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**The use of early diagnosis in the prevention and treatment of oral  
diseases in children with chronic hepatitis B**  
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## INTRODUCTION

The incidence of viral hepatitis occurs in all age groups and in the general structure of viral hepatitis in children, hepatitis B accounts for 1.5 to 9% of cases, and hepatitis C - 31% of cases. If you look at the development of modern methods of diagnosis and treatment of viral diseases, the formation of chronic forms is 50-80% of cases and occupies one of the leading places in the structure of chronic liver diseases. The use and implementation of vaccination in Uzbekistan has led to a decrease in hepatitis B in childhood, but at the same time there is an increase in the incidence in certain groups of the population. A number of researchers note that liver disease and its weakening, both among children and adults, are the main factor and are closely related to diseases of the gastrointestinal tract. Today, there is only one problem, the organization of the mayor, prognosis, treatment and prevention of the disease in patients with chronic viral hepatitis B.

In the world, in order to achieve high efficiency in organizing measures aimed at prognosis, treatment and prevention of oral diseases in patients with chronic viral hepatitis B, a number of research works are being carried out. In particular, the study of endogenous and exogenous factors causing chronic hepatitis, as well as the identification of mechanisms of action of external environmental factors; clinical features of painfulness of the periodontal mucosa and periodontal, dental caries and children with chronic hepatitis, changes in the composition of oral fluid, clinical and biochemical features, immunobiological properties, the study of the complex action of medical drugs and the level of dental caries, clinical changes in the degree of remineralization of tooth enamel, acid-base balance of oral fluid, the rate of saliva secretion, as well as the influence of various properties of mixed saliva.

In children with chronic hepatitis B, research in the general direction of reducing the etiological factors of the disease, improving and optimizing treatment and preventive measures with the simultaneous development of clinical and prognostic methods for diagnosing the patient's disease. The main priority of scientific research is to reduce complications of oral cavity diseases, while

increasing the effectiveness of its diagnosis and treatment. Currently, comprehensive research and study of chronic liver pathology and dental diseases are being conducted in the Republic of Uzbekistan. There are only unified works that are not specifically focused on chronic hepatitis, cover a group of patients with all forms. chronic viral infection cookies (Yuldoshkhanova O.S., 1996).

Comparison of the obtained results with the data of foreign and domestic authors, substantiated conclusions and the conclusion confirm the reliability of the obtained results. The scientific significance of the obtained results is included in the scientific substantiation of the severity of the main clinical manifestations of oral diseases in children with chronic hepatitis B; in the installation of the main clinical markers that allow practicing dentists to prevent the development of chronic viral hepatitis at an early stage.

The practical significance of the work is that for the week in practice an improved approach to combat tactics of dental treatment of children with pathological field of the oral cavity against the background of chronic hepatitis B is proposed, which made it possible to increase the clinical, immunological and dental effectiveness of treatment, reduce the risk of formation of chronic pain field of the oral cavity.

# **CHAPTER I. MODERN CONCEPTS OF THE RELATIONSHIP BETWEEN ORAL CAVITY PATHOLOGY AND CHRONIC VIRAL HEPATITIS B IN CHILDREN**

## **The influence of chronic viral hepatitis B on the development of diseases of the oral cavity.**

The issues of combination of lesions of the oral cavity and internal organs among the problems of dentistry currently occupy a visible place, as they allow to reflect the essence of the genesis of diseases manifested on the slippery membrane of the oral strip (SOPR). Changes in SOPR are often the first signs - markers of the occurrence of general somatic pathological processes, the study of which allows to provide early diagnostics of mongix diseases of the internal organs of the oral cavity is a "mirror" reflecting the state of i.e. mongix internal organs.

Often, the dentist first examines skin changes characteristic of systemic pain. In addition, timely diagnosis significantly affects the choice of symptomatic dental treatment for these diseases.

Dysfunction of the digestive organs predisposes to polyhypovitaminosis, the result of which is a decrease in the general resistance of the body and this is one of the trigger factors for the development of pathology of the oral cavity.

Changes in the area of the heart and pathological organs of the JCT are more pronounced in comparison with children without somatic pathology and are closed at high levels of distribution of the red caudal papilla (characteristics of the angular size and chronic tricuspid sponge); in particular, and icterus of the mucous membrane of the oral strip; and changes in the relief of the dorsal surface of the tongue and groove; and changes in the follicular apparatus (a characteristic combination of hypertrophy with atrophy of fungal and filiform follicular tissue, desquamation) or characteristic atrophic changes in filiform follicular tissue; in the formation of plaque on the dorsal surface of the tongue; in the presence of dense, yellow-brown plaque on the teeth; in a high degree of prevalence and intensity of

the inflammatory regime of the periodontium. A high level of IgA and SIgA in saliva and a comparison with practical indicators of children's health were revealed. Pathology of the JCT leads to trauma and indicates the development of microbiocenosis .

In the studies of Kazarina A.N. (2010). It was established that all children with gastroduodenal pathology had an increased compared to the norm content of Igg in the oral fluid, which indicates the sufficiency of anti-infective immunity in children. These are children with gastroduodenal pathological deficiency of sIgA and fluidity of the rta layer , activity of oral neutrophils compared to that in healthy children. Involvement of the digestive system in the pathological process is accompanied by more pronounced immunological changes.

Myasnikov A. L. (1949) observed hyperemia, edema and swelling of the soft palate. According to N. N. Garay (1965), the most frequent symptom for all diseases is bleeding gums, as well as various forms of gums. In patients with chronic forms of hepatitis and liver cirrhosis, he identified three forms of gums - mild, moderate and severe. An analogy for the division of gums was made by Yu. V. Barkhatov (1967)

Research in this area continues to this day due to its relevance.

Thus, when examining the dental status of children aged 6-7 and 11-12 years, it was found that the hepatobiliary system is impaired, and the intensity of dental caries according to the KPU+kp index (for children aged 6-7 years) was  $7.0 \pm 0.41$  (2.7 times more than in healthy children); the PO KPU index (children aged 11-12 years) was  $6.1 \pm 0.52$  (2.2 times more than in healthy children). Pathological manifestations of the hepatobiliary system of gingivitis are observed in 95.24% of children aged 6-7 years and in 97.2% of children aged 11-12 years.

According to the results of the study by Sumkina O.B. and avt. (2008), the analysis of the condition of the mucous membrane of the upper respiratory tract in viral hepatitis indicates the attraction and pathological process of the entire mucous membrane of the oral cavity in the prodromal period of the disease. At first, foci of hyperemia appear on it, later - icteric coloration, mainly in the area of the hard and

soft palate, here vascular disorders occur, manifested in the form of hemorrhages. For chronic hepatitis is characterized (in 96.27% of cases) by a feeling of burning, itching and disease of the lips, tongue and hard palate.

Special attention is paid to studies devoted to the relationship between the development of liver pathology and dental caries.

In recent years, there have been many studies in pediatric dentistry : the impact of caries intensity on the quality of life of children; the impact of dental health on the quality of life of adolescents in the United States, Brazil, Australia. The study of the impact of dental health on the quality of life of the working-age population occurred in various countries of the world: Great Britain, Australia, the United States, China and a number of other developing and emerging countries. All researchers note the aging of the increase in dental caries not only in adulthood, but also in the child population.

Research conducted in the United States has shown that in the average dental practice, patients who are carriers of the flu virus come to see a dentist every day, every 3 days – herpes, every 4 days – skin and venereal diseases, every 5 days – hepatitis. The American Dental Association, having published the research data, attracts dentists to the practice of preventing infections and the time of dental appointments, and also calls the risk of a group of dentists themselves who are in contact with sick patients, the most closely, in addition, the aerosol plume that appears when working with another, spreads within a radius of up to 5 meters.

Epidemiological data on the prevalence of caries among the population of Uzbekistan. Scientists have found that the Republic of Uzbekistan is a region with a high prevalence of caries. Thanks to the developments of domestic teachers, it was possible to raise the hygienic education of adolescents, parents and school teachers to a higher level. The study of the pharmacological action of individual drugs in the treatment of diseases of the oral cavity in adolescents, such as Imudon, Citeal, film "Diplen F" for rannix formax dental caries, for the treatment of catarrhal gingivitis, the use of electroactivated aqueous solution, solcoseryl and a number of other dental

innovations, allowed to provide therapeutic measures among children more effectively.

It is currently believed that the leading role in the occurrence of caries in children belongs to streptococcal microflora, which primarily forms dental plaque and provides a protective mechanism for the adhesion of cariogenic and periodontopathogenic flora on the surface of the teeth. Among the pathogenetic factors, the dominant ones are violations of the nature and regime of nutrition (carbohydrate factor), low level of hygienic condition, the presence of infectious and somatic diseases in children, such as chronic hepatitis.

Dental caries develops in cases where caries is caused by carious situations and resistance of the tooth to the impact of unfavorable factors. Of all the permanent teeth, the first permanent molars are affected by caries earlier. According to a number of researchers, the degree of caries susceptibility of molars is determined by the relief index of the occlusal surface. Caries is often caused by teeth with a large number of ridges, increased prevalence of the main groove, thin layers of the fissure pattern, an increase in the number of additional grooves, spots of irregular length, which leads to the formation of additional retention points for a local cariogenic factor.

In recent decades, the previous idea that children under 3 years of age do not develop dental caries has been replaced by data on its prevalence in 62.6% of children under 2 years of age and 70.3% - 85.5% - under 3 years of age. In terms of age, growth and its intensity: 3.7-3.9 and 70.3% of 3-year-old children in the Southern European region, 13.49% have caries intensity above 8. The average values of caries intensity in 3-year-old children with the third degree of its activity are  $1.33 \pm 0.76$ .

The peculiarity of clinical manifestation of caries in young children are small or pigmented pits, formation of saucer-shaped defects without tendencies to limitation, circular form of damage and occurrence of this phenomenon of crown deformation. Rapid progression of the process leads to complete destruction of the predominant number of teeth by the age of three, losing its functional value and development of periodontitis.

Early appearance of foci of chronic infection and, rarely, their presence up to 5-7 years causes a general adverse effect on the body (provoking partial diseases of the nasopharynx, loss of appetite) and local - on the dental-jaw system. Being in direct contact with the rudiments of permanent teeth forming in the jaw, foci of chronic periodontitis (ostitis) cause the formation of local (focal) enamel hypoplasia.

### **Treatment of dental caries in children with chronic hepatitis B.**

All organs and systems of the human body are closely interconnected, so it is necessary to use treatment methods. Close communication between pediatricians, therapists and dentists should ensure effective prevention, modern diagnostics and treatment of dental diseases. And vice versa - rapid elimination of dental diseases can prevent the development of a number of somatic diseases and complications.

Over the last decade, the concept of operative dentistry has undergone significant changes. Neither by changing the principle of preparation, nor the surgical method, nor only by traumatizing the carious process of tissue, nor the healthy caries-sensitive zone, nor the concept of "minimal intervention". Such properties of glass ionomer cements as chemical adhesion to dentin, enamel and cement to the tooth without acid etching, resistance to air moisture and the filling process, caries static effect with prolonged release of fluoride ions into tooth tissue and oral fluid, good biocompatibility, non-toxicity, allow their wide use in pediatric dentistry - and create the concept of "minimal intervention".

Dr. G. Alle (2009) proposes a new standard for caries treatment. The standard is aimed at improving the quality of life of patients and includes the following: determination of the individual risk of caries, early diagnosis of primary defects, control of the influence of etiologic factors, chemical remineralization of hard tissues and minimally invasive treatment and recommendations with adhesive restoration and continuous monitoring. cost of hard tissues of teeth.

