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Complications in Minor Oral Surgery

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ABSTRACT
Minor oral surgery is common in dentistry, however, even though it is considered safe and low risk, complications such as pain, edema, bleeding, infection, and nerve damage can occur. The dental surgeon must be aware of possible complications, identify them quickly and perform postoperative follow-up to ensure the safety and efficiency of the procedure. The general objective of the present study was to discuss complications in minor oral surgery. The type of research carried out in this work was a Literature Review, in which it was carried out a consultation of books, dissertations and selected scientific articles through a search in the following databases: *Google Academy, Scientific Electronic Library Online* (Scielo). Minor oral surgery covers routine and less complex dental procedures, but are subject to various risks and complications. Prevention of these complications involves detailed surgical planning, strict adherence to biosafety standards, precise surgical skill, and appropriate treatment in case of complications.

Keywords: Oral Surgery. Minor. Complications. Treatments.

1 INTRODUCTION

Minor oral surgery is a common procedure in dentistry and can be performed in offices or clinics. Although it is considered a safe and low-risk technique, complications can occur during or after the procedure. Complications can be classified as immediate or delayed and include pain, edema, bleeding, infection, and nerve damage.

It is important for the dental surgeon to be aware of the potential complications and know how to identify and treat them appropriately. Prevention is essential to minimize the occurrence of complications in minor oral surgery, so rapid identification is extremely important.

The rationale for the study of complications in minor oral surgery is related to the need to provide a safe and effective treatment to the patient. Knowledge of potential complications and the ability to prevent and treat them appropriately are essential to ensure the success of the procedure and patient satisfaction. In addition, the study of complications in minor oral surgery can contribute to the improvement of clinical practice, providing greater safety and efficiency in treatment.

Complications in minor oral surgery are a relevant topic in dentistry, since they can occur even in procedures considered simple and low-risk. These complications can affect the patient's health and well-being, as well as the success of treatment. Thus, the following problem question arose: What are the most effective strategies to prevent and treat complications in minor oral surgery?

The general objective of the present study was to discuss complications in minor oral surgery. For this, the specific objectives were: To conceptualize minor surgery, to describe the complications that can occur in minor surgery and to describe how all complications can be avoided and treated.

2 DEVELOPMENT

2.1 METHODOLOGY

The type of research carried out in this work was a Literature Review, in which it was carried out a consultation of books, dissertations and selected scientific articles through a search in the following databases: *Google Academy, Scientific Electronic Library Online* (Scielo). The period of the articles researched was the works published in the last *five* years. The keywords used were: Oral Surgery. Minor. Complications. Treatments.

2.2 RESULTS AND DISCUSSION

Minor surgery is a surgical procedure performed on an outpatient basis, with the aim of solving health problems that do not require major surgical intervention. It is usually performed under local anesthesia and does not require hospitalization. The term "minor" refers to the fact that the surgical intervention is considered to be of low risk, with less complexity and a shorter recovery time (CARVALHO; PAULA, 2021).

Minor surgery can be performed by different medical and dental specialties, depending on the type of intervention required. This technique can be used in various situations, such as removing cysts, benign tumors, impacted teeth, among others. Minor surgery is also often used in cosmetic procedures, such as removing warts and moles. Minor surgery is considered a safe technique, but as with any surgical procedure, there are associated risks (GUIMARÃES, 2023).

Complications can include pain, infection, bleeding, inadequate healing, among others. It is important that the patient is informed about the risks and benefits of minor surgery before performing the procedure. Minor surgery is a technique that can be performed in different settings, such as doctors' offices, clinics, and hospitals (MATEUS, 2022).

It is important that the environment is suitable and equipped with the necessary materials and instruments to perform the surgery. In addition, it is essential that the professional who performs the procedure has the necessary qualification to perform the technique safely and effectively. Minor surgery can be performed with different types of anesthesia, such as local, conscious sedation, and general anesthesia (SÁ, 2022).

The choice of anesthesia depends on the type of procedure and the patient's health conditions. It is important that the professional responsible for the surgery is aware of the possible adverse reactions to anesthesia and knows how to treat them properly. Minor surgery is a procedure that can

be performed on patients of different ages, from children to the elderly. However, in patients with compromised health conditions, such as diabetes and heart disease, the procedure may be considered at higher risk (SANTOS, 2022).

In these cases, it is important that the patient is properly evaluated and monitored before and after surgery. Minor surgery is a technique that can have significant benefits for the patient's health and well-being. However, it is important that the patient is aware of the associated risks and knows how to properly prepare for the procedure (GUIMARÃES, 2023).

In addition, the professional responsible for the surgery must have the necessary qualification to perform the technique safely and effectively. Finally, it is important to note that minor surgery is a technique that should be performed only when necessary and when the benefits outweigh the risks. The patient should be informed about all available treatment options and have the freedom to choose the option that best suits their needs and health conditions (MATEUS, 2022).

