

Managing Complications in Endosseous Implant Dentistry

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ABOUT THE STUDY

Endosseous implants have become a popular and effective treatment option for replacing missing teeth and restoring oral function. These dental implants are placed directly into the jawbone, providing a stable foundation for artificial teeth. While endosseous implant dentistry has a high success rate, complications can arise in certain cases. This article aims to explore the common complications encountered in endosseous implant dentistry and discuss the strategies for managing these complications effectively.

Peri-implantitis

Peri-implantitis is one of the most prevalent complications associated with endosseous implants. It refers to inflammation and infection of the tissues surrounding the implant, which can lead to bone loss and implant failure if left untreated. The management of peri-implantitis involves thorough debridement of the affected area, antimicrobial therapy, and the use of regenerative techniques to promote tissue healing and bone regeneration.

Implant failure

Implant failure can occur due to various reasons, including poor osseointegration, improper implant positioning, inadequate bone quality, or excessive loading of the implant. Managing implant failure requires a careful evaluation of the underlying cause. In some cases, salvage procedures such as bone grafting or implant repositioning may be possible to salvage the implant. However, in severe cases, implant removal and replacement may be necessary.

Prosthetic complications

Complications related to the prosthetic component of the implant can include screw loosening, fractures of the prosthetic framework, or improper fit of the restoration. These complications can affect the stability and functionality of the implant-supported restoration. Managing prosthetic complications involves assessing the cause of the problem and making appropriate

adjustments or replacements to ensure optimal fit and function of the prosthesis.

Nerve injury

Nerve injury can occur during implant placement, particularly in the mandibular region where the inferior alveolar nerve resides. Symptoms of nerve injury can range from temporary numbness to persistent sensory disturbances. Early recognition and appropriate management are crucial in minimizing the risk of permanent nerve damage. Treatment options may include observation, medication, or referral to a specialist for further evaluation and intervention.

Infection

Infections can occur at any stage of the implant treatment process. Proper surgical techniques, strict adherence to aseptic protocols, and post-operative care are essential in preventing and managing implant-related infections. In cases of localized infections, surgical debridement and antimicrobial therapy may be necessary. Systemic infections may require a coordinated approach with medical professionals to ensure comprehensive management.

Allergic reactions

Some patients may develop allergic reactions to the materials used in the implant components, such as titanium or the restoration materials. Allergic reactions can manifest as localized inflammation, discomfort, or systemic symptoms. Identifying the allergic trigger and replacing the implant components with alternative materials is essential in managing allergic reactions in implant dentistry.

Esthetic complications

Achieving optimal esthetics is a significant goal in implant dentistry. Esthetic complications can arise due to implant malpositioning, inappropriate restoration design, or soft tissue deficiencies. Managing esthetic complications involves a thorough assessment of the underlying causes and implementing

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appropriate corrective measures, such as orthodontic treatment, soft tissue grafting, or modification of the prosthetic restoration.

Occlusal problems

Occlusal problems, such as excessive forces on the implant or inadequate occlusal adjustments, can lead to implant overload, implant loosening, or restoration fractures. Proper occlusal analysis, adjustment, and occlusal splint therapy can help manage occlusal problems and prevent further complications.

Sinus complications

Implants placed in the posterior maxilla may be associated with complications involving the maxillary sinus. Sinus complications can include sinus membrane perforation during implant placement or sinus infections. Managing sinus complications requires immediate recognition and appropriate management, which may involve sinus membrane repair or referral to an oral and maxillofacial specialist.

Maintenance and follow-up

Regular maintenance and follow-up are vital in managing complications in endosseous implant dentistry. Patients should receive thorough oral hygiene instructions, periodic professional cleanings, and routine check-ups to monitor the health of the implant and surrounding tissues. Early detection of complications allows for timely intervention and improved outcomes.

While endosseous implant dentistry offers an excellent solution for tooth replacement, complications can occur. Successful management of these complications requires a comprehensive understanding of the underlying causes, prompt recognition, and appropriate intervention. With proper planning, meticulous execution, and diligent post-operative care, the majority of complications in endosseous implant dentistry can be effectively managed, leading to long-term implant success and patient satisfaction.