Dr. G. Alle presents his own clinical studies in his new series of publications:

-There is no optimal treatment strategy for any type of carious defect;

- Depending on the individual risk level, the treatment plan should include monitoring, remineralization or invasive treatment;
- cavity formation is the main indicator for the use of invasive treatment;
- For the treatment of defects located in the interdental spaces, it is recommended to use remineralization of hard tissues in combination with regular X-ray monitoring.

Numerous experimental and clinical studies conducted in recent years confirm that a decrease in the general non-specific resistance of the body, as well as the structural and functional resistance of hard dental tissues, is a repulsive factor for the development and activity of dental caries in children and adolescents.

New data on the treatment of dental caries in children at an early age are presented in the dissertation work of Korchagina V.V. (2008). The author's studies established the effectiveness of conservative therapy methods for primary caries at an early age with a high and average level of caries intensity of  $94.33 \pm 0.81\%$  with fluoridation of the enamel filling liquid,  $94.95 \pm 0.69\%$  with fluoridation of the filling liquid of the dental arches  $97.44 \pm 0.79\%$  with non-invasive fissure sealing. It was established that the effectiveness of minimally invasive treatment methods at an early age is  $99.47 \pm 0.28\%$ , and the frequency of invasive fissure sealing is  $95.24 \pm 2.34\%$  -  $98.81 \pm 1.19\%$  v. remote rocks. The effectiveness of atraumatic treatment methods for caries in children under 3 years of age was established, which by the end of one year of observation was  $86.24 \pm 2.25\%$  for prophylactic filling and  $76.06 \pm 2.65\%$  for adhesion restoration, and after two years -  $84.21 \pm 2.43$  and  $90.59 \pm 1.82\%$ , respectively. The author reports new data on the effectiveness of using copper-calcium hydroxide for root canals of incisors with an unformed apex ( $97.26 \pm 0.68\%$  -  $98.07 \pm 0.57\%$ ). formation of a dentinal barrier in the apical part of the root canal and the results of a combined method of instrumental treatment of it, copper-calcium hydroxide depot and permanent obturation with zinc oxide-degenol paste. The authors also found that achieving maximum dental health in a young child is possible under the conditions of implementing an individualized treatment and

preventive program taking into account the psychophysiological characteristics and risk factors for caries and the inherent data of the child.

A group of students from Moscow shares their successful experience of treating dental caries in children using the dental adhesive film "Diplen F" on stadiums of chalky spots of temporary teeth. As a result of using the film, the enamel is saturated with fluoride ions, which contributes to the full remineralization of teeth and increased resistance to the action of cariogenic factors. Chlorhexidine bigluconate, being part of the film, provides localized inhibition of the vital activity of plaque bacteria. The low concentration of the medicinal components of "Diplen F" does not pose a toxicological hazard to a small child, in addition, the structure of the film prevents fluoride from entering the gastrointestinal tract.

However, there is no information in the literature about the inadequacy of children in aesthetic treatment of primary teeth, not enough days or differential characteristics of various methods of treating dental caries in children.

The study of the clinical efficiency of the composite material "Esterfill Ca/F" with direct adhesion in the treatment of caries of primary teeth is devoted to the communication of the group of authors. The restoration was assessed using the USPHS criteria (Cvar & Ryge) during a year. Results: after 12 months, complete restoration was observed: according to Black class I - 97.1%, according to class II - 90.1%, according to class V - 90.1%. The criterion - local adaptation for all classes of restoration, by the end of the year having received the "A" rating, - was approximately 70%. The main indicator of the ultimate discoloration with the "V" rating was in the restorations of class II Black - 28%, S - 5-10%, also more in the bands of class II. Almost all restorations received the "A" rating according to the "secondary caries" criterion. Conclusion: A 12-month clinical study showed sufficient effectiveness of the Esterfill Ca/F material in the restoration of Black class I, II, V and primary teeth.

A new approach to the treatment of fissure caries has been proposed by a scientist from the USA, Daniil W. Boston (2010). This problem is aggravated by the fact that not all open carious lesions are detected radiographically. In modern clinical

conditions of widespread hidden occlusal caries and suboptimal diagnostic methods for differentiating healthy and carious fissures, a conservative approach to treatment is of great importance. The use of the Fissurotomy™ system offers a new approach to solving this problem due to a selective conservative method for treating various clinical manifestations of occlusal caries. To optimize the approach to the restoration of localized fissure caries, a common technique from the Temple University School of Dentistry and SSWhiteBurs, Inc. and a liquid composite material HeliomolarFlow were used.™ for restoration of cavities, molded and auxiliary procedures. Fissurotomy™. Two main factors determine the minimum "golden mean" in preparation for fissurotomy. The first factor is the opening of the fissure, necessary for creating diagnostic access to dentin. Having measured the width of 30 dental probes of different basins, the authors found that to create access of the probe to dentin it is necessary to open the fissure approximately by 0,8 mm. The second factor is sweetness, necessary for the use of liquid composites. Studies tested on extracted teeth showed that in cases where the preparation reaches the enamel-dentinal border, the width of the strip should be approximately 0,8 mm.

In order to obtain the desired geometric field and the necessary cutting characteristics, such parameters as dimensions, the number of blades, the blade profile and the angle of the incision are necessary. And as a result, there is a firm word that meets all my requirements.

The problems of treating chronic gingivitis in children with congenital and hereditary somatic diseases associated with multiple caries and, less frequently, with systemic enamel hypoplasia, are the subject of a study, according to which the disease is characterized by significant disturbances in the composition of saliva: increased content of anaerobic glycolysis products (lactate and pyruvate), lipid peroxidation products, local anti-inflammatory factors (secretory immunoglobulin A (sIgA), lysozyme). These changes correlate with systemic disturbances in bioenergetic processes, and are also observed in children with hereditary and congenital somatic pathology. In turn, the constant increased lactate content in saliva is a high-risk factor for caries, the implementation of which is observed in the

observed children. As a result of treating gingivitis with polyoxidonium and sublingual tablets of Vide, immediate elimination of clinical manifestations of gingivitis is observed, as well as a significant increase in saliva: normalization of lactate and pyruvate, an increase in lysozyme, sIgA, a decrease in phospholipase activity, the amount of lipids, collagen metabolites and signs of inflammatory activity of the inflammatory process in the oral cavity. No side effects were noted during treatment with polyoxidonium. On the contrary, no improvement in the course of the pathology of children was found in children from the comparison group who did not receive treatment with sublingual tablets of polyoxidon, despite the continuation of treatment of the underlying disease. The data obtained indicate the advisability of local use of polyoxidonium in chronic gingivitis combined with multiple dental caries in children with congenital and celestial somatic pathology.

For successful treatment of dental caries and caries in young children, various remineralizing gels containing xylitol are used. Due to special additives, the gel has high adhesive properties, it can be used without preliminary drying of teeth and applied without the use of mouth guards, which is very important for young children. The studies have shown high efficiency and safety of use even in the treatment of caries and non-carious lesions. Therefore, the inclusion of gels in the complex treatment scheme as remineralizing therapy, which simultaneously have antimicrobial properties, is very promising. The study data of the remineralizing gel " R. O. S. S. Medical Minerals " showed a positive effect on the composition of the biofilm microbiocenosis, normalization of the qualitative composition and quantitative destruction of bacteria, caries and stabilization of residences. In addition, when using the complex, the occurrence of Candida fungi increases and biofilms, as well as the number of infections and the frequency of isolation of some periodontopathogenic species of anaerobic bacteria.

Thus, modern medical technologies and means are used to treat dental caries and the occurrence of somatic pathologies, which allow preventing the progression of the carious process and prolonging the course of time. Along with this, methods have emerged that allow treating tooth tissues with minimal damage and a restorative

material with properties of high biological compatibility and chemical-physical adaptation to the parietal plate, which is especially important in the treatment of caries and chronic hepatitis B.

### **Prediction of oral diseases in children, starting with XGV.**

Rapidly developing innovative technologies allow using the latest achievements of science and technical means in modern dentistry, especially where it is necessary to improve objective diagnostic parameters for the appointment of clinical or preventive measures. This is especially relevant in a children's dental clinic, where the preservation of the health of the younger generation is practiced.

Known colorimetric methods for determining the pH of dental plaque. It is based on the use of an acid-base indicator - methylene red, which is applied to the dental plaque in the oral cavity after a carbohydrate load of 1% glucose solution, which is used as a nutrient medium for acid-forming bacteria. plaque. In this case, a change in the color of plaque from yellow to red causes in the area where the pH is less than 5.2. The disadvantages of this method include: a low range of the determined pH parameter (4.4-6.0); inaccuracy in determining pH, associated with a subjective, primary assessment of the result obtained; inconvenience of colorimetric assessment of changes in the color of dental plaque in the oral cavity due to the peculiarities of the color of the mucous membrane of the alveolar process and tooth enamel (the color changes from yellow to red); The use of an indicator solution (methylene red) in the child's oral cavity can cause allergic reactions of a local and general nature.

In the modification, the above method of determining the pH of dental plaque is deprived of the last two advantages. This is a method of changing an account. De-determination of the fact of change in the color of dental plaque occurs not in the oral cavity, but on titration paper after a carbohydrate load, collecting dental plaque and applying an indicator (methylene red) to it. But at the same time, such

imperfections as a low range of change of the determined parameter and inaccuracy of the result assessment are not excluded.

Known potentiometric methods for measuring the pH of dental deposits in the oral cavity are based on the use of various metal oxide indicator electrodes.

The data allow to determine the pH parameter more accurately (range from 1 to 10) with an error of  $\pm 0.2-0.3$ . The methods are very similar to each other, and differ only in the type of indicator electrode. However, these methods are not without their advantages. Some of my shortcomings can be explained by the fact that there is a fairly high error in the results obtained ( $\pm 0.2-0.3$ ), as well as the bulkiness of the design, which allows it to be used for interpretation and scientific purposes, as well as practical application and practical health care. For this reason, I see limitations in use in pediatric dentistry, especially in preschool and primary school children. It also remains unclear how to ensure sterilization with an electrode during mass dental examinations, given that pH is determined in the oral cavity.

Most of the proposed methods are based on the use of proprietary designs that cannot be purchased for use even for scientific purposes, let alone for mass practical implementation.

Thus, the known methods for determining the pH of dental plaque have a number of limitations, which, according to this literature, should prevent their use in dental practice.

To determine the step-by-step individual risk of dental caries development in children aged 3-5 years by oral fluid, a new method has been proposed using a microbiological test in combination with the treatment of temporary teeth with toroid-containing preparations. The author of the method is Kolesova O.V. (2010). Studying the saliva of patients, the author established the level of caries activity by the number of lactobacilli, which should not exceed  $10^5$  in 1 ml of saliva. To determine the level of lactobacilli and plasma fluidity, a small amount of unstimulated mixed saliva (2 ml) is taken for 10 minutes, which is mixed with a sterile pipette and a sterile, pre-suspended test tube without preservatives, delivered to the laboratory, and taken 1 glass, which is especially important for preparing food

for anaerobes that die on contact with oxygen. For the treatment of teeth and prevention of cellulite, 3 different fluoride-containing preparations are used: Gluftored, enamel sealing liquid, bifluoride 12. Research data have shown that with a high level of lactobacilli and a high level of lactobacilli and non-renewable hygiene, it can be used for 3-5 years to correct these indicators and prevent cellulite, caries can be recommended as the most effective preparation - Enamel Sealing Liquid, and for prolonging the effect of reducing the level of lactobacilli - bifluoride 12.

