



THE CONDITION OF NON-REMOVABLE DENTURES AND SURROUNDING GUMS IN SUPPORTING TEETH AND IMPLANTS IS DETERMINED IN THE PRESENCE OF CRUSHED METAL AND METAL-FREE FRAMES IN THE PROSTHESIS

Turumova Marjona Bahodir qizi

Assistant of the Department Orthopedic Dentistry
Samarkand State Medical University, Samarkand, Uzbekistan

Abstract

A clinical comparison of the long-term results of non-removable prosthetics using modern structural materials was carried out: crushed and cast chrome-cobalt metal-ceramic material on the frame, pressed ceramics, ceramics made of zirconium oxide on the frame. As with prosthetics on implants, the advantages of crushed frameworks made of chromocobalt and zirconium oxide were demonstrated.

Keywords: Dentistry, prosthetics, crowns, efficiency, implants.

Introduction

In modern dentistry, there is a tendency to replace the technology of wax modeling and metal casting with the technology of milling the metal frame of the prosthesis from the factory block.[1, 3, 6, 7]. In addition, designs of metal-free prostheses are being actively introduced, which are mainly manufactured using 2 technologies: pressing and milling CAD/CAM [2,4,5]. Comparative studies of the clinical effectiveness of these fixed prosthesis designs are relevant.

The aim of the study is: to conduct a comparative analysis of the results of non-removable prosthetics using modern structural materials: cermets on crushed and cast chrome-cobalt frames, pressed ceramics, ceramics on zirconium oxide frames.





Materials and methods:

of the study the state of the gums was compared with artificial crowns around fixed dentures made of materials: –Group I – metal–ceramic crowns (61) and bridges (including 42, 119 crowns) on cast frames made of chrome-cobalt alloy - 22 people; -Group II - metal-ceramic crowns (30) and bridges (including 14, 37 crowns) on a crushed frame made of chrome–cobalt alloy – 25 people; -group III - ceramic crowns made of pressed ceramics (69) -20 people.; - Group IV – ceramic crowns (65) and bridges (including 58, 169 crowns) on a crushed zirconium oxide frame - 34 people. In addition, groups Ia, IIa, IIIA, IVa were formed, which included patients with crowns on dental titanium implants. Ia–19 people, 48 ceramic–metal crowns on a chrome-cobalt frame; IIa-14 people, 26 ceramic-metal crowns on a chrome-cobalt frame; IIIa-11 people, 27 ceramic crowns made of pressed ceramics; iva-22 people, 4 ceramic-metal crowns on a frame made of crushed zirconium oxide. pieces of a ceramic crown. Criteria of the USHPS (Ryge) system were used to assess the condition of the artificial crown (Z.V.Razumnaya, 2012). Subjective feelings of the patient, cementation, replacement of prostheses were added to the criteria. Among hygienic and periodontal indicators, oral hygiene indicators J.C.Green, J.R.Vermillion (OHI-S), Palm-modified papillary-limbic-alveolar index (PMA), gingivitis index (GI) H.loe, J.Silness are used. The results of the study and their arguments According to a 3-year analysis of the condition of artificial crowns and surrounding tissues in supporting teeth and implants, various indicators of the effectiveness of metal-ceramic and metal-free ceramic crowns were revealed. The number of complications averaged according to the criteria studied at the "C" level proved the advantages of ceramic crowns on zirconium oxide frames (3.6%) and metal-ceramic crowns on crushed chromocobalt (3.8%), as well as crowns made of pressed ceramics (4.3%). The number of complications was significantly higher in cermet crowns on chromocobalt frames (5.2%). There were no differences between the crowns in the degree and form of bite change and approximate contact. Metal-ceramic crowns on a cast frame have the worst indicators in terms of marginal compliance (10.0%), the condition of the marginal gums (7.2%), the development of secondary caries (3.9%), cementosis (6.1%) and subjective manifestations of toxic and allergic phenomena (1.7%), as a result, the number of replaced crowns increased by 5.6 over 3 years%. I was there. Complications during prosthetics with metal-ceramic crowns on a chromocobalt frame, crushed in accordance with the listed criteria, were rare in an average of 20.9% of cases. Ceramic crowns on zirconium oxide frames are superior to the latter in terms of the quality of fit to the edges, the condition of the gums, subjective sensations and the frequency of replacement. All crowns made of ordinary press ceramics most often had cracks (7.3%), sometimes changed color to fix cement (1.5%) and re-install. they were less likely to be cement



(7.3%); At the same time, they were characterized by a better fit of the edges, the condition of the gums compared to other crowns and less often cement ones. When fixing crowns of various designs on the implant, the patterns revealed during fixation to the tooth in the ratio of complications in the condition of the crown and adjacent soft tissues are preserved. Crown fractures are more common in implants (46.7%), mainly due to malocclusion, as well as subjective negative symptoms (5.3%). At the same time, the implant crown has a better fit at the edges (38.4%), approximate contact (28.4%), the condition of the surrounding gums (47.9%), the cement crown is generally used less frequently, despite the frequent replacement of the implant crown (15.7% compared to previous studies). to the teeth), the implant fits better to the edges. According to clinical and functional tests, in the long term, metal-ceramic crowns on cast chrome-cobalt frames are more likely to cause gum disease than metal-free ceramic crowns and metal-ceramic crowns on crushed frames if they rely on both teeth and implants.

Conclusion:

Press ceramics are inferior in strength and frequency of replacement to ceramic crowns made of crushed carcasses made of zirconium oxide and cobalt chromium, despite the best clinical indicators of the condition of the edges and gums.

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