

## CLASP PROSTHESES

Atahanov Alisher Vohobjonovich

Associate professor: Andijan State Medical institute

### ANNOTATION

The aim of the article is to improve the technology of clasp dentures manufacture. Material and Methods. Orthopaedic treatment of patients was conducted using advanced technology of manufacturing clasp dentures at the Department of Prosthetic Dentistry at Samara State Medical University. Results. Conducting the orthopaedic treatment a method of obtaining an impression in prosthetics on implants and teeth, a method of manufacturing clasp denture with locking fasteners and a method of manufacturing a clasp denture with a questionable prognosis of bearing tooth were used. Conclusion. Using the advanced technology of manufacturing clasp denture has solved the problem with unreliable periodontal tissues, loss of a removable part of clasp denture and allowed to improve the quality of obtaining impression from bearing teeth.

**Keywords:** clasp denture, attachment, impression.

### INTRODUCTION

The manufacture of a clasp prosthesis with a locking type of fixation for prosthetics of partial defects in the dentition is the most functional and aesthetic. Clasp prostheses are used: with an insufficient number of supporting teeth for the manufacture of fixed prostheses; the presence of supporting teeth with insufficient reserve forces of the periodontium, with varying degrees of periodontal atrophy; unilateral and bilateral distally not limited defects of the dentition.

When using these structures, sometimes it becomes necessary to remove the abutment tooth due to the progression of periodontal diseases, caries and its complications, and a decrease in the reserve forces of the periodontium. Subsequently, these structures cannot be used after the removal of an abutment tooth with unreliable periodontal tissues, so it becomes necessary to manufacture new prostheses.

Patients may complain that the removable part of the structure is lost (loss, breakage of the clasp prosthesis), while the non-removable part remains in the oral cavity and is fixed on the abutment teeth. A known method for manufacturing a clasp prosthesis, including taking an impression, obtaining a plaster and duplicated refractory model on it, placing a container attachment around a spherical retainer, modeling a clasp frame from wax, transferring the frame to metal, connecting the container attachment to the frame, installing the clasp frame on a plaster model, setting artificial teeth on a clasp frame, forming a plastic base for the prosthesis, removing the prosthesis from the plaster model and installing the prosthesis in the oral cavity.

If it is not possible to make a new impression, the fabricated structure is corrected. At the laboratory stage, the dental technician applies one or more layers of insulating varnish to the model in places where the corrective layer of the impression material is thinned.

Filling the impression with excessively liquid supergypsum leads to an increase in its shrinkage, and, consequently, to the manufacture of inaccurate orthopedic structures. Thick supergypsum fills the impression with the formation of voids, shells, pores. The finished gypsum mixture from high-strength varieties is immediately poured into the resulting impression. It is not necessary to knead the supergypsum for more than two or three fillings of the impression, the time for pouring the impression is included during the processing of the material. When hardening begins, the formation of crystals occurs, which prevents the reproduction of fine details, reducing the strength of the gypsum. Pouring on a vibrating table has a positive effect on preventing the formation of bubbles, fluidity, vibration should not continue at the beginning of supergypsum crystallization.

When making a model from supergypsum, you should not use pressure until it has completely hardened, which allows you to strengthen the model from supergypsum and reduce the number of air bubbles. The impression may contain hidden pores that are not visible during the assessment of the impression, which lead to the formation of defects on the working model.

The clinician takes an impression with C-silicone base layer, Speedex, A-silicone, Elite HD, Express, or polyester, Impregum, to make a composite impression crown, Protemp 4, or resin material, Superpont. Produces preliminary odontopreparation, under the impression crown. The dental technician makes an impression crown, on which retention points are created in the form of longitudinal and transverse grooves, perforation of the chewing surface or incisal edge. The problem of dentistry in the development and creation of new dental prosthetic systems that would improve the quality of life and reduce the rehabilitation time for dental patients remains very relevant at this time. Clasp prosthetics is a rather progressive type of this area, which has a number of advantages, but also a number of disadvantages, in which this type of orthopedic treatment is not suitable in all cases of patient prosthetics.