This is a picture that predicts the possibility of painful dental caries of the upper teeth, since each child has an individual risk of developing caries, which depends on the type and quality of caries, the presence of caries, as well as external factors, such as a balanced diet, the quality of everyday life, teeth, various somatic diseases and chronic hepatitis B. To determine the individual risk of caries, a number of tests and numerous methods for predicting dental caries have been developed, based on identifying shifts in constant saliva, dental summer and others. The data obtained with the help of these tests significantly help the doctor to assess the degree of activity of the carious process and apply in each specific case differentiated appropriate measures to prevent caries.

### **Modern approaches to caries prevention in children with XGV**

Prevention of dental caries in children, despite numerous studies and scientific works in this area, does not lose its relevance.

In caries prevention, optimal conditions should be created for remineralization processes under the influence of calcium- and fluoride-containing preparations. According to the investigators, first of all, it is necessary to normalize physiological reactions that ensure the balance of de- and remineralization processes in the solid state of cannabinoids and the creation of a full-fledged structure of hydroxyapatite and fluorapatite in them.

Results of a nine-year study of immunomodulatory drugs and complex caries prevention in children with different dental status, presented by Nizhny Novgorod researchers. Scientists claim that the elimination of carious tissue and the elimination of the defect with a filling material cannot be assessed as a treatment of diseases if this pathology has an infectious etiology. At the same time, the oral immunity system, which suppresses the proliferation of microorganisms, including cariogenic ones, can serve as a deterrent to the development of caries. The presented results of the study show that under the influence of the measures taken, patients improved the indicators of oral hygiene and imbalance of local immunity factors. Positive changes can be made in the group of children. Additional use of Imudon gave a more stable positive result, which allowed the researchers to recommend in combination with therapeutic and preventive measures to improve the dental status using an immunomodulator.

Within the part of the post-Soviet space, the prevalence of caries in children of the average child population as a whole does not coincide with the observed fantastic reduction in dental morbidity in the countries of Western Europe and the USA. To optimize the program of communal prevention in the CIS, it is obvious that it is necessary to use international experience, recommendations of the World Health Organization and facts of evidence-based dentistry. Leus P.A. (2009).

Since the middle of the last century, manufacturers and scientists have made great strides in improving the quality, increasing the efficiency and functionality of toothpastes. Development of a significant number of new biologically active components capable of strengthening hard tooth tissues, reducing demineralization, reducing bacterial plaque adhesion, preventing or slowing down the rate of tartar formation, reducing dentin sensitivity. Today, pastes have a wide multifunctional purpose. Toothpaste contains passive substances and active additives, the share of which in the total volume of toothpaste is relatively small and is not of fundamental importance in the prevention and treatment of diseases (caries, non-caries lesions, periodontal diseases).

The results of numerous scientific studies allow us to single out fluoride as the main active component of dental preparations, playing a leading role in the prevention of dental pain. The most popular toothpastes on the market are those containing sodium fluoride, monofluorophosphate and aminofluoride.

In addition, the composition of toothpaste components includes fluoride products to increase tooth sensitivity and external irritation. These include strontium, potassium, fluoride, hydroxyapatite salts. The mechanism of action is based on chemical blockage of dentinal canals, blockade of nerve endings.

antibacterial agents such as chlorhexidine, triclosan and others are added to toothpastes .

Agents that slow down the rate of tartar formation – pyrophosphates, triclosan with copolymers, zinc citrate, zinc chloride – prevent the precipitation of calcium ions and thereby reduce the rate of formation of dental plaque.

For children of this group, an individual preventive program is drawn up. Their distinctive feature is the focus on children of low growth, in connection with which only those types of manipulative and preventive means are prescribed that are practical and effective in children of this age group. Frequency and timeliness of use and dependence on the activity and development of caries. The program provides for mandatory control of the risk of caries development, especially control of saliva parameters (buffer capacity, alkalinity, amount and quantity of cariogenic flora), the use of growth-stimulating drugs, as well as the possibility of correcting the content by other special methods. low risk - laser diagnostics of hidden caries, quality control of the marginal fit of the sealant, X-ray control of the edges of the restorations.

The algorithm for creating an individual caries prevention program can be presented in the following practical form: identifying prenatal factors and early postnatal factors that contribute to the formation of hemoresistance in dental tissues → identifying risk factors in early childhood that affect the transformation and resistance of dental tissues (interviews, filling out questionnaires, analyzing a food diary) → looking at the child and his mouth - finding caries risk indicators (filling out the Early Patient Observation Card) → extracting risk factors (registration in the

journal) and determining the level of caries risk and corresponding to the Algorithm for determining the risk level → forming a preventive group in accordance with the degree of caries risk and its intensity → choosing the appropriate Preventive Program → testing programs → individualization programs in accordance with the characteristics of the "child-parent" bet and, for children, taking into account chronic hepatitis B.

Having studied literary sources, I can conclude that for special work of dentistry with children it is necessary not only competent selection of methods and means of quality call, especially in case of chronic somatic pathology, but also no less competent approach of psychoemotional correction of the state of the child and his parent. A great advantage of prevention of dental diseases in children with chronic hepatitis B is relatively low cost compared to treatment. It is 10 times cheaper to prevent the disease than to treat it later. To provide dental care to children with somatic pathology it is necessary to have an alliance: an infectious disease specialist, a pediatrician and a dentist. Only such an alliance can guarantee the fulfillment of the main task facing a pediatrician of any specialty - strengthening the physical and maintaining the mental health of a small patient.

Summing up the analysis of literary sources on the chosen topic of the study, I would like to note that publications on the study of diseases of the oral cavity in children with chronic hepatitis B in recent years have been virtually non-existent. And I have not found any serious information on this topic in the available literature.

The widespread prevalence of dental caries in children makes research aimed at developing methods of treatment, prevention and prognosis of this disease relevant.

The prevalence of chronic hepatitis B in children is also at a high level. The epidemiologist is beating the bell about the increase in the incidence of children with various forms of hepatitis. Scientists have established that the Republic of Uzbekistan belongs to the region with a high prevalence of diseases, such as dental caries in children, and hepatitis of various forms in accordance with the WHO classification.

The high prevalence and intensity of dental caries in children in different countries and regions, with different environmental conditions, dictates the need for complex risk factors, social and hygienic, medical and biological, especially in

children with various somatic pathologies. As scientists note, many childhood diseases, such as rickets, anemia, occurring in the personal years of a child's life, affect the development of the dentoalveolar system, which leads to delayed bone development and deformations ii. In such children, the formation of hard tissues of teeth is disrupted and delayed, late eruption occurs, and the bones of the jaws can be deformed. Teeth erupt with a defect in the structure of hard tissues (systemic hypoplasia), are easily subject to carious destruction, both milk and permanent. Any disruption in the functioning of the dentoalveolar system, and in particular the incorrect position of the teeth, can lead to disruption of the function of other organs and systems of the body. Gastritis, cholecystitis and obesity, liver and pancreas diseases, skin and endocrine diseases - this is an incomplete breakdown of the problem caused by anomalies of dental and jaw development. Anomalies of the bite can be caused by growth disorders and the location of the jaw bones; incorrect position of the teeth and the nature of ix closure, the shape of the alveolar snouts, as well as impaired functions of breathing, sucking, swallowing, chewing and speech. The nature of caries is also affected by general pathology and non-specific immune status.

To optimize the preventive program, it is obvious that it is necessary to use international experience, recommendations of the World Health Organization and evidence-based dentistry, as well as to take into account children suffering from hepatitis B.

## **CHAPTER II. CHARACTERISTICS OF CLINICAL MATERIAL AND RESEARCH METHODS**

### **General characteristics of clinical material**

Collection of clinical material in the hepatology center and polyclinic of the Republican Scientific and Practical Medical Center of Pediatrics of the Ministry of Health of the Republic of Uzbekistan for the period from 2005 to 2011. Namely, 320 children with CHB aged 5 to 15 years were examined. Also under observation were 20 practically healthy children of the same age with pathology of the gland XGV (control group).

The distribution of children depending on the field is shown in Fig. 2.1.

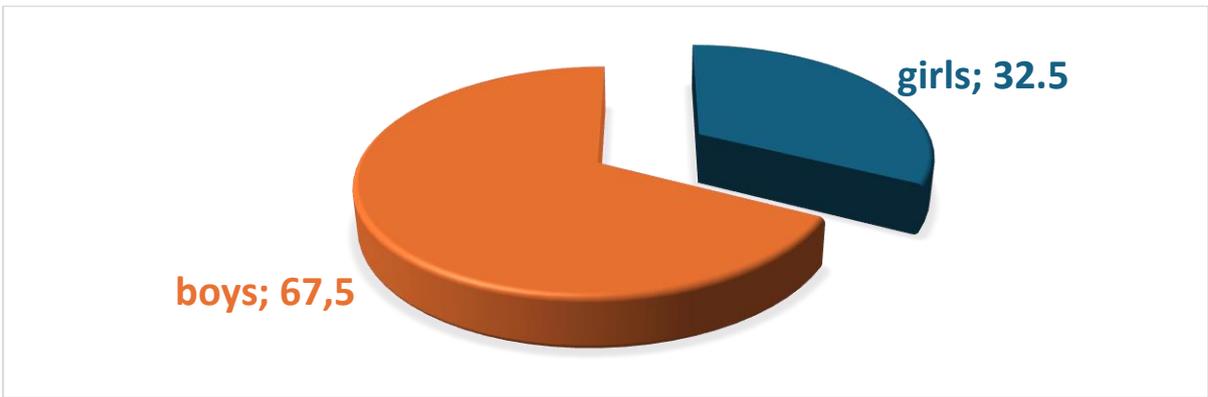


Fig. 2.1. Distribution of children depending on field.

Of the total number of children examined, 216 (67.5%) were boys - 104 (32.5%) were girls

And this depends on the age of the child, divided into the following subgroups: 5-7, 8-11 and 12-14 years (Table 2.1.).

Table 2.1

The distribution is detailed.

Research Group	Age index						All
	5-7 years		8-11 years		11-14 years old		
	press	%	press	%	press	%	
Children with XGV	125	39.1	139	43.4	56	17.5	320
Continuation of the group.	9	30	10	33.3	11	36.7	30

The most frequent patients were children of primary school age (5-7 years) - 125 children (39.1%) and middle school age (8-11 years) - 139 children (43.4%).

Dynamic observation of patients with marking and a specially developed map, including questionnaire data, patient data, anamnesis data, results of an objective examination of the state of the heart organs, laboratory and instrumental observation, the presence of concomitant diseases of internal organs.

All children were examined by a pediatrician, rheumatologist, dentist before hospitalization, and in some cases, consultations with other specialists were also

conducted. Diagnoses were verified based on the results of clinical and general laboratory research methods. Clinical and laboratory studies were carried out dynamically: upon admission to the hospital, before discharge, after 6 months, and also after 1 year after discharge from the hospital.

### **Research method**

All examined patients were subjected to a thorough clinical and laboratory examination, which is generally accepted in dental and hepatological practice.

**The diagnosis of chronic hepatitis B** was established in accordance with the order of the Ministry of Health of the Republic of Uzbekistan No. 5 dated 5.01.2012 “On measures to improve the fight against viral hepatitis in the Republic” and according to the classification adopted by the World Congress of Hepatologists (Los Angeles, 1994).

**Biochemical parameters** were determined in the experimental laboratory department of the Republican Scientific and Practical Medical Center of Pediatrics of the Ministry of Health of the Republic of Uzbekistan.

The activity of ALT, AST, the content of total protein, total and direct bilirubin, and the thymol test parameters were determined by standardized methods using commercial kits from Lachema (Czech Republic) and Labs Stem (Finland) on a biochemical analyzer FP-901 (Finland).

