

# Diagnosis, Prevention and Treatment of Chronic Catarrhal Gingivitis in Children

Ganiev J. I., Xabibova N. N.

Bukhara State Medical Institute

**Relevance.** Currently, despite the scientific research conducted in the world today on the problem studied by scientists, the etiology and pathogenesis of periodontal diseases remain completely unexplored. Currently, a significant increase in the prevalence of periodontal diseases from 20 to 60% of the population requires serious attention of dental scientists, since over the past 15 years, scientists of the world have conducted extensive studies on the etiopathogenesis, prevalence, intensity of gingivitis and have proposed various methods of diagnosis, treatment and prevention of this disease [1.2.4.6.8.9]. The results of many researchers indicate extremely unfavorable consequences of chronic infectious and inflammatory processes in the soft tissues of the oral periodontal cavity and for the health of the whole organism, as well as a parallel increase in risk factors leading to the transition of catarrhal gingivitis to severe and reversible catarrhal gingivitis – diffuse periodontitis. Therefore, the need to develop new methods of diagnosis, prevention and treatment of periodontal tissue diseases remains one of the important problematic issues of medical practice that are of interest to doctors and scientists [3.5.7.10].

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Scientific research in a number of priority areas is being conducted worldwide through clinical and morphogenetic substantiation of new principles of prevention, diagnosis and rehabilitation of chronic catarrhal gingivitis in children. In this regard, it is important to take into account the specifics of pathogenetics affecting the occurrence of endogenous and exogenous causes affecting catarrhal gingivitis; to develop an optimal treatment regimen, prevention and rehabilitation of chronic catarrhal gingivitis, taking into account their specificity in its clinical manifestations; to create a complex of preventive measures aimed at preventing the disease, to improve modern methods of treatment of chronic catarrhal gingivitis. Effective treatment of gingivitis in childhood is the restoration of periodontal soft tissues and, subsequently, at an older age, is a preventive measure to prevent the development of an inflammatory and destructive process in the periodontal, which in turn is considered an urgent problem of modern medical science and practice [11.12.13.14.15].

In our country, large-scale measures are being taken to improve the healthcare system, including reducing dental diseases and their complications, as well as providing qualified medical care to patients with this pathology on an equal footing with such functions as “...improving the efficiency, quality and accessibility of medical care, maintaining a healthy lifestyle and preventing diseases, including the formation of a system of medical standardization, high-tech methods of diagnosis and treatment, support through the introduction of effective models of patronage and dispensary care. In this regard, effective treatment, prevention and timely diagnosis of complications of dental diseases, including chronic catarrhal gingivitis in children, remains one of the urgent areas requiring research work [13.14.16].

The purpose of the study: to develop recommendations and proposals for the diagnosis, prevention and improvement of the quality of treatment of chronic catarrhal gingivitis in children

## Methods of the study.

Presented in the literature, 80% of children suffer from gingivitis. Among periodontal diseases in children, chronic catarrhal gingivitis accounts for 35-85%. The greatest proportion falls on gingivitis of mild and moderate severity. Changes in periodontal tissues are observed in 7-8 50% of young children, with age the prevalence of gingivitis increases until puberty, 90% of children under the age of 12 suffer from gingivitis. According to scientists, gingivitis often proceeds painlessly and can remain untreated for many years. The main cause of chronic gingivitis and periodontitis is inflammatory processes

against the background of non-specific microorganisms for the oral cavity and their various manifestations (O.A.Smetanina, L.N.Kazarina 2015). With the development of inflammation in the periodontal gingivitis passes into another nosological form - periodontitis. Chronic catarrhal gingivitis is considered not only periodontal inflammation, but also the quality of the body's response to the aggressive action of microbes present in the teeth, resulting in a nonspecific negative effect on its character, which leads to dysmetabolic damage to epithelial cells and microvessels. (Ippolitov Yu. A. et al. 2014).

Some issues of providing dental care to children in our republic are still insufficiently studied. Scientists and researchers from Uzbekistan and abroad pay great attention to inflammatory periodontal diseases, dealing with methods of treatment, diagnosis and prevention. In chronic catarrhal gingivitis, the disease is characterized by a wide prevalence (80-98%), with various clinical manifestations, complications in diagnosis, complex treatment and prevention (S.S.Murtazaev, M.K.Kuchkarov 2018; ZH.A.Rizaev, O.E.bEkzhanova 2019). The most common cause of gingivitis is improper oral hygiene in children, neglect by parents of hygiene education in a child, the presence of dental anomalies, the severity of the general somatic condition and a combination of general and local factors of the development of inflammatory diseases in marginal periodontitis.

