

## RESTORATION OF FRONTAL TEETH GROUPS WITH PARAPULPAR POSTS AND THEIR EFFICIENCY

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### Abstract:

Significant destruction of the crown part of the tooth is regarded as a disease that eventually leads to morphofunctional disorders of the dentition and the entire dental system. Therefore, early diagnosis of pathological restructuring of the dental system and knowledge of the pathogenesis of possible complications after tooth extraction are not of little importance, which, in turn, determine the indications for preventive orthopedic treatment. For effective treatment of the destroyed crown part of the tooth, all kinds of pin structures are used, the most "ancient" of which are parapulpar pin structures.

**Keywords:** Destruction of the crown part of the tooth, orthopedic treatment, pin structures, parapulpar pin (PPP).

### Introduction

The crown part of the teeth, throughout a person's life, are the most traumatized structural components of the teeth. Experiencing constant external traumatic effects in the processes associated with biting and chewing food, they take on various strengths and degrees of mechanical, thermal and chemical effects. The introduction of modern composite filling materials into practical dentistry has served as an incentive for reliable and at the same time aesthetic treatment of such widespread dental pathology as caries, as well as frequent mechanical damage to teeth. In this regard, restoration of the anatomical shape of teeth without excision and violation of the integrity of its constituent hard tissues and depulpation is currently one of the most relevant and promising areas of dentistry development. In connection with the above, methods of gentle restoration of the anatomical shape of teeth are currently relevant and promising problems in dentistry. This is especially important when the issue concerns the restoration of frontal teeth and dentition using orthopedic and therapeutic dental manipulation. From the above, we determined the purpose of our study: To substantiate the clinical and structural-functional justification for the restoration of defects in the crowns of the frontal teeth and chewing teeth of the mandible of the PCA with the formation of correct and reliable dentitions both functionally and cosmetically.

Currently, in many countries, the restoration of the anatomical integrity of the crown of the teeth, due to their carious or non-carious lesions, as well as the creation of the integrity of the dentition and normal bite is carried out through the manufacture of artificial crowns and is



usually associated with tooth depulcation. After excision of the tissue cover and depulcation, the hard tooth tissue, devoid of innervation and trophism, after a relatively short period of time, necrotizes and gradually undergoes complete destruction under an artificial crown.

### **The purpose of the study**

Strengthening of the restoration structure by using parapulpal pins, when the columnar part of the frontal groups of teeth is destroyed.

### **Material and Methods**

A retrospective analysis of outpatient records for the last 3 years was carried out and a statistical analysis of the therapeutic and orthopedic treatment of damage to the crown of the frontal teeth, which were carried out in the regional dental clinic, was performed. The criteria for evaluating the studies were: the treatment of patients with carious and non-carious lesions of the frontal teeth and the formation of secondary cosmetic lesions of facial defects with various bites.

The patients were subjected to a general clinical examination, through a comprehensive survey. If necessary, additional clinical and laboratory examination was performed. Before the treatment, the causes and factors that contributed to the development of the pathological process in the hard tissues of the teeth were clarified.

### **The results of the research**

After treatment, patients were observed in dynamics, in the long term - 360 days after treatment. We used clinical, functional, and research methods to objectively evaluate the results of the restoration of the PPSH. Among the surveyed applicants, the gender distribution turned out to be approximately equal: the number of men was 491 people, or 46%; women - 741 people, or 54%. In the course of our research on the restoration of frontal teeth using modern CPM and PPSH, we followed technical approaches reflected in the following provisions: 1. When preparing a tooth for restoration, one should be guided by the position of the maximum possible preservation of healthy dental tissues (dentin), by gentle preparation; 2. Avoid leaving overhanging, deprived of nutrition and prone to further necrosis and rejection of the edges of the dental crown (enamel, dentin residues). The bed for the seal should be crater-shaped, with sloping walls, preserving the full-fledged dentin adjacent to the pulp; 3. When using modern primers and adhesives offered by companies, do not use composites containing acetone and other chemically active components, in particular, acids, leading to blockage and death of the structural elements of dentin (tubes); 4. When filling large carious cavities with the destruction of the crown of the tooth, use the PPSH technique for subsequent redistribution of pressure and stable fixation of the seal; 5. When sealing CSR, use the technique of layered horizontal formation of the seal, with the illumination of each layer separately with a halogen lamp;

### **Conclusions**

It should be emphasized that strict compliance with paragraphs 1, 2, and 3 of the above provisions plays an important role in preventing the formation of marginal cracks on the seal-



tooth border. Among the aesthetic criteria, such signs are important as: the presence of a "dry" gloss on the surface of the composite, the severity of the color scheme, the coloring of the border of the transition "tooth tissue - composite", the creation of a relief of the vestibular surface and the shape of the seal as a whole. There was a positive response from the SOPR.

In addition, the condition of the SOPR can serve as a criterion for the effectiveness of the treatment, the body's reaction to the filling materials used in prosthetics, and modern composites. In addition to the stomatoscopy data, the EDI technique was used to evaluate the results of prosthetics. EDI indicators reflect the level of sensitivity of teeth to the effects of electric current. Pathological phenomena developing in the tooth pulp lead to changes in the structure of the dentine tubules responsible for the transmission of electric current into the tooth pulp. As a result of the treatment, reduction of local inflammatory processes, repair of destroyed structures of dentin and pulp lead to normalization of EDI indicators. In the control group, EDI values were  $5.22 \pm 0.37 \mu\text{A}$  and served as confirmation of the absence of pathological processes in the normal functioning of dental pulp tissue. EDI values in the group of patients with teeth restored with chemical composites were  $12.65 \pm 0.48$  before treatment. After the treatment, EDI indicators decreased to  $9.04 \pm 0.42$ .

In the group of patients in whose treatment we used light-curing composites, the initial levels of EDI approximately corresponded to the previous one. However, the decrease in indicators by day 360 was more significant. In the group of patients where PPSH was applied together with CSR, the initial EDI values were  $12.35 \pm 0.42$ , while the final values on the 360-day after the installation of the seal decreased to  $8.55 \pm 0.31$ . X-ray studies both in the near and long-term observation periods confirmed a persistent effect in the stability and reliability of the fixation of the seal and PPSH.

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