To determine the SMP and blood serum, a method using high-performance liquid chromatography according to V. V. Garbakov et al. is used. In healthy children, the SMP in cow serum was  $0.24 \pm 0.02$  mg/ml.

The determination of the CIC in the blood was carried out using the method of Khoskov et al. (1978), based on the precipitation of immune complexes (IC) with a solution of polyethylene glycol (PEG, molecular weight 6000) followed by measurement of serum by sintering and a spectrophotometer (F-26 at a wavelength of 450 ml). The V norm consists of  $73.7 \pm 5.8$  units.

LII was determined using the formula proposed by Ya.Ya. Kalf-Kalif as modified by Ostrovsky (1983). Normally, LII fluctuates within the range of 0.3-1.5.

Determination of LDH activity is carried out using the Sevel, Tovarek method and the Warburg optical test. Normal values are 23-90 E/D.

**Serological methods**, including determination of key markers of serum blood - HBsAg, anti-HBs, HBeAg, anti-NVe, anti-HV-cor by the IFA method with the help of commercial companies "Pharmas group" (Finland), "Pharmacia Diagnostic" (Sweden), test system "Roche" (Switzerland) and the department of laboratory and experimental diagnostics of the Republican Scientific and Practical Medical Center of Pediatrics of the Ministry of Health of the Republic of Uzbekistan. In order to exclude chronic viral mixed hepatitis, diagnostics of other markers, such as anti-HSV, were additionally carried out. , anti - HAV and anti - HDV . The final confirmation of the diagnosis was carried out after conducting a PCR study (determination of HBV DNA ).

To confirm the diagnosis of chronic hepatitis, **an ultrasound examination** of the liver, spleen and bile ducts was performed using the SAL-35A apparatus from Toshiba (Japan).

**A comprehensive dental examination** includes: examination of the patient, collection of anamnesis, visual examination and index assessment (KPU index, Fedorov-Volodkina hygienic index, RMA and KPITN, KOSRE) of the organ system.

The objectification of the results of dental examinations is carried out on the basis of calculation indicators: GI - oral hygiene index (Yu.A. Fedorov, V.V. Volodkina, 1970), KPU - dental caries intensity (WHO expert committee, 1962), to determine the condition of the periodontal soft tissues, the papillary-marginal-alveolar index - PMA (S. Parma, 1960), KPITN (WHO, 1989) were used.

**OHI Index Hygienic Floor - S** ( Green J.K. , Vermillion J.R. , 1964).

by the OKHI - C index : the first molars of the upper and lower jaws (16, 26, 36 and 46, if ix is absent - the adjacent second molars) and two central incisors (11 and 31, if ix is absent - the central incisors on the other side). Only one surface of the teeth is examined: the molars of the upper jaw and all incisors - vestibular, the

molars of the lower jaw - lingual. At the same time, the named surfaces should not have caries and hypoplasia.

Each surface is examined with a probe for the presence of soft plaque and tartar. On the surface being examined (lingual, buccal), the probe is placed parallel to the axis of the tooth and, starting zigzag movements from the occlusal surface of the tooth to the neck, the levels of the crown are marked, at which dental deposits accumulate in the zone.

The OHI - C is calculated as the sum of the plaque index and the stone index.

**Scaled plaque index ( Debris Index , DI - S ):** 0 points – pure pigment with plaque; 1 point – soft plaque is interesting and does not exceed  $\frac{1}{3}$  of the crown height or there is extradental pigmentation without visible soft plaque (Priestley plaque) on any surface area; 2 points – soft binding covers  $\frac{1}{3}$  · not more than  $\frac{2}{3}$  of the height; 3 points – soft plaster covers  $\frac{2}{3}$  of the surface .

**Dental calculus scale index ( Calculus Index , CI - S ):** 0 points – pure loss; 1 point – supragingival calculus occupying no more than  $\frac{1}{3}$  of the examined surface ; 2 points – supragingival calculus occupying more than  $\frac{1}{3}$  but less than  $\frac{2}{3}$  of the examined surface, or the presence of individual fragments of subgingival calculus ; 3 points – supragingival calculus covering more than  $\frac{2}{3}$  of the surface , or subgingival calculus encircling the neck of the tooth.

DI data - S and CI - S are entered into a special table with six cells, each of which is divided diagonally.

To calculate OHI - S sum up DI - SuCI - S all teeth:

$$\text{OHI - S} = \frac{\sum_{\text{DI-S}} \pm \sum_{\text{CI-S}}}{6}$$

The state of oral hygiene according to the OHI - C data is assessed as follows: with OHI - C no more than 0.6 - good hygiene; 0.7-1.6 - satisfactory; 1.7-2.5 - unsatisfactory; >2.6 - flat.

To assess the hygienic condition of the oral cavity, the hygiene index (HI) of Fedorova-Volodkina (1971) was used. The lower front teeth are stained with Lugol's solution. The result is calculated using the following formula:

$$\text{GI} = \frac{\text{Dental plaque score}}{n}$$

where: n is the number of observed teeth

The intensity of staining of dental plaque on each tooth is assessed using the following codes:

- 1 point – no staining,
- 2 points – staining of 1/4 of the tooth crown surface,
- 3 points – staining of 1/2 of the tooth crown surface,
- 4 points – coverage of 3/4 of the surface
- 5 points – painting of all surfaces.

Interpretation index:

**Hygiene Level Index Value**

- 1.1-1.5 points – good level of hygiene.
- 1.6-2.0 points – satisfactory hygiene of the oral area.
- 2.1-2.5 points – unsatisfactory hygiene of the oral cavity.
- 2.6-3.4 points – even level of hygiene
- 3.6-5.0 points – high level of hygiene.

**The following criteria are used for the RMA Rating Index:**

- 0 - no inflammation;
- 1 - inflammation of the mesenteric papilla (P);
- 2 - inflammation of the right marginal edge (M);
- 3 - inflammation of the alveolar gingiva (A).

displayed amount x 100%

Then the ratio index is equal to RMA according to the formula:  $RMA = 3 \times \text{number of points}$ .

RMA Study Index, Specific Gingivitis Grade:

0% - no inflammation;

30% of cases - mild gingivitis;

31-60% - moderate gingivitis;

In 61% of cases, advanced gingivitis is observed.

3. Determination of the CPITN index.

To determine **the periodontal index** CPITN (Ainamo, Barmes, Beagrie et al., 1982), the dental arches are fixed with 6 sextants: 2 anterior (upper and lower) and 4 lateral (upper and lower, right and left), 17, 16, 11, 26, 27, 37, 36, 31, 46 and 47 teeth are examined, the condition of six of the sites is recorded, i.e. one from each sextant, which is clinically in a more severe condition. Examination of the periodontal tissue was carried out by the zoning method to detect bleeding, supra- and subgingival calculus and pathological pockets using a special (button) probe.

CPITN Tracking Code for Rating Index:

0 - pure signs of disease;

1 - bleeding from the right probing site;

2 - presence of supra- and subgingival calculus;

3 - pathological pocket deep 4- 5 mm;

4 - pathological pocket deeper 6 mm and deeper.

**The KOSRE test** was determined using the method of V.K. Leontiev [123, p.6-8 ]. An acidic buffer solution with a pH of 0.3-0.6 and a 2.0% methylene blue solution were prepared in advance. The acidic buffer is a demineralizing solution. To prepare it, add 97 ml of hydrochloric acid and 50 ml of hydrochloric acid, stir and add distilled water to a volume of 200 ml. To make the solution more viscous, frequently add glycerin. The increased viscosity of such a solution allows you to obtain a cap with a constant friction speed on the tooth and a better effect on the surface.

For better visual control, the demineralizing liquid is tinted with acid fuchsin. In this case, the demineralizing solution acquires a red color.

When preparing a 2.0% methylene blue dye solution, measure and add distilled water to the 100.0 ml mark in a measuring flask.

A practical method for assessing the resistance of teeth to caries is implemented as follows. The enamel surface of the tooth being examined is carefully cleaned of plaque with a dental spatula, water peroxide, and dried with water. After this, a drop of saline buffer pH 0.3-0.6 of a constant volume is applied to the enamel surface of the tooth with a semiautomatic micropipette.

After 60 seconds, the demineralizing solution is removed with a cotton swab. No subsequent rinsing with water is required. The etched area is then covered with enamel nanosheets for one minute using a water ball filled with 2.0% methylene blue. The cotton ball is removed and excess paint is carefully removed using only dry cotton swabs. If necessary, if the plaque is coldly removed, the tooth surface is re-treated. These manipulations are important because excess paint and stained plaque can lead to incorrect interpretation of the data obtained.

The enamel's resistance to acid action (the demineralization process) is assessed by the intensity of staining of the etched area of tooth enamel. The degree of staining is judged by the blue color typographic tint scale. You use a ten-point scale, i.e. the stained color strip is taken as 10%, and the dry one as 100%.

After 24 hours, the etched area of tooth enamel is re-painted. The effect of the demineralizing solution is not ensured. If the etched area of tooth enamel is re-painted, then this procedure is repeated after 24 hours. The loss of the etched area's properties is considered as its complete restoration. The etched area of tooth enamel is restored at different ages in different people. The remineralizing properties of saliva are judged by the day at which the etched area of enamel loses its ability to be re-painted.

Thus, the degree of susceptibility of tooth enamel to the action of acids (demineralization, or enamel dissolution) is taken into account in percentages, and the remineralizing capacity of saliva is calculated in days.

In case of persistent caries - low susceptibility of enamel to acids (40%) and high remineralizing capacity of saliva (from 1 to 3 days), and in case of caries - high susceptibility of enamel to acids (40% and higher) remineralizing capacity of saliva (more than 3 days).

**The rate of formation of soft dental plaque** was determined using the method of Z.A. Yaroshkin, and **the cariogenicity of dental plaque** was determined using the method of J.A. Hardwick.

**Salivation** is determined by the volume of unstimulated mixed saliva, which is collected in the morning in a test tube and a graduated test tube and is allowed to flow for 15 minutes. The rate of salivation was expressed as the ratio of the obtained volume of saliva (ml) to the regulated time (15 min.) during which the mother was saliva, considering the norm to be 0.56 d} 0.01 ml/min. The rate of salivation is determined by the ratio of the obtained volume of mixed saliva to the time of receipt of the mother.

The start and end time of saliva collection are noted (usually 5-15 min). The salivation rate is calculated using the formula:

$$C_c = \frac{V}{t}$$

where  $S_s$  is the rate of salivation;

V — volume of secreted saliva (in ml);

t — saliva collection time (per minute).

The normal rate of unstimulated salivation is considered to be  $S_s = 0.31-0.6$  ml/min, hyposecretion is diagnosed at  $S_s = 0.03-0.3$  ml/min, hypersecretion - at  $S_s = 0.61-2.40$  ml/min.

**The viscosity of mixed saliva** was measured by the Oswald method using a VK-4 viscometer. The principle of operation of the device is that, as is expressed, the liquid and capillaries of the same state at the same temperature and pressure, inversely proportional to the internal or viscosity. In relation to the establishment of this parameter mixed saliva, this definition is reduced to comparing the path of movement of saliva and distilled water in strictly identical capillaries and under identical conditions.

The viscosity of saliva is calculated using the formula:

$$\frac{V_B}{V_C} = \frac{B_C}{B_B}, \text{ из чего } B_C = \frac{V_B \cdot B_B}{V_C},$$

where  $V_v$  — volume of required water (ml);

$V_s$  — volume of desired saliva (ml);

$In_s$  - viscosity of saliva (in relative terms);

$In_v$  — viscosity of water (relative ed.).

Favorable values of saliva viscosity are considered to be 1.0-4.0 relative units, unfavorable values are 6.0-9.0 relative units.