It has been proved that in children with chronic catarrhal gingivitis, a decrease in the number of gum cells with cytopathological changes, against the background of an increase in the number of cells of the inflammatory infiltrate of PMN and intact monocytes, a decrease in the number of nucleated cells of the spiny layer and non-nuclear keratinized cells, is one of the important links in the pathogenesis of the disease.

It is confirmed by the use of rational theoretical approaches and methods, the choice of informative research methods, a sufficient amount of studied material and the number of selected patients, the use of sound clinical, laboratory and instrumental methods, statistical data, comparison of the results obtained with foreign and domestic researchers; conclusion, confirmation of the results obtained by authorized structures.

After conducting the study, we calculate the index using evaluation criteria. For cytological studies, prints of the gingival mucosa were taken in the area of the frontal and chewing teeth (6 prints for each student). To do this, a dry, fat-free sterile slide was applied several times to the test area. If the affected area is difficult to access, you can use a stationery elastic band. The gum is cut into long narrow columns (the working part with an area of 3x3 mm), sterilized, dried, applied to the test area, and then transferred to a slide. 5-10 prints were made on each slide. The drug was fixed in methyl alcohol for 15-20 minutes, then microscopy was performed using a 1x400 lens, as well as a 1x100 immersion lens. The simplest criterion for assessing oral hygiene is the calculation of the tooth surface covered with plaque, expressed in numbers. To do this, we used the Green-Vermillion method.

It has been shown that the incidence of gingivitis increases starting from the age of 5, reaching a peak during puberty and remains high throughout life. In addition, the development of inflammatory processes is affected by hormonal imbalance in the puberty period, when the gum tissues are more at risk of developing periodontal diseases and react to bacterial irritations with inflammation. In this section, we studied the features of the clinical course of chronic gingivitis in children of primary and secondary school age.

The leading component of the prevention of dental diseases is individual oral hygiene. Dental cleaning of teeth, removal of soft dental deposits contributes to the physiological, biochemical maturation of enamel. Regular massage of the gums when brushing teeth helps to activate metabolic processes, improve blood circulation in periodontal tissues.

We also studied the increasing role of motivation of schoolchildren in individual oral hygiene as an effective method of preventing periodontal diseases.

A scheme of individual oral hygiene was drawn up for each examined child, and training was conducted on the standard method of brushing teeth with soft toothbrushes using anti-inflammatory

toothpastes. For better oral hygiene, additional means are used: fluxes, toothpicks, dental elixirs, mouthwash, chewing gum. However, the regular use of well-known methods of oral care with the use of various means, even with good skills, does not solve such a complex problem as the prevention of dental diseases. Therefore, individual hygiene was combined with professional oral hygiene.

Professional oral hygiene included several stages: motivation of the patient to prevent dental diseases and training of his individual oral hygiene; removal of supra- and subgingival dental deposits; polishing of the tooth surface; elimination of factors contributing to the accumulation of plaque. The efficiency of removal of dental deposits was controlled using appropriate hygienic indices

The simplest and most effective method of plaque removal is mechanical brushing using a toothbrush. The use of an electric toothbrush can greatly simplify the daily oral care procedure. In addition, these brushes are equipped with a timer measuring time - 2 minutes, and they remove plaque much better and treat the tissues of teeth and gums more carefully, electric toothbrushes are more effective than conventional ones only when the working part rotates and oscillates at the same time – this allows you to remove 27% more plaque and 12% reduces the incidence of gums. In both LPGs, children with HCG used anti-inflammatory toothpastes containing chlorhexidine and triclosan. Individual oral hygiene with the use of manual and EHS was carried out for 2 weeks. At the beginning of the examination, the children received a course of professional oral hygiene with the inclusion of hygiene lessons according to the algorithm developed by us.

**CONCLUSIONS.** Gum indicators in children with HCG are characterized by a decrease in the content of nucleated cells of the thorny layer by 1.4 times and keratinized non-nuclear cells by 1.1 times against the background of an increase in the content of cells with cytopathological phenomena by 4.9 times, the number of cells of the inflammatory infiltrate of PMJAL increased by 1.7 times, and intact monocytes by 1.3 times. To diagnose HCG in children as criteria, it is necessary to use the following quantitative and qualitative changes in the cytograms of the gum: an increase in the content of cells of the inflammatory infiltrate of PMN, an increase in cells with cytopathology and a decrease in the total content of epithelial cells. Microbiological and clinical studies reliably confirm a decrease in the level of inflammatory complications in periodontal tissues of children with HCG during a complex of therapeutic and preventive measures according to the developed algorithm.

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