Before performing a minor oral surgery procedure, it is important that the dental surgeon requests additional tests to assess the patient's health and identify possible risk factors that may interfere with the performance of the surgery. Some of the most common tests include:

a) Blood tests: Blood tests can help assess the patient's kidney, liver, and endocrine function, as well as check for the presence of infections or inflammation (GARCIA et al., 2020).
b) X-rays: X-rays are important to assess the bone structure and position of the teeth that will be removed. X-rays can help identify the presence of cysts, tumors, or other abnormalities that may interfere with surgery (HUPP; ELLIS III; TUCKER, 2021).
c) Electrocardiogram: in some cases, the dental surgeon may order an electrocardiogram to assess the patient's cardiovascular health and identify possible risks to anesthesia (DA SILVA et al., 2018).
d) CT scan: CT scan is a more advanced imaging technique that can help to more accurately assess the bone structure and position of the teeth. This test is more indicated in cases of more complex surgeries (HUPP; ELLIS III; TUCKER, 2021).
e) Coagulation tests: in patients who use anticoagulants or who have coagulation problems, the dentist may order coagulation tests to assess the risk of bleeding during surgery (GARCIA et al., 2020).
f) Medical evaluation: in cases of patients with chronic diseases or compromised health conditions, it is important that the dental surgeon requests a medical evaluation before surgery. This can help identify possible risks and guide surgery planning (CARVALHO; PAULA, 2021).

In summary, before performing a minor oral surgery procedure, the dental surgeon should request additional tests to assess the patient's general health and identify possible risk factors. This helps to ensure the safety and effectiveness of the surgery, reducing the risks of complications during and after the procedure (GUIMARÃES, 2023).

Minor oral surgery is a common dental procedure that involves the removal of wisdom teeth, impacted teeth, cysts, among other interventions. Although it is considered a simple surgery, like any surgical procedure, minor oral surgery can present complications. Some of the most common complications include:

a) Excessive bleeding: it can occur due to poor blood clotting, injury to the gum tissue, or the artery that irrigates the region. Excessive bleeding can be controlled by applying pressure to the affected area or by using sutures (HUPP; ELLIS III; TUCKER, 2021).

b) Infection: This can occur due to a lack of proper hygiene or a compromised immune system. The infection can cause swelling, pain, and fever. Treatment usually involves the use of antibiotics (GARCIA et al., 2020).

c) Nerve damage: This can occur when nerves are injured during surgery. Symptoms may include numbness, tingling, a feeling of electric shock, or pain. Treatment may involve medication and, in more severe cases, reconstructive surgery (DA SILVA et al., 2018).

d) Damage to adjacent tissues: This can occur when surrounding tissues are damaged during surgery. This can lead to inadequate healing and an increased risk of infection (GARCIA et al., 2020).

e) Alveolitis: is an inflammation of bone and gum tissue that occurs after tooth extraction. It can be caused by a bacterial infection or excessive bone exposure. Treatment involves cleaning the affected area and, in some cases, applying topical medication (HUPP; ELLIS III; TUCKER, 2021).

f) Allergic reaction: can occur in patients with hypersensitivity to drugs or materials used during surgery. Symptoms may include rash, swelling, difficulty breathing, and anaphylactic shock. Treatment involves the immediate administration of medications to relieve symptoms (GARCIA et al., 2020).

g) Bone fracture: This can occur during tooth extraction, especially if the tooth is too stuck or the root is curved. Bone fractures may require more extensive and prolonged treatment (CARVALHO; PAULA, 2021).

h) Adjacent tooth dislocation: This can occur during the removal of an impacted or retained tooth. This complication can result in mobility, pain, and possible loss of the adjacent tooth. It is usually treated with immobilization and careful monitoring to ensure complete recovery (GARCIA et al., 2020).

i) Difficulty opening the mouth (trismus): It can occur due to inflammation, bruising, or muscle injuries. Trismus can interfere with daily activities like talking and eating. Treatment involves physical therapy, local heat, and, in some cases, muscle relaxant medication (HUPP; ELLIS III; TUCKER, 2021)

j) Suture dehiscence: can occur when sutures are not properly maintained, resulting in separation of the wound edges, thus prolonging the healing period. Treatment involves cleaning the area, possibly reapplying sutures, and administering antibiotics to prevent infection (GARCIA et al., 2020).

k) TMD: may be exacerbated by minor oral surgery, especially in patients who already have symptoms. This complication is characterized by pain in the temporomandibular joint, difficulty opening the mouth, and joint noises. Treatment may involve physical therapy, occlusal splints and, in more severe cases, surgical intervention (DA SILVA et al., 2018).

l) Loss of vitality of adjacent teeth: This can occur if there are injuries to the blood vessels that feed the adjacent tooth. This can result in death of the tooth pulp, requiring a subsequent root canal treatment or even the loss of the affected tooth (HUPP; ELLIS III; TUCKER, 2021).

Therefore, minor oral surgery may present complications that vary in severity and may affect the outcome of the surgery and the patient's recovery. It is important for the dental surgeon to be aware of these potential complications and take the necessary steps to avoid or treat them appropriately, ensuring the safety and well-being of the patient.