**The acid-base balance** in the oral cavity was assessed using the hydrogen index (pH). The pH of mixed saliva of patients with parenteral hepatitis B and C was studied using a universal indicator strip (pH 0-12) manufactured by Lachema. (NERATOVICE). A strip of indicator paper is applied to the mixed saliva being tested, after which it is compared with a decorative strip with a standard scale.

**Study of focal demineralization of enamel** . During the examination, children were diagnosed with teeth with initial caries in the stage of focal demineralization of enamel with white spots (105 children), the control group - 32 children, the main group - 73 children.

To conduct a more in-depth study of the course of focal demineralization of enamel in 105 children, clinical and laboratory methods were used to study the functional state of tooth enamel.

We determined **the intensity of staining of spots using** the method of Aksamit L.A., on a seven-full gradation scale in percent (%). A 2% solution of methylene blue was used as a dye for caries diagnostics (white spot) . This concentration of the dye ensures fast (within 3 minutes) and sufficiently intense staining of demineralized enamel areas characterized by high permeability. At the same time, healthy enamel remained unstained.

The method of staining the teeth was as follows: a cotton swab soaked in a 2% solution of methylene dimethyl ether was applied to the dried vestibular surface of the tooth after mechanically increasing the plaque with hydrogen peroxide and

thoroughly drying the surface teeth with cotton balls and air. After 3 minutes, use a swab with dye, and wash off excess paint with water. Paint, impregnation and enamel surface with increased impregnation, not removed as a result of polishing and scraping with an excavator.

The intensity of coloration of white carious spots is assessed using a control 10-point halftone scale with different shades of blue.

Three degrees of intensity of carious spots color were identified: light - horse 10-30%; medium - 40-60%; high - 70-100%. And in the case of an incorrect character, it is shown that he is naive.

Staining the teeth with a 2% aqueous solution of methylene blue allowed for the precise staining of carious spots. The intact enamel around the carious spot (point) remained unstained.

**A method of dental treatment of children with chronic hepatitis B,** including the order of observation:

All observed and sick children undergo dental treatment and preventive work, which is carried out according to the specified algorithm:

1. Individual health education work aimed at acquiring relevant skills and developing a strong motivation to visit a dentist.
2. Preventive work: conducting professional hygiene.
3. Medical work - oral cavity sanitation.
4. Outpatient observation - examinations after 1, 3, 6 and 24 months. The choice of means and methods of treatment of dental diseases is justified by the clinical and laboratory changes identified in sick children.

Scheme of complex treatment of patients with hepatitis B, including the order of observation:

- I. Sanitation of chronic foci of infections. Elimination of predisposing factors and therapy of organ pathology.
- II. RTA rehabilitation zone.
  1. Personal and professional hygiene.
  2. Antiseptic treatment, use of Eludril, Parodium application gel 2 times a day.

3. Treatment and prevention of hard dental tissues with the drug Gluftored.  
Oblepix oil, rosehip oil, oil solution of vitamin A.

XGV Children are divided into three groups. The first (control) group consisted of 20 children who underwent professional dental control of aesthetic processes in the treatment of major chronic diseases. The 2nd group of professional and personal hygiene sanatoriums. The third group consisted of XGV patients, divided, in turn, into three subgroups depending on the dental treatment we proposed. Children were examined before treatment, immediately after treatment and at long-term periods of 3, 6 and 12 months. The objectives of our study were to study the condition of the oral cavity organs in children with CHB and to evaluate the effectiveness of various treatment regimens using chlorhexidine-containing drugs: eludril, el hydium, parodium, treatment of hard tissues with teeth Gluftored (Fig. 2.2).

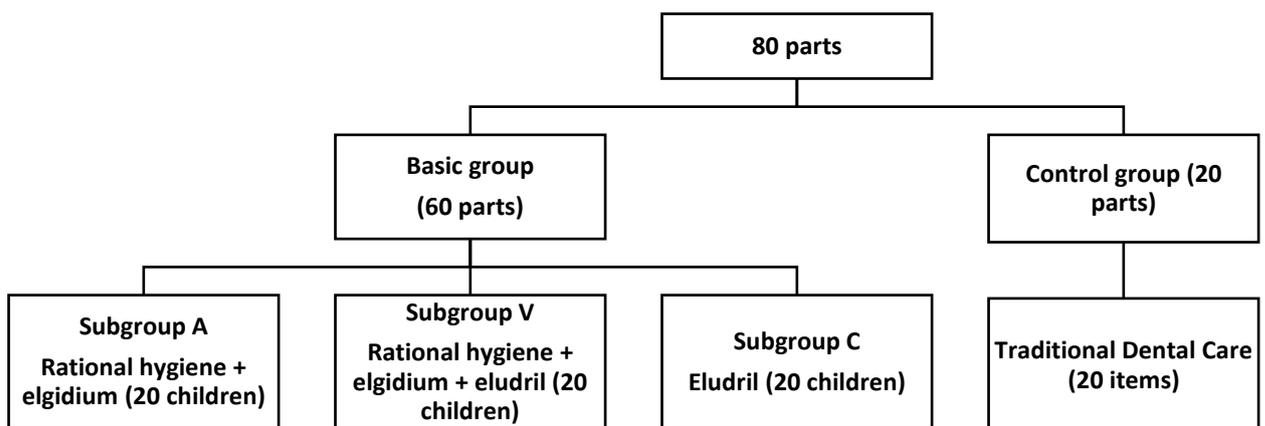


Fig. 2.2. Distribution of examined children by treatment groups.

We have proposed the following course of deep fluoridation: treat teeth with the preparation Glutored 5-6 times for 12-14 days every other day. The course of treatment can be repeated after 6 and 12 months, depending on the intensity of caries.

Dental treatment was carried out against the background of basic therapy for the general disease - XGV.

The treatment proposal included deep fluoridation of hard dental tissues with the drug Glutored, irrigation of the oral cavity with a solution of Eludril after each meal, followed by the use of gums with Parodium gel in children with increased bleeding gums. Hygiene measures: 2 times a day, morning and evening, brush your teeth with Elgidium toothpaste and an Elgidium toothbrush according to the standard clinical method, then apply SOPR ointment and Viferon to prevent viral rash.

At the beginning of the study, our task is described in detail the implementation of the area of rational hygiene. Kaidai's group was divided into 3 subgroups [10 parts each]: 1st subgroup [A], 2nd subgroup [B] and the third [C]. In subgroup A, the patient's child undergoes rational hygiene using the antibacterial toothpaste "Elgidium", the effect of which is carried out within 1-2 minutes according to the standard method. In subgroup V - rational hygiene and washing the floor with an antiseptic solution Eludril and running for 0.5 minutes.

In subgroup "A" the determination of the index of hygiene products is 5 days. During all 5 days after breakfast and at night a rational hygiene regime is carried out, for opening of teeth the antibacterial toothpaste "Elgidium" is used. After 5 hours after the morning hygiene measures the level of hygiene of the oral cavity was determined.

Subgroup "V" also includes clean teeth and a 5-day course of using the antibacterial toothpaste "Elgidium". Additionally, after brushing the teeth, simply spread Eludril. Each child also had their hygiene index determined 5 hours after the combined use of the antiseptic Eludril.

The third subgroup "C" - a striped napkin with an antiseptic in the morning and evening.

Antibacterial toothpaste Elgidium is used for the prevention and treatment of dental caries and periodontal diseases. And the composition includes chlorhexidine digluconate and calcium carbonate, which provide mechanical opening of the skin and have antiseptic properties.

The antiseptic drug Elludril is a 0.02% solution of decamethoxin, has a pronounced bactericidal, fungicidal, antiviral and sporicidal effect.

**Method of deep fluoridation with the preparation Gluftored** . For deep fluoridation my primer Gluftored - material for deep fluoridation of enamel and dentin (manufactured by VladMiva, Russia). The preparation Gluftored is a liquid suspension. Liquid - a blue solution containing fluorine and copper ions. Suspension - finely dispersed calcium hydrate in distilled water with the addition of a stabilizer.

As a result of subsequent saturation of the liquid and suspension, the sealing of enamel microcracks, dentine canals and cement occurs. The resulting substance is a high-molecular polymer of silicic acid with submicroscopic crystals of calcium fluoride, magnesium fluoride and copper-II fluoride deposited in it . Being alkaline in nature and an exceptionally dense material, it provides effective protection of dentine and pulp from the action of acids and monomers contained in composite materials.

Unlike conventional fluoridation (temporary - fluoride varnishes and fluoridating pastes), with side fluoridation microcrystalline calcium fluoride particles less than 1 micron in size are formed directly in the dentinal canals and powder of damaged enamel, which provides effective , long-term protection against caries.

Submicroscopic crystals of calcium fluoride are a constant source of fluoride ions, providing long-term remineralization and effective sealing of hard tissues. Copper compounds guarantee effective protection of hard dental tissues from cariogenic microorganisms. The long-term presence of copper and fluoride ions in hard dental tissues can restore the alveolar-dental system.

Deep photoetching does not reduce the adhesion and retention of filling and restorative materials.

The order of components depends on clinical effectiveness.

No safety instructions required:

- 1) remove tartar,
- 2) clean the surface (fissure) from hard dental deposits using special products (Polident No. 1 or Polident No. 2 paste without fluoride),
- 3) rinse the surface with water,

- 4) dry it with a stream of air,
- 5) then moisten generously with liquid,
- 6) After 1 minute, remove the liquid from the room, dry the swab, apply a suspension of calcium hydroxide to the surface to be treated (the bottle is pre-washed),
- 7) in 1 minute a stream of water will pass.

To achieve the desired effect, the procedure is repeated every 2 weeks and 1-2 times a year.

Gluftored allows for highly effective mineral fissure sealing, preserving tissue as much as possible. Sealing is due to powerful remineralization with the participation of saliva as a result of any fluoridation and the oligodynamic action of copper traces.

Since we conducted the study on children aged 10-15, i.e. during the period of permanent teeth eruption, when the mineralization of tooth enamel is not yet complete, we could not apply the deep fluoridation method in full. In 25-30% of children, a chalky spot formed within 1 minute after applying liquid #1 (available according to the instructions). Therefore, my team improved this method. The technique we propose is gentle for children. In my case, the exposure time of solution #1 was 30 seconds, the magnification factor was 2 times. Solvent #1 has a slightly acidic environment, which does not negatively affect anything and does not form enamel, I propose using a 1% solution of sodium bicarbonate. In this example, the original drying method consists of 7 stages, and the proposed one consists of 10 stages:

- 1) the surface of the teeth is cleaned of plaque with a regular toothbrush, and the spaces between the teeth are cleaned with dental floss;
- 2) the teeth are isolated from saliva and tears, dried with a stream of air (in patients with hypersensitivity of the tooth surface, it is enough to lightly blot the X with a dry cotton swab), a few drops of liquid No. 1 are applied to the palette;
- 3) for 30 seconds, the surface of the teeth is thoroughly moistened with solution No.

- 1) using a separated cotton swab (magnesium fluoride silicate) using a “microbrush”;
- 4) Using back and forth movements, rub the solution into the approximal spaces;
- 5) After 30 seconds, the surface of the teeth is washed with a 1% solution of soda bicarbonate, and then you can cool it with a dry cotton swab and a stream of air;
- 6) within 30 seconds, the surface of the teeth is again thoroughly moistened with solution No. 1 using a separated cotton swab;
- 7) Using back and forth movements, rub the solution into the approximal spaces;
- 8) After 30 seconds, cool the tooth surface, liquid and fluid in the refrigerator with a water-based swab and a stream of air;
- 9) Apply a small amount of liquid No. 2 containing highly dispersed calcium hydroxide to the second tray;
- 10) post-exposure speed No. 2, for 0.5-1 minute the patient can rinse the rot.

