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No Antibiotics for Tooth Extractions in Diabetic Patients

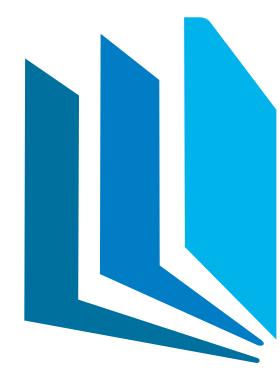
Alexandre Frascino*

Diabetes is a disease associated with increased surgical complications and deficient tissue repair. However, recent publications claim that non-compensated diabetic patients have not increased risk for postoperative complications in simple tooth extractions. The tissue repair is a complex sequence of cellular and molecular events that act in concert to restore the structures damaged by trauma and disease and is critical to the maintenance of homeostasis of living organisms. All surgical procedures must be based on the best local and systemic health conditions for the repair processes to restore the integrity and prior tissue architecture [1].

Hyperglycemia as a result of Diabetes Mellitus (DM) is related to changes in bone formation, delayed fracture healing and tissue repair deficient. These complications have in common the increased intracellular oxidative stress and overproduction of reactive oxygen species (Reactive Oxygen Species - ROS) [2]. Four basic mechanisms are responsible for an increased production of ROS. he first is the increase of polyol pathway flux; characterized by the second increase in the advanced glycosylation end products (advanced glycation end-products, AGEs); based on the third activation of protein kinase C isoforms (protein kinase C, PKC) and finally the increase of hexosamine athway (hexosamine biosynthesis pathway - BPH) [3,4]. There is a consensus among authors that the repair of dental alveoli in hyperglycemia conditions presents a deficit at all stages of tissue repair. However, clinically it is observed that despite the delay in wound repair, there is no increased risk of postoperative complications like alveolitis, postsurgical infections or exposure of the bone tissue, which is manifested as pain, redness and fever [5]. Thus, there is no consensus in the literature to recommend the use of antibiotics in order to prevent infections in diabetic patients undergoing simple extractions; the dentist should monitor the progress of patient throughout the postoperative period [6].

References

- Younis WH, Al-Rawi NH, Mohamed MA, Yaseen NY. Molecular events on tooth socket healing in diabetic rabbits (2013) Br J Oral Maxillofac Surg 51:932-936.
- Wang Y, Wan C, Deng L, Liu X, Cao X, et al. The hypoxia inducible factor alpha pathway couples angiogenesis to osteogenesis during skeletal development (2007) J Clin Invest 117:1616-1626.
- Thrailkill KM, Lumpkin CK Jr, Bunn RC, Kemp SF, Fowlkes JL. Is insulin ananabolic agent in bone?
 Dissecting the diabetic bone for clues (2005) Am J Physiol Endocrinol Metab 289:e735-745.
- Brownlee M. The pathobiology of diabetic complications: a unifying mechanism (2005) Diabetes 54:1615-1625.
- Samee M, Kasugai S, Kondo H, Ohya K, Shimokawa H, et al. Bone morphogenetic protein-2 (BMP-2) and vascular endothelial growth factor (VEGF) transfection to human periosteal cells enhances osteoblast differentiation and bone formation (2008) J Pharmacol Sci 108:18-31.
- Dubey RK, Gupta DK, Singh AK. Dental implant survival in diabetic patients; review and recommendations (2013) Natl J Maxillofac Surg 4:142-150.



Affiliation:

School of Dentistry, University of Sao Paulo,

*Corresponding author:

Alexandre Frascino, School of Dentistry, University of Sao Paulo, Brazil, Tel: +55 11 994 258 561

E-mail: aledefra@gmail.com

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