Clasp prosthetics is one of the types of removable prosthetics, which is currently the most convenient and advanced among the proposed types of prosthetics of the dentition. This type of prosthesis is an arc-shaped cast metal frame, which is covered with an acrylic plastic base and artificial teeth are installed on it. It is fixed in the oral cavity with the help of clasps, which very tightly cover the abutment tooth. Since the prosthesis has an arcuate metal structure, this allows you to effectively distribute the load between the teeth and gums [2–6]. Compared with other similar modifications made of various plastic structures, this type of prosthesis makes it possible to avoid the thickening of the plastic layer, reduces the weight and volume of the structure, and also maintains its strength and stability indicators. The clasp prosthesis has a number of indications for its use:

- 1) 1st, 2nd, 3rd grade according to Kennedy,
- 2) if it is necessary to correct a dental anomaly, for example, malocclusion,
- 3) when splinting [10–13],
- 4) in case of periodontal disease of I, II degrees, the design of the clasp prosthesis should be special - all natural teeth are included in the prosthesis, they have a holding and supporting function [14],
- 5) with a deep or decreasing bite, it is advisable to increase it with a continuous clasp located on the front upper teeth [15, 16],
- 6) removal of a large number of teeth (immediate prosthesis) [17],

- 7) the absence of even one tooth (aesthetic prosthesis) [18],
- 8) large-scale traumatic treatment of teeth, carried out, under the proposed bridges .
- 9) serious condition of patients in need of prostheses .
- 10) refusal of patients from prosthetics with fixed structures .
- 11) replacement of an old, functionally incompetent prosthesis with a new one.
- 12) with galvanosis, allergic reactions of the body to metal prostheses .

This type of removable prosthesis allows fixation, both on your own living teeth, and on already installed or destroyed teeth, or crowns. If the design of the clasp prosthesis is chosen correctly, its fasteners will perform a reinforcing function for the teeth that are supported, and it is possible to extend their service life. The installation of a clasp prosthesis is determined not so much by the number of teeth in the jaw as by their strength, as well as the condition of the gums and the oral cavity in general. So in some cases, this prosthesis can be installed even with a minimum presence of teeth.

This type of clasp dentures does not have metal hooks, so its appearance is more aesthetic. Clasp prostheses on the locks have a strong, lightweight bridge-like structure, which, when chewing, transfers part of the pressure to the supporting teeth. To protect and strengthen the abutment teeth, they are preliminarily covered with metal-ceramic crowns, where half of the lock is implanted, and its second half is located on the abutment teeth.

The locks fixed in the teeth or in the crowns of the teeth provide high strength of the fastening of the prosthesis. In addition, they allow you to securely fix the structure and easily remove it for periodic cleaning.

But they also have a number of disadvantages. One of them is the complexity of manufacturing. Currently, this is the most high-tech construction in prosthetics, the manufacture of which requires highly qualified dental technicians and orthopedists. In the manufacture of such a prosthesis, high accuracy in the calculation of all structural elements is important. This leads to the second drawback - the high cost. And the third drawback is the participation in the design of a large number of teeth. This type of clasp prosthesis requires the obligatory protection of the abutment teeth with metal-ceramic crowns, since they have locks . The clasp prosthesis on telescopic crowns is already considered the most aesthetic design of this type. A retractable (telescopic) crown is used for fixation: its removable part is attached to the base of the structure, and the non-removable part is fixed on the supporting teeth. To install such a prosthesis, you need to turn the teeth, cover them with metal, polish them, and only then put the clasp. This type of prosthesis is very difficult to manufacture, since its stability requires an absolute match between the fixed and removable parts of the crown. Also, a very high cost is a disadvantage of this type of prosthetics.

### LIST OF USED LITERATURE

1. A method of manufacturing clasp prosthesis with locking fasteners: Patent 2593355. Rus. Federation, 2016; 22: 3. Russian (Способ изготовления бюгельного протеза с замковыми креплениями; Патент 2593355. Рос. Федерация, 2016; 22: 3).
2. Pichugina EN. Modern aspects of removable prosthetics with partial absence of teeth using a clasp dentures from T. S. M. ACETAL. Bulletin of Medical Internet Conferences 2013; 11 (3): 12-15. (Pichugina E. N. Modern aspects of removable prosthetics in the partial absence of teeth using clasp prostheses from T. S. M. ACETAL. Bulletin of medical Internet conferences 2013; 11 (3): 12-15).
3. Komlev S.S. Improving the technology of manufacturing a clasp prosthesis. Saratov Scientific Medical Journal 2016; 12(4): 589-592.