What is the suggested repeat course of deep fluoridation in Rovanie: treatment of teeth prepared with Gluftored according to the above scheme is carried out 5-6 times and every 12-14 days. The course of treatment can be repeated after 6 months and 1 year depending on the intensity of the caries.

Dental treatment in both groups was carried out against the background of basic treatment of the underlying XGV disease.

The proposed treatment included: deep fluoridation of hard dental tissues with Gluftored according to the above-described scheme, irrigation of the oral strip with Eludril solution after each meal, followed by application of Parodium gel to the gums in children with increased bleeding of the gums. The hygienic floor is washed 2 times in the morning and evening with Elgidium toothpaste and an Elgidium toothbrush according to the clinical standard method.

For Oral Infection of Sick Children, a solution developed and manufactured by the pharmaceutical company EUROMEDEX was used (France) antiseptic drug

for local use Eludril, daily for 10 days during periods of exacerbation of the underlying disease.

Eludril is an antiseptic, anti-inflammatory, analgesic and wound-healing solution, which includes: chlorhexidine bigluconate - 0.10% with pronounced antibacterial, antifungal and anti-inflammatory action; chlorobutanol - 0.50% - long-term local anesthetic effect; sodium docusate - a surfactant that increases dispersion and preserves active substances on mucous membranes for a long time. One of the remarkable pharmacological properties of the drug is the rapid relief of inflammatory phenomena and prolongation of the remission period.

Before using the working solution of Eludril, dissolve 10 ml or 100 ml of sterile saline. The resulting working solution was used to rinse the mouth of children with XGV. The difference of the proposed drug is that at a low concentration of chlorhexidine, a pronounced therapeutic effect is manifested, explained by the prolonged action of activated chlorhexidine bigluconate, capable of long-term deposition in the area of use, possessing additional bactericidal, antifungal, anti-inflammatory properties.

Parodiy is a powerful antiseptic with a wide range of bactericidal action, with anti-inflammatory, astringent and hemostatic properties. In addition to chlorhexidine, it contains rhubarb extract with glycosides and tannins that have a beneficial effect on the gums. It is available in the form of a gel in a 50 ml bottle, so a special spoon for using SOPR.

Elgidium is an antibacterial toothpaste containing chlorhexidine digluconate and calcium carbonate, which has a broad spectrum of bactericidal activity against both gram-positive cocci and gram-negative bacteria. Elgidium has a long-lasting (24 hours) therapeutic effect. In addition, it increases the pH of saliva, which leads to neutralization of the acidic environment and increased antibacterial activity. How to use: brush your teeth and brush your teeth for 2-3 minutes 2 times a day. The criteria for assessing the development of cariogenic situations in the oral cavity in children are the rate of plaque formation, its cariogenicity, concentration. Str . mutans in dental plaque and the degree of enamel demineralization.

Traditional therapy, including the key and itself: organoplastic sanitation, mouth treatment of gums with 0.5% chlorhexidine.

Basic therapy for CHB includes detoxification therapy, antiviral drugs, hepatoprotectors, antispasmodics, vitamin preparations, iron preparations, and enzyme preparations. Viferon is prescribed as antiviral therapy at a rate of 100 thousand IU/kg/day perrectum initially 10 days daily, and then 3 times a week for 6 months and Lamivudine (inhibition of HBV DNA polymerase ) at a dose of 3 mg / kg / day orally in tablets for 6 months. Given the severity of the cholestatic syndrome, children in both groups additionally received Ursosan (ursodeoxycholic acid) at a dose of 10-15 mg / kg / milk orally in capsules for 6 months.

To maintain the homogeneity of the group, the selection of patients was carried out taking into account the identical distribution of disease activity in all groups. At the beginning of treatment, children were in hospital conditions, and then municipal treatment was used with control observation after 3, 6 months and after one year.

The rate of therapy effectiveness increases after the end of the course of treatment, as well as 6 months and 1 year after the end of therapy. It should be noted that allergic reactions and other side effects were not observed in any sick child.

**Clinical and epidemiological research methods.** Based on the main clinical and laboratory research methods, he studied the prevalence, intensity and growth rate of caries. The definition of the state of the hygienic area and the knowledge of teachers, parents and educators, as well as the methodology for the correct implementation of the hygienic area are also described in detail.

The examination of the oral cavity and teeth was carried out using generally accepted clinical methods. The condition of the teeth was taken into account: isolated caries (intact teeth), carious lesions, including various forms of caries (with complications and without nix).

Caries diagnostics are based on anamnesis, clinical examination, zoning, and percussion. Additional methods for diagnosing focal demineralization of enamel include staining of spots with a 2% aqueous solution of methylene blue using the method of L.A. Aksamit. The term "focal demineralization of enamel" refers to the

initial manifestation of caries - caries and stages of the disease. In this case, single and multiple spots are observed on the surface of the tooth enamel.

A distinction is made between white uniform spots, which are usually sharply defined, and non-regenerative spots, where chalky areas are mixed with healthy enamel.

The sizes of the spots ranged from exact sizes to taking up 1/3 of the tooth surface. According to the nature of the surface, spots with a shiny smooth surface, matte and gray-gray were distinguished. In a number of cases, a decrease in the density of enamel in the area of focal demineralization was detected; the enamel was easily scraped off with an excavator.

In difficult cases of caries diagnostics at the white spot stage, we used the method of drying the examined surface of the tooth crown. When drying the tooth surface, the affected areas became quite white. All spots related to focal demineralization of enamel were stained with a 2% aqueous solution of methylene blue.

The incidence of caries was determined by the face of teeth with carious spaces, as well as by the number of filled and extracted teeth (FET/EE). The diagnosis of caries was established based on visible clinical signs of the presence of a carious cavity, taking into account deep lesions of the hard tissue of the tooth. The expanded dental formula records the localization of damaged and superficial teeth: medial, lateral, buccal, lingual surfaces - for the frontal and sagittal groups of teeth of the upper and lower jaw.

During the dental examination, the developed program with filling and a new examination formula provided for a reduction in the following main indicators of hard tissue dental caries: intensity and growth rate (according to the WHO nomenclature).

The rate of formation of soft dental plaque was determined by the method of Z.A. Yaroshkin, the cariogenicity of dental plaque - by the method of Hardwick J.A. A 0.1% aqueous solution of methylene red is used as an indicator of dental plaque.

In accordance with WHO recommendations, it is necessary to conduct hygiene education (sanitary and educational work and training in hygiene methods). In the presence of tartar and tartar pockets, professional oral hygiene was carried out with careful removal of tartar.

Sanitary and educational work was carried out regardless of the initial state of the periodontium. The children were explained the importance of calls for the oral cavity, speech, chewing function and the real possibility of preventing pain and periodontium.

Special attention was paid to the issues of balanced nutrition, as well as the relationship between oral hygiene and periodontal diseases. During classes on teaching methods of oral hygiene, students, under the supervision of a dentist, brushed their teeth in front of a mirror using the method we recommended. A standard method of brushing teeth was used. Brushing began with the chewing group of teeth on the upper jaw on the right, then the premolars were brushed, then the group of front teeth, the group of premolars on the left side and the group of chewing teeth on the left. And the teeth of the last jaw were brushed in this order. All teeth were brushed with 3 types of Genii toothbrushes: sweeping, spreading and horizontal-advancing.

**Microbiological studies.** All examined children had oral fluid collected by washing the oral mucosa (by rinsing); for this purpose, tubes with 9 ml of sterile physiological solution were prepared (Efimovich O.I., 2002). The material obtained by this method was considered as the first study; from this material, a number of serial studies were prepared in the laboratory, and subsequently a certain volume of them was seeded onto the surface of diagnostic nutrient media (Table 2.2).

Table 2.2.

Microbiological research methods

No	Nutrient media	Cultivation conditions	Selected
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1	Blood agar with sodium azide	Anaerobic	Total number of anaerobes
2	MRS-4	Microaerophile	lactobacilli
3	Blaurocco	Anaerobic	Bifidobacteria
4	Bloody agar	Aerobic	Total number of aerobes, streptococci
5	Gel-salt agar	Aerobic	Staphylococcus
6	Endo on Wednesday	Aerobic	Enterobacteriaceae, Escherichia
7	Saburo on Wednesday	Aerobic	Mushrooms
8	Aesculin agar	Aerobic	Group D Streptococcus

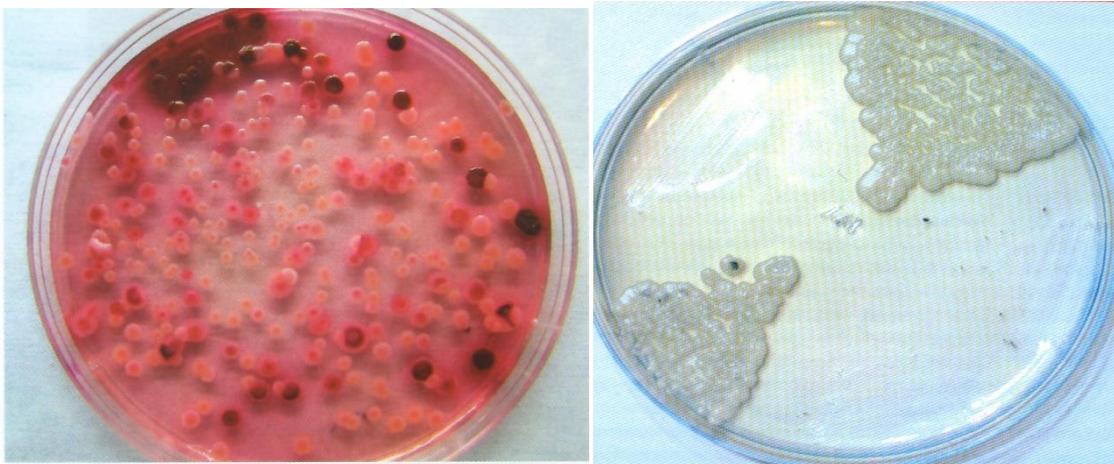
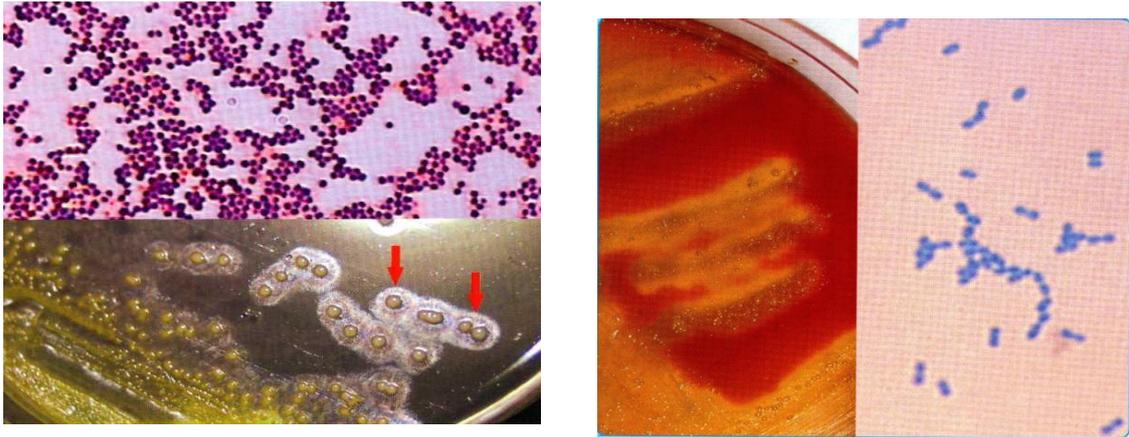
Seed and blood agar, Endo, milk-salt agar, Sabouraud were cultivated under normal conditions for 18-24 hours at a temperature of 37 ° C, the cultivation of samples for the isolation of anaerobes was carried out in an anaerobic jar, using gas generator bags (Fig. 2.3.).



