aspirin. The consent should include a proper explanation of the patient's periodontal condition, the treatment the dentist will perform, and any potential risks associated with the treatment in relation to aspirin [12,13]. Let us know if the aspirin dosage can be changed or if it can be discontinued for a certain number of days before the periodontal therapy [12,13].

The doctor can usually change the aspirin dosage or cease it before beginning periodontal therapy. However, what would happen if the doctor refused to change the patient's aspirin dosage or if it was not possible to cease taking aspirin for a few days? Both situations might endanger a person's life. However, the patient's therapy for their periodontal condition continues to be crucial. In that scenario, a dentist should use the International Normalized Ratio, or INR ratio, which is equal to the Prothrombin time of the patient/Actual Prothrombin time [11].

Conclusion

A systemic infection is a periodontal infection. Numerous studies conducted have demonstrated that it has the potential to travel quickly from the oral cavity into the systemic circulation.

The historical period similar to how periodontal disease affects systemic disorders, many systemic conditions-such as multiple abscesses, excessive bleeding, delayed wound healing, and gingiva inflammation-also have an impact on the periodontium. Among them, patients receiving aspirin therapy is one of the systemic disorders that may affect periodontal care both during and after surgery. As an expert in gums, periodontists need to be aware that these patients may experience severe bleeding during and after surgery. In these circumstances

For periodontal therapy to be successful and to avoid endangering the patient's life, the aspirin dosage must be adjusted. Periodontists need to be aware of the international normalized ratio and its value in order to properly determine the course of treatment for periodontal disease. They also need to know what to do if the dosage of aspirin cannot be changed or halted for a few days. In order to effectively treat aspirin-using individuals who also have periodontal issues, the doctor and the patient should maintain a close channel of communication. Only a periodontist or periodontist should be able to manage patients who are periodontally compromised and taking aspirin; the physician cannot be the one to worry about changing or stopping the aspirin. This is because systemic and oral health are interdependent and should be maintained in good condition.

References

1. Holmstrup P, Plemons J, Meyle J. Non-plaque-induced gingival diseases. *J Periodontol*. 2018; 89(S1).
2. Arigbede A, Babatope Bo, Bamidele Mk. Periodontitis and systemic diseases: A literature review. *J Indian Soc Periodontol*. 2012; 16(4): 487.
3. Abdulkareem AA, Al-Taweel FB, Al-Sharqi AJB, Gul SS, Sha A, et al. Current concepts in the pathogenesis of periodontitis: From symbiosis to dysbiosis. *J Oral Microbiol*. 2023; 15(1).
4. Becker DE. Antithrombotic Drugs: Pharmacology and Implications for Dental Practice. *Anesth Prog*. 2013; 60(2): 72-80.
5. Hermiz C, Sedhai YR. Angina. 2024.
6. Lewis HD, Davis JW, Archibald DG, Steinke WE, Smitherman TC, et al. Protective Effects of Aspirin against Acute Myocardial Infarction and Death in Men with Unstable Angina. *N Engl J Med*. 1983; 309(7): 396-403.
7. Miner J, Hoffhines A. The discovery of aspirin's antithrombotic effects. *Texas Hear Inst J*. 2007; 34(2): 179-86.
8. Rensing B. Coronary restenosis elimination with a sirolimus eluting stent; First European human experience with 6-month angiographic and intravascular ultrasonic follow-up. *Eur Heart J*. 2001; 22(22): 2125-30.
9. Nibali L, Gkraniyas N, Mainas G, Di Pino A. Periodontitis and implant complications in diabetes. *Periodontol 2000*. 2022; 90(1): 88-105.
10. Alghamdi AA, Moussa F, Fremes SE. Does the Use of Preoperative Aspirin Increase the Risk of Bleeding in Patients Undergoing Coronary Artery Bypass Grafting Surgery? Systematic Review and Meta-Analysis. *J Card Surg*. 2007; 22(3): 247-56.
11. Verma G. Dental Extraction Can Be Performed Safely in Patients on Aspirin Therapy: A Timely Reminder. *ISRN Dent*. 2014; 2014: 1-11.
12. Harder S, Klinkhardt U, Alvarez JM. Avoidance of Bleeding During Surgery in Patients Receiving Anticoagulant and/or Antiplatelet Therapy. *Clin Pharmacokinet*. 2004; 43(14): 963-81.
13. Li C, Lv Z, Shi Z, Zhu Y, Wu Y, et al. Periodontal therapy for the management of cardiovascular disease in patients with chronic periodontitis. *Cochrane Database Syst Rev*. 2017.