



ASSESSMENT OF CLINICAL COMPLICATIONS IN PATIENTS WITH IMPLANT-SUPPORTED DENTURES

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Relevance

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 partial absence of teeth by storing crowns based on dental implants has a fairly high percentage of complications. Our clinical analysis of the results of orthopedic treatment based on dental implants in the long-term aspect in 267 patients aged 20 to 60 years indicated many clinical complications. We have studied 350 orthopedic structures, as well as 885 dental implants. A systematic analysis of the obtained clinical data made it possible to identify the detected complications after orthopedic treatment based on dental implants in the long term. For example, complications such as bone atrophy at the site of dental implant placement — 95 (35.62%) patients, lack of flushing space — 68 (25.47%) patients, dental deposits — 56 (21.14%) patients, physical mobility of the installed implant — 36 (13.63%) patients, peri-implantitis were often recorded and mucositis — 33 (12.49%) patients.

The need for widespread use of various orthopedic structures in the treatment of patients with partial and complete absence of teeth is due to the absolute increase in the number of patients in need of prosthetics over the past 10 years [1, 2]. The dental market of implantation systems is widely represented by various design options that take into account the different anatomical and topographic structure of the bone tissues of the patient's jaw [3]. The key advantage of implantation prostheses is their wide adaptive capabilities, as well as high aesthetics [4, 5].



However, despite its many advantages over conventional prosthetics, prosthetics on dental implants carries a significant risk of complications [6]. A study of these literature sources, as well as clinical data accounting for errors and complications during dental implantation surgery, showed that the key complications in orthopedic rehabilitation are osteoporosis of the jaw bone tissue, unsatisfactory osteogenesis, excessive functional overload of bone tissue, the presence of severe general somatic diseases [2, 7]. Currently, dental implantation is one of the most discussed topics in the dental literature [8, 9]. However, despite this, there is still no clear systematization of the existing complications of orthopedic rehabilitation based on dental implants [10].



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.

Materials and methods

The study involved 30 patients with partial or complete adentia. A total of 152 implants were installed: 89 in the upper jaw and 53 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 97.14%. The loss rate of dental implants installed in the upper jaw area was 0.52%, in the lower jaw area – 1.46%. 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 57.8% 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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