

Assessment of Clinical Complications in Patients with Implant-Supported Dentures

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Abstract

Partial or complete absence of teeth is a serious problem for both dentists and their patients. Implantation of missing teeth is a reliable way to restore incomplete dentition, significantly improving the quality of life of patients. Despite the wide range of implant-based prosthetics, existing methods and materials do not exclude cases of early and late complications. The premise for the use of orthopedic structures based on dental implants is the high aesthetic, functional, articulatory aspects of their use. However, an analysis of modern literature sources shows that orthopedic rehabilitation of patients with missing teeth by storing crowns based on dental implants has a fairly high percentage of complications. Tooth loss can negatively affect the aesthetics of the face, affect the functions of speech and chewing.

Keywords:

Introduction



Removable prosthetics is a common type of treatment for partial adentia. Based on the physiological, anatomical and psychological needs of the patient, diagnosis and subsequent manufacture of a dental prosthesis can significantly improve the quality of life of patients and positively affect the life expectancy of the elderly population. Nevertheless, some patients are dissatisfied after the treatment and cannot use their removable prostheses. The most common problems include increased salivation in the first 72 hours, pain and discomfort, as well as lack of

stability and retention. In the structure of dental orthopedic care, the number of patients in need of prosthetics with removable dentures is steadily increasing. When choosing a basic material as a replacement and restorative structure, which serves as a favorable basis for the colonization of microorganisms, the dentist faces the question of preventing complications of the inflammatory, dysbiotic nature of the oral mucosa and atrophic processes occurring under a denture. In solving this problem, hygienic maintenance of manufactured orthopedic structures with the help of special cleaning and disinfectants plays an important role. To date, numerous studies confirm that they do not meet the high, high-quality and modern requirements of dental materials science and orthopedic dentistry. Orthopedic dentists have increased interest in using medicines with antihistamines, immunomodulatory, anti-inflammatory, and antimicrobial properties for therapeutic and prophylactic purposes to improve the condition of organs and tissues of the oral cavity after prosthetics with removable prostheses of various designs. Bio-soluble medicinal films have proven themselves positively in the preventive direction after orthopedic treatment. The adhesive biofilm has an excellent feature with a significant anti-inflammatory effect, confirmed by microbiological and clinical indicators.

The aim of the study was to assess the complications of implant-supported prosthetics in a clinical setting, as well as to assess the complications of problems reported by patients.



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Materials and Methods

The study involved 40 patients with partial or complete adentia. A total of 162 implants were installed: 99 in the upper jaw and 63 in the lower jaw. Dynamic follow-up was carried out after 12, 24, 36 and 48 months. Complications such as mucositis, loss of retention, weakening of the screw fixation, fracture of the ceramic part of the denture were recorded. The degree of patient

satisfaction was assessed before the installation of the denture and 4 years after by the questionnaire method. The data analysis was carried out using a regression analysis of proportional Coke risks.

Results

The average implantation success rate was 98.14%. The loss rate of dental implants installed in the upper jaw area was 0.62%, in the lower jaw area – 1.26%. The most common complications of prosthetics were: loss of retention, mucositis, weakening of the screw fixation of the abutment and fracture of the base of the prosthesis.

Complications of non-removable prosthetics were less common, with the exception of fractures in the area of the ceramic prosthesis. During the 4-year follow-up period, fractures in the dentition of the removable denture were not observed. There was no statistically significant difference in the incidence of complications between the 1st and 4th years of operation.

The risk of retention loss in removable dentures is 56.8% higher than in non-removable dentures. The risk of developing mucositis during removable prosthetics on implants was significantly higher than in the manufacture of non-removable dentures.

After a short period of adaptation, both the initial phonetic problems and problems associated with chewing food disappeared during prosthetics on implants. Prosthetics increased the degree of patient satisfaction.

Conclusions

Further studies of the causes of complications of prosthetics on implants will contribute to the prevention and increase the effectiveness of this type of treatment.

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