To prevent complications in minor dental surgery, it is essential that the dental surgeon makes a complete evaluation of the patient before surgery. It is necessary to collect information about the patient's medical and dental history, including health conditions, allergies, and medications in use. In addition, it is important that the professional follows all biosafety standards, with the use of personal protective equipment and proper sterilization of the instruments (GUIMARÃES, 2023).

During surgery, it is essential that the dentist has skill and precision in movements, avoiding injuries to adjacent structures, such as nerves and blood vessels. It is also important that hemorrhage control is carried out with caution and that adequate suturing is made to prevent the risk of infections (SÁ, 2022).

To treat the complications that may arise, it is essential that the dental surgeon has the knowledge and skill to perform the necessary procedures. In the case of hemorrhages, for example, it may be necessary to apply hemostasis techniques, such as local compression or the use of hemostatic agents. In case of infections, it may be necessary to use antibiotics or drain abscesses (SANTOS, 2022).

For effective management of complications such as adjacent tooth dislocation, the use of appropriate instruments and minimally invasive techniques during extraction may be considered. In cases where tooth mobility occurs, immobilization of the tooth, accompanied by careful monitoring, can help preserve the vitality of the adjacent tooth (GARCIA et al., 2020).

As for trismus, prevention is of paramount importance and can be achieved through the application of gentle techniques and minimization of surgical trauma. Nonsteroidal anti-inflammatory drugs can be used before and after the procedure to reduce inflammation. In treatment, physical therapy and thermotherapy can help to improve range of motion (HUPP; ELLIS III; TUCKER, 2021).

Suture dehiscence can be prevented by maintaining proper suturing technique and guiding the patient to avoid harmful forces that can compromise the healing area, such as smoking and inadequate oral hygiene. If dehiscence occurs, cleaning the site, a new suture and the administration of antibiotics may be necessary (DA SILVA et al., 2018).

Temporomandibular disorder (TMD) can be prevented by performing a complete preoperative evaluation. If a patient already has TMD symptoms, steps can be taken to minimize trauma to the joint, such as applying minimally invasive surgical techniques and limiting the duration of the procedure. Physical therapy and the application of occlusal devices can be beneficial in the treatment of this condition (GARCIA et al., 2020).

Preventing loss of vitality from adjacent teeth involves careful surgical planning and meticulous technique to minimize vascular trauma. If injury occurs, endodontic treatment may be indicated to save the tooth. In short, the prevention and appropriate treatment of complications in minor oral surgery involve not only refined technical skills, but also careful postoperative follow-up and management (HUPP; ELLIS III; TUCKER, 2021).

Another form of treatment is the follow-up of the patient after surgery, with guidelines for the correct hygiene of the operated region and for the use of prescribed medications. In more severe cases, it may be necessary to refer the patient to a health unit with greater complexity, such as a hospital (DA SILVA et al., 2018).

Preventing complications is a crucial point in any surgical procedure, including minor dental surgery. To avoid them, it is necessary for the dental surgeon to always be aware of the patient's medical and dental history, as well as compliance with biosafety standards (SANTOS, 2022).

During surgery, skill and precision in movements are essential to avoid injury to adjacent structures, in addition to careful control of hemorrhage and adequate suturing. If complications occur, it is essential that the dental surgeon has the necessary knowledge to deal with the situation. This includes the use of hemostasis techniques for bleeding control and the treatment of infections with antibiotics or drainage of abscesses (MATEUS, 2022).

Adequate follow-up of the patient after surgery, with guidelines for the hygiene of the operated region and the use of prescribed medications, is also important. However, the best way to treat complications is to prevent them. Proper follow-up and care of the patient before, during, and after surgery are essential to avoid future problems. Attention to biosafety standards and appropriate surgical techniques are also essential for the success of the procedure (SÁ, 2022).

Finally, it is important to highlight that the prevention of complications in minor dental surgery is the best way to avoid additional treatments and losses to the patient. Therefore, proper monitoring and care with the surgical technique are essential for the success of the procedure and for the patient's health.

3 CONCLUSION

Minor oral surgery is a set of dental procedures that, despite being routine and less complex, are not free of risks and complications. These can manifest in various ways, from excessive bleeding, infection, damage to nerves and adjacent tissues, alveolitis, allergic reactions, bone fractures, to dislocation of adjacent teeth, trismus, suture dehiscence, temporomandibular dysfunction and loss of vitality of nearby teeth.

To avoid these complications, it is essential to have adequate surgical planning, which includes the collection of detailed information about the patient's medical and dental history. In addition, biosafety standards must be strictly followed to reduce the risk of infections. During the procedure, the dental surgeon must exercise skill and precision in movements, avoiding injuries to adjacent structures and controlling bleeding appropriately.

In the event of complications, it is essential that the professional has the knowledge and skill to perform the necessary procedures for the control and treatment of these adverse events. This can include hemostasis techniques, antibiotic use, abscess drainage, physical therapy, endodontic therapy, among others.

Therefore, despite the potential complications inherent in minor oral surgery, these can be effectively prevented and treated through a combination of careful planning, meticulous surgical technique, adherence to biosafety standards, close postoperative monitoring, and competent complication management. Through these measures, it is possible to ensure the success of the surgical procedure and the well-being of the patient.

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