

CLINICAL COURSE AND DIAGNOSIS OF DENTAL CARIES IN SCHOOL AGE CHILDREN

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Annotation

Dental caries is the main dental disease in children of primary school age, the distinguishing feature of which is that once started, the carious process does not stop and requires constant treatment and monitoring. The location of a carious lesion depends on a number of factors, including the thickness of the enamel layer, the shape and position of the tooth, as well as the effectiveness of daily brushing and general oral hygiene. Most researchers believe that in children of primary school age, hard tissues in the area of fissures of the first permanent Molyars are most often affected by caries. Damage to permanent teeth by caries begins from the moment of their eruption and increases with age. The chewing surfaces of the Molyars are most susceptible to caries, and the more severe the form of caries, the wider and deeper the lesion. There are a large number of methods for diagnosing the initial forms of dental caries, but none of them is universal.

Keywords: children of primary school age, increased risk, dental caries, sealing, oral hygiene, prevention.

Introduction: it has been proven that dental caries is the main dental disease of children of primary school age, and its distinguishing feature is that the caries process does not stop after the beginning and requires continuous treatment and control [6, 9]. It is the most common chronic disease of mankind and the main cause of early tooth loss [2, 11].

It was found that dental plaque microorganisms participate in the emergence of the inflammatory process in periodontal tissues. It is known that anaerobic microorganisms with pathogenic properties develop in bacterial fermentation. These include: Actinobacillus, Actinomycetem comitans, Porphyromonas gingivalis, Bacteriidas forsythus, Campylobacter rectus, Eikenella corrodens, Streptococcus intermedius, Spirochetes and others [1].



The prevalence of caries in children of primary school age, according to different authors, ranges from 91% to 100%, with an intensity of 3.9 - 6.3 [5, 13]. E.M. Kuzmina (2009) found that the prevalence of permanent dental caries in 6-year-old children in different regions of Russia was on average 13%, and at the age of 12, it increased sharply to 73% and up to 15 years. - up to 82%.

Purpose: improved so that E.A. Danilov and R.N. Zhapakova (2008), the prevalence of caries in permanent teeth in 7-year-old children in St. Petersburg exceeds 45%. The average value of the intensity of caries of permanent teeth (KPU) in children of this age group is 1.07 ± 0.12 , until the age of 12 it rises to 3.75 ± 0.25 and continues to grow. Component "B" (permanent tooth removed) at 7 years - 0.01 ± 0.01 , at 12 years - 0.02 ± 0.01 [8].

According to P.A. Leus, the greatest increase in caries intensity in temporary teeth occurs at 6-8 years of age [13]. The incomplete process of enamel mineralization is a factor of increased risk of caries, which leads to a sharp increase of this disease in permanent teeth in children aged 6-8 years [4].

Research materials and methods: The localization of carious damage depends on a number of factors, in particular, the thickness of the enamel layer, the shape and condition of the tooth, as well as the effectiveness of daily tooth cleaning and the general state of oral hygiene. [15]. According to many researchers, hard tissues in the area of fissures of first permanent molars are often affected by caries (up to 85% or more) in children of primary school age [10].

The risk of developing caries in cracked teeth is related to their complex geometric shape and morphological structure, low level of mineralization compared to other parts of the crown [5,3]. Hypomineralization is especially evident in the enamel of molars that have erupted earlier or later than the average time and in the teeth of children with a high risk of developing caries [9,7]. Due to the lack of occlusal contacts with the antagonistic teeth, insufficient cleaning of the chewing surfaces from plaque during eruption also contributes to the development of caries in the fissure area [4, 8].

Despite the fact that the occlusal surface is only 12.5% of the total tooth surface, in 6-8-year-old children, 69.2-100% of cases are caries in the area of the first cracks. diagnosed permanent teeth molars [2,8]. In addition, up to 50% of lesions on the occlusal surface of



molars develop for a long time in the depth of the cracks without visible changes in the enamel, spread along the enamel-dentin border[9,12].

Discussion and results: Resistivity measurement is a method based on recording changes in electrical conductivity of enamel. In the process of demineralization, the enamel becomes porous, various ions or saliva diffuse from the hydration membrane are fixed between the prisms. The resistance value depends on many factors: the porosity of the tissue, the surface contact resistance, the density of the enamel and thickness, water content, temperature and ion concentration [17,4]. This method allows to determine not only the initial carious lesions of tooth enamel, but also the initial level of its mineralization [6,20]. However, the probes of the measuring device have a very sharp tip, so this method can lead to the formation of more surface defects or cavities than conventional dental probes[9,15]. Thus, when choosing a filling method and type of filling, it is necessary to take into account the age of the patient, his general somatic and behavioral condition, the level of caries activity, the level of tooth cracking, and the possibility of effective isolation from the mouth [21].

Conclusion: Thus, caries is the main nosological form encountered by the pediatric dentist. Caries damage to permanent teeth begins when they erupt and increases with age. Therefore, simple and reliable methods for identifying carious cavities at the initial stage of formation are needed to improve the practitioner's work efficiency and make an accurate and timely diagnosis. Residues of bacterial plaque, pigments, composite restorations and polishing pastes can distort diagnostic results.

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