Fig. 2.3. Anaerobic jar with anaerobic cultures, Petri dishes and a bag with substances creating conditions for anaerobic and robiosis are visible

They are planted in the anaerobic medium MRS-4, Blaurock and KAB with a thermostat at a temperature of 37 ° C for 3-5 days. After the specified time, the seeded dishes are removed from the thermostat, the product is counted according to the mature colony, species group and species characteristics of the isolated colony of microbes and the main data of the microscope, grams, Characteristics and selective and differential diagnostic nutrient medium (Fig. 2.4).

A) B)



B)

D)

Fig. 2.4. True microorganisms in nutrient media: a) staphylococcus, b) streptococcus, c) Escherichia, d) fungus

Tracer test The genus *Staphylococcus* and *Micrococcus* were determined by: absence of pigment, microscopic data, glucose splitting and anaerobic conditions. To differentiate staphylococci species, the following were used: the ability to produce hemolysin, plasma coagulase, lecithinase, mannitol fermentation and anaerobic conditions. In the presence of all these properties, the studied cultures were classified by us as golden staphylococci. Epidermal staphylococci have similar properties.

Group D streptococcus of my related strain, fermenting mannitol, 40% gelling agent, 6.5% sodium chloride , reducing agent and 1% zinc.

When working with the modified method, the result is the last analysis, and to obtain true bacteria and microorganisms, the following formula is used:

$$K = A \times 200 \times R \text{ (COE/ ml )}$$

where K is the number of microbes of a certain screw;

A - the number of colonies in the dish and in the last dilution where there is microbial growth;

1 ml

P – level of intelligence;

The number of microbes of each type was expressed in lgCFU /ml.

Considering the large amount of literature data on the pathogenic role of opportunistic flora, as well as pathogenic factors present in the specific microflora of oral fluid. In etix celyax, generally accepted methods were used that helped to determine: hemolytic properties, plasma coagulation capacity, fibrinolytic, cytonase , hyaluronidase activity.

**Study of biological properties of isolated lactobacilli strains.** In the field of microbiological research, 560 lactobacilli strains are known, which are used as objects of research.

a) Method for determining the adhesive competence of lactobacilli. The study of the adhesive properties of microorganisms was carried out according to the method of V.I. Brilis et al. (1986). The cellular substrate of the mucosa fixes erythrocytes O( I ) Rh group (+). Erythrocytes were prepared in advance using the glutaraldehyde method: the erythrocyte sediment, washed three times with physiological solution, was cooled to 0 °C in a water bath. 25% glutaraldehyde solution - 1% solution of the following composition: 1 part 0,15 M Na<sub>2</sub>RO<sub>4</sub> sr h 8.2±9 parts 0,15 M NaCl + 5 parts distilled water, cooled mixture and ice water. Erythrocyte sediments with 1% glutaraldehyde and 1-2% suspension are incubated for 30 min at 0°C with periodic stirring. Fixed erythrocytes were washed 5 times with 0.15 M NaCl and 5 times with distilled water, then stored in a 30% suspension in distilled water with the addition of 0.01% merthiolate. When studying the adhesive capacity, erythrocytes were used, previously washed twice with a buffer

solution, by centrifugation (300-500 days). A suspension of erythrocytes of concentration 100 million/ml was prepared on the specified buffer.

For the reaction, a uniform volume (0.5 ml) of suspended erythrocytes and bacteria is introduced into the test tube. Incubator Smes at 37°C on a shutter apparatus for 30 minutes. Then carefully prepare glass paste, which is dried at room temperature, fixing with Nikiforov's mixture and decorative zinc Manson. The number of microbial cells adhered to five erythrocytes in five fields of vision was counted. As an indicator of adhesiveness, the microorganism adhesion index was used - the average number of microbial cells on one erythrocyte participating in the adhesive process.

Microorganisms were considered non-adhesive with an IA index of <1.75; low-adhesive with an IA of 1.76–2.5; moderately adhesive with an IA of 2.51–4.0; and highly adhesive with an IA of >4.0 bact/er.

produce lysozyme-like enzymes was carried out according to the method of A.A. Lenzner et al. (1975). For this purpose, the grown bacterial cells of the test strain *M. lyzodenticus* killed with chloroform for 60 min, suspended in physiological solution to an optical density of 0.5 units on a photometer, in standard 96-well tablets. Then add 9.0 ml of 0.7% MRS agar with 1.0 ml of the test strain suspension and a Petri dish. After solidification, the dishes were inflated in a thermostat for 30-40 min. Then, drops of dry bolon cultures were applied to the surface of the dried agar with a Pasteur pipette, we are examined for the production of lysozyme-like enzymes. The result is a three-dimensional cookie after 48 hours of incubation at 37°C under microaerophilic conditions. The test strain range is grown in a culture with a high degree of lysozyme activity and a zonal lysis radius. In this case:

- 1- 3 mm, low activity;
- 4- 7 mm— average activity;
- 7 mm> high activity.

During statistical processing of the obtained results, the degree of lysozyme activity is expressed in arbitrary units and scales: 0 (low LA), 1 (low LA), 2 (medium LA), 3 (high LA).

c) Method for determining the sensitivity of lactobacilli to antibiotics.

The sensitivity of lactobacilli to antibiotics was determined by the agar diffusion method using standard indicator disks (S. M. Navashin, I. P. Fomina, 1982). A bacterial suspension of a two-day agar culture and a concentration of  $5 \times 10^9$  microbial cells/ml were prepared with this cell.

A mixture of 0.7% MRS agar cooled to  $45^{\circ}\text{C}$  in the amount of 5 ml and 0.2 ml of the above-mentioned bacterial suspension was added as a second layer to the surface of a Petri dish with dried 1.5% agar. Standard disks with antibiotics were laid out on the surface of the solidified agar using a pinset. After 48 hours of incubation at  $37^{\circ}\text{C}$  under microaerophilic conditions, the resulting sample is a disk with a zonal delay diameter, a disk with a zonal delay diameter, and a disk that can be used for cultivation. Razer growth inhibition zones were taken into account in reflected light.

For the quantitative characterization of antibiotic resistance of the studied lactobacilli strains, the "Resistance Marker" indicator proposed by V.I. Bondarenko et al. (1990) was used.

d) Method for determining the bacteriocinogenicity of lactobacilli. The bacteriocinogenicity of the studied culture was determined using the Murray-Sherwood method (1979) as modified by B. Ya. Usvyatov (1967). The experiment was conducted using the following technique: 5 ml of 1.5% agar were poured into a flat-layer Petri dish, after solidification they were suffocated with a thermostat at  $37^{\circ}\text{C}$ . Ready-made billion-dollar suspensions of two-day cultures tested for bacteriocin sensitivity. A second layer of the mixture cooled to  $45^{\circ}\text{C}$ , 0.7% MRS agar in the amount of 4.5 ml and 0.5 ml of a high-quality bacterial solution was applied to the surface of the Petri dish with dried 1.5% agar. After solidification, the dishes were suffocated in a thermostat for 30-40 minutes. Then, drops of dry bolon cultures, tested for bacteriocinogenicity, were applied to the surface of the dried agar using a Pasteur pipette. 6-10 test strains were seeded on each dish. The results of the experiment were confirmed after 48 hours of incubation at  $37^{\circ}\text{C}$  in microaerophilic conditions and growth of bacteriocinogenic strains in the correct culture.

For the quantitative characterization of the bacteriocinogenicity of the studied lactobacilli strains, the “Bacteriocinogenicity Marker” was used (the ratio of the number of test cultures sensitive to bacteriocins of the studied strain to the total number of test cultures).

**Immunological methods of research** . M.A. Temurbaev (1984) as modified by A.V. Antonov (1996). For this purpose, autocollected saliva is opened, washed with a buffer solution and centrifuged at 1000 rpm for 10 minutes. The supernatant is poured off, and 0.5 ml of physiological solution is added to the sediment. Transfer 0.2 ml of the resulting mixture into a test tube and add 0.1 ml of liquid latex ( $5 \times 10^8$  in 1 ml) with a diameter of 0.8  $\mu\text{m}$ . Incubate the mixture in a humid chamber for 30 minutes at a temperature of 37 ° C, shaking constantly. Subsequently, a ready-made smear, decorated with Romanovsky-Giemsa, is made from this mixture. At least 100 neutrophils with and without latex were counted in each preparation, the phagocytarin index was determined, i.e. The percentage of phagocytosed leukocytes out of those counted, and the phagocytic number - the average number of ingested latex particles per phagocytosed cell.

The activity of lysozyme in saliva was determined by the method proposed by Sh.R. Aliev (1994), using sterile paper disks. For this purpose, saliva products and a sterile test tube were captured, then with tweezers with a paper disk (like a disk with an antibiotic) and carefully soaked in saliva. Then the disk was placed on the surface of nutrient agar (Difco agar) in a Petri dish with a Micr vegetable garden about coccuslysodenticus (strain 2665 GKI named after L.A. Tarasevich). The seeds are incubated in a thermostat at a temperature of 37°C, the activity of lysozyme and saliva is determined by the diffusion method and on agar.

The secretory fraction of class A immunoglobulins is determined by the Mancini method (1964), based on measuring the diameter of the precipitate ring formed when oral fluid is introduced into a well cut into an agar layer, which is a pre-dispersed monospecific antiserum. Under standard conditions, the diameter of the precipitate ring is directly proportional to the immunoglobulin concentration.

To determine the level of immunoglobulin and the saliva being tested, a step-by-step control image is used: the abscissa axes are absent, the diameter of the settling ring of the test tube, the vertical perpendicular of the intersection with the calibration curve, then a straight line, without an ordinate axis. The obtained value corresponds to the immunoglobulin level, expressed in IU/ml.

sIgA level determined by the method of solid-phase enzyme immunoassay using the enzyme immunoassay test system of Cytokin LLC (Russia, St. Petersburg) and Vector-Best CJSC (Novosibirsk). The quantitative assessment of the result was carried out by constructing a calibration curve reflecting the dependence of optical density on the standard indicator and allowing the studied samples to be compared with it.

Along with dental methods, all those examined underwent microbiological and immunological studies.

For this purpose, 2 glasses of cookies are prepared in a kitchen rotova and a sterile test tube. From the obtained material, serial studies were prepared in the laboratory, from which a certain volume was subsequently seeded onto the surface of differential diagnostic nutrient media: agar for anaerobes, Endo, Kalina, Sabouraud, MRS-4, milk-salt and blood agar.

When determining the concentration of *Streptococcus mutans* in oral fluid the number of colonies is three times, in adults in 1 ml of saliva. The result is calculated in CFU - colony-forming units, taken as the streptococcal index. The value of the streptococcal index of more than  $1 \cdot 10^5$  CFU / ml is considered as criteria indicating the risk of developing mass dental caries in sick children.

According to the latest literature data, the sensitivity of microorganisms to chemicals is determined by two methods:

1. Disco - diffusion method - this method is diffusion and is based on the use of paper disks with chemical properties.
2. A method of serial dilutions of chemical substances in dense or liquid nutrient media with the addition of microbes.

Among these methods, in most cases, preference is given to the disk-diffusion method, since it is the most comfortable, simple, economical to use and accurate in the results. The oral fluid of children with XGV served as the test material.

