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PROSTHETICS WITH A PARTIALLY REMOVABLE PROSTHESIS ON A TELESCOPIC SYSTEM

Chaqqonov Faxriddin Xusanovich
Student of 4th course of department of dentistry, Samarqand state medical university, Uzbekistan

Xamrayeva Nigina
Student of 4th course of department of dentistry, Samarqand state medical university, Uzbekistan

Primov Shaxzod
Student of 4th course of department of dentistry, Samarqand state medical university, Uzbekistan

ABOUT ARTICLE

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Abstract: In case of partial absence of teeth, various prosthesis designs are used. Both removable and non-removable prostheses are used. Bridges are known to be physiological. Removable dentures, unfortunately, do not have such an advantage, but this does not mean that they are less in demand. When choosing the design of a partial removable prosthesis, the doctor first of all faces the question of how to strengthen it in the oral cavity, how to fix and stabilize the prosthesis correctly and effectively. An effective method of fixation is one of the conditions that ensure good functional qualities of the prosthesis. This is the criterion for the successful use of a removable prosthesis.

INTRODUCTION

The fixation of removable dentures in case of partial secondary tooth loss is carried out using various artificial mechanical systems, and adhesion and anatomical retention are also taken into account. The use of adhesion and consideration of the anatomical features of the prosthetic bed does not solve the entire problem of fixation, since with a small base of the prosthesis, the adhesion forces are very small, and anatomical conditions may be unfavorable. However, the latter are a great help in the system of fixation of the prosthesis and they cannot be ignored.

Fixation of the prosthesis on double crowns in the oral cavity is carried out using a cylindrical rod. When making a removable prosthesis with double crowns using a metal cylindrical rod, the following rules for the preparation of supporting teeth must be observed. A prerequisite is the water-air cooling of the working field. When dissecting a vital tooth, infiltration or conduction anesthesia should be performed. The treatment of the supporting tooth is carried out by the generally accepted method using diamond drills. The tooth is dissected without a ledge. After preparation, the stump of the tooth should have the shape of a truncated cone with the angles of the side walls within 100-110 ° to the longitudinal axis of the tooth. At least 1.0–1.5 mm of hard tissue is sanded from the contact surfaces, as well as from the vestibular and oral (or palatine) surfaces. From the occlusal surface – 1.5–2 mm. The sharp edges of the tooth stump must be smoothed. Carry out surface finishing with fine-grained borons.

RESULTS

A generally accepted method is used to make a removable prosthesis, in the basis of which a metal cylindrical rod is welded into a thickness of soft plastic. The rod should pass through the hole in the outer crown and protrude slightly into it, according to the recess in the inner crown. As a result, the manufactured removable prosthesis is fixed in the oral cavity on the supporting teeth. Fixation occurs due to the entry of the rounded end of the metal cylindrical rod into the recess in the inner crown, as well as due to the elastic properties of the soft plastic in which the rod is located. When loading on the middle of the prosthesis due to its deflection on the supports, counter-wrenching forces occur, causing an extended deflection of the jaw between the supports, as well as its general skew relative to the opposite branch. The effect of the prosthesis deflection has a noticeable effect on the deformation of the frontal support segment of the jaw. Alternating forces occur on the teeth of the incisor row: pressing – from the side of the load and pulling – from the opposite side. As a result, the misalignment of the jaw also becomes alternating. As for the vertical load on the supports, it becomes more gentle due to the proportional redistribution between them. With frontal loading, the deformation of the jaw is identical or close to its natural state: there is a symmetrical rotation relative to the virtual axis localized in the area between the articular processes with the imposition of a local inflection of the frontal segment on it. The lateral load on the intermediate segment of the prosthesis supports are subjected to a wrenching force directed into the jaw in proportion to its size, which is especially dangerous for the extreme supporting tooth.

The considered method of prosthetics with removable dentures with telescopic or double fixation allows you to solve certain prosthetics tasks and is recommended for use by orthopedic dentists in daily

practice. Further research concerns the construction of a mathematical model of a telescopic system, which will become material for future articles.

CONCLUSION

Work on the construction of a mathematical model continues, specific conclusions will be presented after the calculations. Prosthetics using a telescopic system is not widely used in our country, which has objective reasons. Our task is to use this type of prosthetics more often. We hope that this article will be useful for a wide application of the telescopic fixation system.

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