

Zirconium and Strip Crowns in the Area of Temporary Incisors of the Upper Jaw

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Abstract

In case of extensive defects in hard tissues, as well as after the treatment of pulp diseases, the coating of teeth with artificial crowns is shown. The APD recommends the use of three options for artificial crowns: made of stainless steel, zirconium and Strip crowns. The term "Strip crowns" comes from the name of the process of removing the cap from the tooth after photopolymerization of the composite material. Strip crowns for baby teeth are special orthopedic structures that allow you to restore damaged teeth in young children.

Keywords:

Introduction

In case of extensive defects in hard tissues, as well as after the treatment of pulp diseases, the coating of teeth with artificial crowns is shown. The APD recommends the use of three options for artificial crowns: made of stainless steel, zirconium and Strip crowns. The term "Strip crowns" comes from the name of the process of removing the cap from the tooth after photopolymerization of the composite material. Strip crowns for baby teeth are special orthopedic structures that allow you to restore damaged teeth in young children. Children's crowns look like the thinnest transparent caps, which are made of acrylic or special metal. "Strip" crowns are caps made of acrylic material, which are used to restore the anatomy and functions of destroyed baby teeth. Unfortunately, baby teeth can decay faster than permanent teeth. For the formation of a proper bite, the normal development of the maxillofacial system, it is necessary to carry out treatment and prevent early tooth loss. If teeth fall out before the physiological change, there are violations of the functions, work and development of the organs of the oral cavity. Baby teeth are displaced and there is a lack of space for permanent teeth that erupt outside the dentition.



One of the new and effective methods of treatment is the use of "Strip" crowns, which help to restore destroyed baby teeth in one visit to a pediatric dentist. The method allows you to maintain the normal anatomy and functions of the teeth. At the same time, the restored baby teeth will serve the child until their physiological change to permanent ones. Direct composite restorations of the milk incisors of the upper jaw using ready-made plastic caps are usually called strip crowns. The name "strip crown" comes from the clinical manipulations performed with these caps. The cap is filled with a composite, installed on the prepared tooth surface and photopolymerized. After that, the cap is removed (from the English stripping), and a composite restoration remains on the surface of the tooth, fully restoring the crown part of the tooth. Strip crowns allow for automatic, aesthetic and realistic restoration of front teeth, which otherwise would be a long and tedious procedure for a child. Caps of various sizes are available for the central and lateral incisors of the upper jaw. Below is a step-by-step guide to restoring an anterior baby tooth using a strip crown.

Indications

Restoration of "Strip" crowns is recommended in the following cases:

- Severe destruction of the crown part of the tooth;
- Pathology of dentin or enamel structure;
- Fluorosis is strongly pronounced;
- Dental malformations;
- Color disorders;
- Cosmetic defects;
- Injuries, chips;
- Violation of amelogenesis or dentinogenesis.

Advantages of Strip crowns:

- Effective restoration of anatomy;
- Preservation of the function of chewing, speech, aesthetics;
- The ability to save teeth before their physiological change;
- Malocclusion is prevented;
- The development of the carious process is prevented;
- Painless installation;
- Excellent aesthetic appearance.

Stages of treatment

1. Preparation. The dentist performs hygienic cleaning of teeth and treatment of dental diseases. Diseased teeth are thoroughly cleaned from the carious process. If necessary, endodontic treatment is performed and root canals are sealed;
2. Preparation of teeth for crowns. With the help of special bores, the teeth are given a conical shape for reliable attachment of the crown;
3. Creating a crown. An acrylic cap of the required size is selected and filled with a special material. Next, the cap is put on the prepared tooth and illuminated with a photopolymer lamp. After solidification of the material, the cap is removed and the tooth is re-illuminated from all sides;
4. The finished structure is sanded and polished.

Treatment with the help of "Rip" crowns is very effective and functional. It is characterized by its low trauma compared to the manufacture of classic crowns. Restored teeth retain all their functions and do not differ from others.

Goal

The aim of the study was to compare the results of restoration of temporary incisors of the upper jaw using zirconium and Strip crowns.

Methods

The study involved children aged 18 to 48 months who were randomly assigned to the treatment group with zirconium and Strip crowns. The results of treatment were evaluated 6 and 12 months after the installation of artificial crowns. Assessment parameters: the presence/absence of a restored tooth in the oral cavity, the presence/absence, as well as the quality of restoration, the presence/absence of secondary caries in the restoration area, discoloritis. The frequency of the need for pulpotomy after the installation of restorations for each of the methods was also assessed. Treatment results: intact restoration, restoration with minor defects and the need for treatment.

Results

A total of 59 children participated in the study, who were fitted with 76 zirconium and 101 Strip crowns. After 6 and 12 months after installation, zirconium crowns were more likely to remain intact compared to Strip crowns. There was no statistical difference in the frequency of pulpitis treatment between the groups.

Conclusions

After 6 or 12 months after installation, zirconium crowns were more likely to remain intact than Strip crowns. There was no statistically significant difference in the frequency of pulpitis treatment between the groups.

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