

Oral Surgery in High-Risk Patients: A Focus on Drug Interactions and Safety

Georgia Stavropoulou*

Department of Orthodontics, University of Athens, Athens, Greece

Received: 29-Nov-2024, Manuscript No. OHDM-24-28398; **Editor assigned:** 02-Dec-2024, PreQC No. OHDM-24-28398 (PQ); **Reviewed:** 16-Dec-2024, QC No. OHDM-24-28398; **Revised:** 23-Dec-2024, Manuscript No. OHDM-24-28398 (R); **Published:** 30-Dec-2024, DOI: 10.35248/2247-2452.24.23.1127

Description

Oral surgery in patients who are at high risk for complications related to drug intake presents a unique challenge for dental professionals. These individuals often take medications that can affect various physiological processes, such as clotting, immune function and wound healing, which can impact the outcome of surgical procedures [1]. Understanding the interaction between drugs and the surgical process is essential in managing these patients effectively and minimizing potential risks [2].

Patients who are on anticoagulant medications, such as warfarin or direct oral anticoagulants, require special attention before undergoing oral surgery [3,4]. These medications are designed to prevent blood clot formation, but they also increase the risk of bleeding during and after surgery. To minimize this risk, it is essential to assess the patient's INR (International Normalized Ratio) levels and consult with the prescribing physician about the possibility of temporarily discontinuing or bridging the medication prior to surgery. In some cases, the use of local hemostatic agents or suturing techniques may be employed to control bleeding and close monitoring of the patient after the procedure is required to ensure proper clot formation.

Similarly, patients who are on immunosuppressive drugs, such as corticosteroids or biologics, are at an elevated risk for infection and delayed wound healing. These drugs suppress the immune system, which can impair the body's ability to fight off infections and repair damaged tissue. As such, prophylactic antibiotics are often recommended to reduce the risk of postoperative infections. Additionally, the patient's history of drug use should be carefully reviewed to determine the need for adjustments in their medication regimen before the surgery. In some cases, dental surgeons may choose to delay the procedure until the patient's immune function has been adequately optimized [5,6].

Another category of patients that requires careful consideration are those taking medications for metabolic or endocrine disorders, such as thyroid medications or diabetic treatments. These conditions can affect anesthesia metabolism and increase the risk of hypoglycemia or hyperglycemia during surgery. For diabetic patients, it is important to maintain tight control of blood glucose levels before, during and after the procedure. In certain cases, the timing of surgery may need to be adjusted to coincide with the patient's medication schedule and ensure optimal glucose regulation [7,8].

The use of analgesics and sedatives also warrants attention. Nonsteroidal Anti-Inflammatory Drugs (NSAIDs) and opioids, commonly prescribed for pain management, can influence the healing process and interact with other medications the patient may be taking. NSAIDs, for example, can affect platelet

function, exacerbating the risk of bleeding, while opioids can depress the respiratory system and cause sedation, particularly when combined with other sedatives. Careful selection of pain management options and close monitoring during recovery are essential to avoid these complications [9].

Moreover, patients with a history of polypharmacy, or those taking multiple medications, pose a higher risk of drug-drug interactions, which can complicate the surgical process. These interactions may either diminish the effectiveness of the medications or increase the likelihood of adverse effects, such as excessive bleeding or altered anesthetic responses. A thorough review of all medications, including over-the-counter drugs and supplements, is necessary to identify potential interactions and adjust the treatment plan accordingly.

Patient education and communication play significant roles in the management of high-risk surgical patients. Clear instructions regarding medication adjustments before surgery, as well as the importance of adhering to prescribed regimens and informing the dental team about all medications being taken are essential components of the preoperative process. Patients should be encouraged to provide a complete list of their medications and any relevant medical conditions to allow for a tailored approach to care [10].

In conclusion, oral surgery in patients at high risk due to drug intake requires meticulous planning, a collaborative approach with other healthcare providers and careful consideration of the patient's overall health status. By addressing potential drug interactions and modifying the surgical plan accordingly, dental professionals can significantly reduce the risks associated with oral surgery in these patients. Proper medication management, alongside close postoperative monitoring and patient education, ensures optimal outcomes and reduces the likelihood of complications.

References

1. Morgado-Sevillano D, Rodríguez-Molinero J, García-Bravo C, Peña-Cardelles JF, Ruiz-Roca JA, García-Guerrero I, et al. Oral surgery considerations in patients at high-risk of complications related to drug intake: A systematic review. *Saudi Dent J.* 2024;36(12):1503-8.
2. Angerame D, de Biasi M, Kalaj B, Maglione M. Surgical extrusion: A dental technique. *J Prosthet Dent.* 2021;125(1):23-28.
3. Minno A, Frigerio B, Spadarella G, Ravani A, Sansaro D, Amato M, et al. Old and new oral anticoagulants: Food, herbal medicines and drug interactions. *Blood Rev.* 2017;31(4):193-203.
4. Cabezas-Calderon V, Freixas PB, Briones VG. Direct-acting Oral Anticoagulants in dermatologic Surgery. *Actas*

Dermosifiliogr (Engl Ed). 2020;111(5):357-363.

5. Bryant C. Oral surgery: Considerations for the medically complex patient. *Prim Dent J*. 2022;11(3):71-79.

6. Joachim MV, Miloro M. The evolution of virtual surgical planning in Craniomaxillofacial surgery: A comprehensive review. *J Oral Maxillofac Surg*. 2024;S0278-2391(24)00926-1.

7. Ji YD, Dodson TB. Enhanced recovery after surgery pathways in oral and maxillofacial surgery. *J Oral Maxillofac Surg*. 2021;79(12):2380-1.

8. Wang F, Cai X, Sun W, Chen C, Meng L. Application

of dynamic navigation technology in oral and maxillofacial surgery. *Clin Oral Investig*. 2025;29(1):1-5.

9. Pedroletti F, Johnson BS, McCain JP. Endoscopic techniques in oral and maxillofacial surgery. *Oral and Maxillofacial Surgery Clinics*. 2010;22(1):169-82.

10. Prevost R, Feugueur G, Moizan H, Keribin P, Kimakhe J, Veysiere A. Management of patients with sickle cell disease in oral surgery. Literature review and update. *J Stomatol Oral Maxillofac Surg*. 2018;119(6):493-7.