Treatment of Caries in the Upper Jaw Buttonhole Belt

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ABSTRACT

Inflammatory complications are very often observed in patients with traumatic fractures of the lower jaw inside the teeth, and, according to some authors, there is a tendency to increase their number. One of the common causes of complications that occur both in the treatment of mandibular fractures and in the late and longer post-traumatic period is a tooth that has survived in the fracture plane.

Keywords: Caries infiltration, minimally invasive caries treatment, children, permanent teeth, trauma of the lower jaws

Traditional treatment of caries involves the complete removal of enamel with signs of demineralization. This approach to treatment leads to significant loss of hard tissues and weakening of the supporting structures of the teeth. To minimize the amount of hard tooth tissue preparation, treatment of focal enamel demineralization with remineralization therapy and fluorization was proposed . However, this approach requires several visits and does not guarantee good results, especially if the patient has a low level of adherence to recommendations for brushing his teeth, eating and washing fluoride.

Thanks to the innovative technology of caries infiltration, new opportunities have appeared. Clinical studies have shown good results in the use of Caries infiltration to treat initial dental caries in children, adolescents and adults. Caries infiltration allows not only to stop the development of focal demineralization of tooth enamel, but also to obtain an aesthetic effect. The essence of the new technology is to impregnate the porous structure of demineralized enamel with an infiltrant, which is a high-liquid polymer tar based on methylmethacrylate. As a result of polymerization, the infiltrant hardens, the carious process stabilizes, and the enamel intensifies. However, the infiltrant does not restore the missing areas of enamel and dentin, therefore, after infiltration of enamel demineralization foci, it is necessary to prepare and fill the carious cavities. It is assumed that combining infiltration of demineralization sites with the preparation and filling of carious cavities reduces the volume of intervention and contributes to the preservation of teeth, but there is not enough information about the use of this technology in childhood.

In 11 children aged 7-17 years, 29 permanent teeth were treated, in which dentin caries was combined with focal enamel demineralization. Written consent for treatment was obtained from parents of children under 15 years of age and adolescents aged 15-17 years. Before the start of treatment, a thorough hygienic cleaning of the teeth was carried out, open carious cavities were closed with an aqueous dentine or liquid rubber dam, and the teeth were separated from the saliva. Character sets (DMG, Germany) were used to infiltrate enamel focal

demineralization sites; the infiltration process was carried out according to the manufacturer's instructions. After the end of the caries infiltration process, gentle preparation and filling of the caries cavities was carried out.

Reinforcement material with light according to standard methods. In cases where it is not possible to complete the treatment in one visit (for various reasons), the carious cavities are temporarily filled with glass ionomer cement (GIC) without preparation. On the second visit, the temporary filling was removed, gentle preparation, drug treatment and filling with light-reinforcing material were carried out. After treatment, the teeth are covered with fluoride varnish. Children were given recommendations for oral care and nutrition, the use of fluoride.

The examination revealed numerous foci of demineralization of white enamel on the vestibular surface in the cervical area of the teeth of the upper and lower jaws, limited discoloration on the vestibular surface of the teeth 22 and 24, carious cavities on the contact surfaces of the teeth 11, 12, 21, 41, 42 teeth. Diagnosis: caries of the enamel of the teeth of the upper and lower jaws; 11, 12, 21, 41, 42 dentin caries of teeth, 22, 24 local hypoplasia of teeth. The boy underwent professional oral hygiene, the caries cavities were closed with a liquid rubber dam, 12, 11, 21, 22, 23, 24 Icon infiltration of demineralization sites and enamel hypoplasia of teeth 22, 24 were carried out.

The examination revealed foci of enamel demineralization on the vestibular surfaces of permanent teeth; 12 and 21 carious cavities on the vestibular surface of the teeth and 41 on the distal surface of the teeth. Diagnosed: enamel caries (K02.0) 11, 12, 21, 22, 31, 32, 41, 42 teeth; dentin caries (K02.1) 12, 21.41 teeth. The child underwent professional oral hygiene, career

The cavities were closed with a liquid rubber dam, and the Icon was infiltrated into the areas of demineralization of the incisors of the upper and lower jaws. Caries gaps, without preparation, were closed by JIC. The teeth are covered with fluoride varnish. Recommendations on nutrition, the use of fluoride and oral hygiene are given. The child was brought to re-adoption only after six months. The examination showed that the condition of permanent teeth is stable, there are no signs of the development of a carious process. Economical preparation of caries cavities of teeth 12, 21 and 41. The edges of the defects were dense, which made it possible to limit the removal of only carious dentin during the preparation process. Filling of carious cavities Dyrect (Dentsply, USA) was carried out using a light-reinforcing compomer. After treatment, the teeth are covered with fluoride varnish. A year later, there were no signs of the development of a carious process on permanent teeth, all fillings received an alpha rating.

It should be noted that the infiltration of enamel demineralization sites before the preparation of carious dentin defects allows children to gain confidence, and reducing the volume of further invasive intervention helps to overcome fears in patients with stomatophobia. It should be noted that the infiltration of enamel demineralization sites before the preparation of carious dentin defects allows children to gain confidence, and reducing the volume of further invasive intervention helps to overcome fears in patients with stomatophobia.

Conclusion; the high effectiveness of a minimally invasive approach to the treatment of caries in permanent teeth in children has been established. The use of the technology of caries infiltration in combination with immediate or delayed filling of carious cavities allows you to preserve the hard tissues of permanent teeth as much as possible with a small intervention.

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