To set up this research method, we initially prepared fresh (24-hour) cultures of microorganisms to be tested. Subsequently, 1 ml of the studied microorganism culture (according to the turbidity standard of  $1.0 \times 10^6$  microbes) was applied to the surface of the submerged nutrient medium in Petri dishes, evenly distributed by shaking the dish, the lids being removed in an airtight container.

In parallel with this, there are also separate vials of ready-made suspensions of chemical preparations and medicinal concentrations subject to testing.

After sowing, the Petri dish is dried at room temperature for 10-15 minutes, then 2 cm sterile paper disk (antibiotic) containing propitil x and chemicals is placed on the surface of the nutrient medium with tweezers (no more than 6 disks per dish). Incubator with a lid and thermostat at a temperature of  $37^\circ\text{C}$  for 18-24 hours. After the end of the incubation period, the dish is removed from the thermostat and to obtain the result, the dish will have a dark matte surface, and the diameter of the zone will be measured by a line 1 mm.

Based on verified studies, monitoring of examination of children with chronic hepatitis in combination with diseases of the oral cavity organs was proposed (Fig. 2.5).

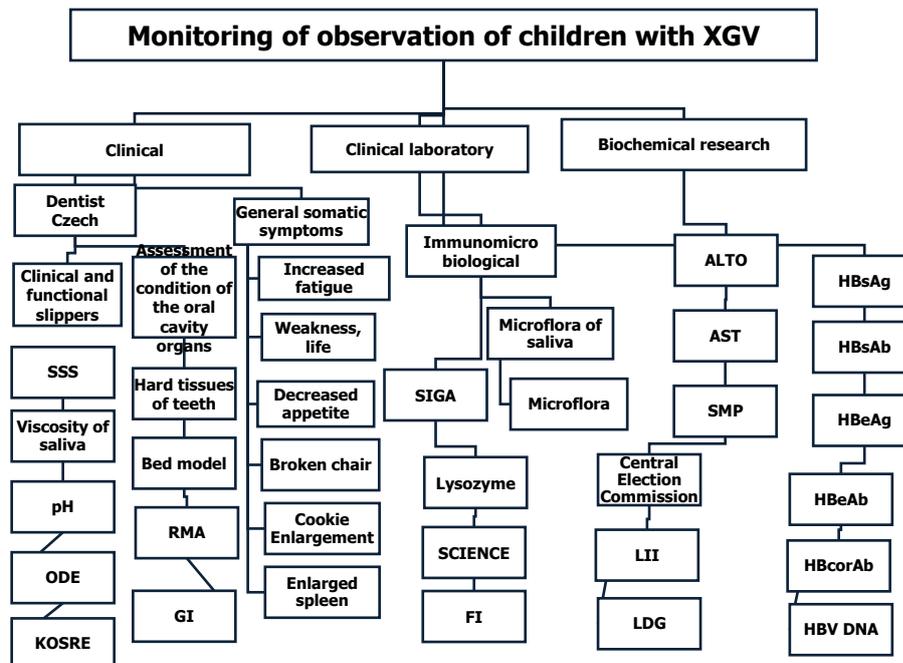


Fig. 2.5 Monitoring observation of children with chronic hepatitis and concomitant diseases

The use of this monitoring allows for in-person, systematic examination of sick children and early diagnosis of oral pathology and chronic hepatitis B.

### Statistical processing of the obtained material

The obtained digital material was processed statistically. The mean arithmetic, its error and confidence intervals with a probability of 95% were calculated.

The calculations were performed using computing equipment of the IBMP/S type.

### **CHAPTER III.**

#### **CONDITION OF ORAL ORGANS IN CHILDREN WITH XGV**

The first objective of our study was the clinical characteristics of the examined children. The patients were predominantly characterized by chronic intoxication phenomena, i.e. symptoms of asthenovegetative syndrome. Constant symptoms were nausea, weakness (89.2%), increased fatigue (80.8%), headache and irritation, noted in the third child (33.1%). The frequency of liver "signs" was high, in the form of palmar erythema (82.3%), vascular network on the chest and abdomen (83.1%), telangiectasias (33.1%).

Dyspeptic syndrome was registered with the same frequency as asthenovegetative syndrome. This was manifested in a deterioration in appetite (84.6%), coated tongue (78.8%), unstable stool (48.5%). Flatulence was observed in 53.8% of patients.

Other clinical signs often (in 50.0% of patients) included hemorrhagic syndrome in the form of nosebleeds, bleeding gums were detected in 72% of cases. Relatively, cholestatic syndrome was detected in the form of subicteric sclera (42.3%) and koiniks of the integuments (12.3%).

In all patients, the spleens were enlarged and protruded from the hypochondrium by 3-5 cm. Its consistency was from medium density to dense. In 73.8% of patients, splenomegaly was established, the spleen was enlarged by  $3.1 \pm 1.8$  cm.

Table V 3.1. The frequency of the main clinical symptoms and observed children is presented and depends on age.

**Table 3.1.**

**The frequency of major clinical symptoms corresponds to the age of XGV detection.**

Clinical symptoms	Age, let it be			
	1-3 years, n=22	3-7 years old , n=56	7-10 years , n=31	10-14 years old , n=21
Weakness, lethargy	16(72.7%)	48(85.7%)	31(100%)	21(100%)
Increased fatigue	18(81.6%)	39(69.6%)	29(93.5%)	19(90.4%)
Headache	3(13.6%)	12(21.4%)	15(48.4%)	13(61.5%)
Irritability	6(27.3%)	13(23.2%)	8(25.6%)	6(28.6%)
Decreased appetite	21(95.6%)	52(92.7%)	28(70.6%)	15(71.4%)
Nausea	6(27.3%)	11(19.6%)	11(35.4%)	8(38.1%)
Pallor	9(40.9%)	25(44.6%)	15(48.4%)	11(52.3%)
Dry koji	4(18.2%)	12(21.4%)	14(45.2%)	8(38.1%)
Jaundice	2(9.1%)	8(14.2%)	3(9.7%)	3(14.3%)
Icteric sclera	5(22.7%)	27(48.2%)	13(41.9%)	10(47.6%)
Coy itch	-	13(23.2%)	8(25.6%)	5(23.6%)
Palmar erythema	19(86.3%)	49(87.5%)	23(74.2%)	16(76.2%)
Capillary network on the cheeks	15(68.2%)	38(67.7%)	19(61.3%)	11(52.3%)
Venous network on the chest and abdomen	18(81.6%)	46(82.1%)	27(87.7%)	17(80.9%)
Vascular "stars".	3(13.6%)	20(35.7%)	12(38.7%)	9(42.7%)
Bleeding pattern	9(40.9%)	28(50%)	15(48.4%)	13(61.5%)
Taxation of language	16(77.2%)	40(71.4%)	23(74.2%)	16(76.2%)
Pain in the flesh	5(22.7%)	20(35.7%)	10(32.3%)	7(33.3%)

Flatulence	14(63.6%)	29(51.8%)	16(51.6%)	11(52.4%)
We make cookies bigger3 cm	9(40.9%)	13(23.2%)	4(12.9%)	3(14.3%)
Increase cookies from 3 to5 cm	10(45.5%)	30(53.6%)	15(48.4%)	12(57.1%)
Raising the oven higher5 cm	3(13.8%)	13(23.2%)	12(38.7%)	6(28%)
Enlarged spleen	16(72.7%)	40(71.2%)	24(77.4%)	16(76.2%)
Unstable stool	12(54.5%)	32(57.1%)	11(35.5%)	8(38.1%)

From these tables it is evident that the frequency of asthenovegetative syndrome was higher in school-age children. In children aged 7-10 to 10-14 years, there is no weakness, weakness and increased sensitivity in 93.5 and 90.4% of cases. Most importantly, 48.4% of children are 7-10 years old and 61.5% are 10-14 years old. Paleness and dryness of the koji are also determined when these are older children.

Dyspeptic syndrome also predominates in children aged 1-3 years. Decreased appetite and refusal to eat were most often observed in patients aged 1-3 years (95.6%) and 3-7 years (92.7%), less often in patients aged 7-10 years (70.5%). 77.2% of children aged 1-3 years, 71.4% 3-7 years, 74.2% 7-10 years and 76% 10-14 years. Flatulence was determined in children aged 1-3 years in 63.6% of cases, and was shown somewhat more often in children of the second age group. Unstable stool was also more often observed in children aged 1-3 years - 54.5% and 3-7 years - 57.1%, less often in children aged 7-10 years - 35.5% and in children aged 10-14 years - in 38.1% of cases.

Extrahepatic signs were observed more often in younger age groups. Thus, palmar erythema was determined in 86.3% of patients aged 1-3 years; 87.5% of patients - 3-7 years; 74.2% of patients - 7-10 years and 52.3% of patients - 10-14 years.

Telangiectasia occurs in children aged 10-14 years (42.7%), in children aged 7-10 years (38.7%), in children aged 3-7 years (35.7%), in children aged 1-3 years.

We also established a dependence of the frequency of occurrence and intensity of dental caries on the HBV marker profile. - infections in examined patients.

The above indicates that the frequency and severity of asthenovegetative, dyspeptic and cytolytic syndromes depend on the presence of the disease in chronic hepatitis B.

### **Clinical characteristics of the combined course of chronic hepatitis B and oral diseases in children.**

The prevalence of pain symptoms in the group of patients is presented in Table 3.2.

**Table 3.2.**

#### **Frequency of general clinical symptoms and detection of XGV**

Sign	The number is sick		Nix's Trace:			
	pres s	%	Boys		Girls	
			pres s	% ± m	pre ss	% ± m
Headaches	22	42.3±8.7	9	17.3±4.8	13	25.0±4.3
Weakness	27	51.9±7.6	19	36.5±7.1	8	15.4±3.2
Decreased appetite	35	67.3±7.4	19	36.5±7.5	16	30.8±4.9
Irritability	18	34.6±8.1	7	35.0±6.2	9	17.3±4.9
Dry koji	39	75.3±9.1	18	34.6±7.8	21	40.4±3.5
Taxation of language	32	61.5±8.9	17	32.7±6.5	15	28.8±3.7
Pain in the flesh	25	48.1±9.1	15	28.8±7.4	10	19.2±2.3
Unstable stool	19	36.2±7.4	9	17.3±6.1	10	19.2±2.6

Bleeding from the nose and gums	23	44.2±9.1	11	21.2±4.3	12	23.7±2.6
Extrahepatic manifestations	30	57.6±8.5	15	21.8±4.5	15	28.8±3.9
C ubictericity of the sclera	44	84.6±8.7	28	53.8±7.2	16	30.8±4.2
Cookie Enlargement	31	59.6±9.3	18	34.7±5.9	13	25.0±4.6
Enlarged spleen	9	17.3±5.7	4	17.3±5.1	5	9.6±1.5

Adjacency: We do not know the difference between boys and girls ( $R>0.05$ )

Thus, the most common symptoms observed upon admission and in hospital were dry skin (75.3%), weakness and fatigue (51.9%), and hepatomegaly (59.6%).

In a comparative analysis of clinical symptoms depending on the gender of children sick with XGV, we did not find any reliable differences.

He has XGV predominant asthenovegetative-dyspeptic syndrome. Extrahepatic manifestations in the form of a capillary complex on the cheeks, venous collaterals on the chest and liver, "palmar erythema" appeared in 57.6% of patients. Hemorrhagic syndrome manifests itself in nosebleeds and nasal bleeding in 44.2% of cases.

And it depends on the activity of the pathological process in the furnace, age, age of children, dynamic observation of the furnace was carried out, as well as the generally accepted scheme. The duration and duration of the course of CHB in most patients was 3-5 years (52.5% of patients), up to 3 years - in 31.7% of patients and over 5 years - in 15.8% of children.

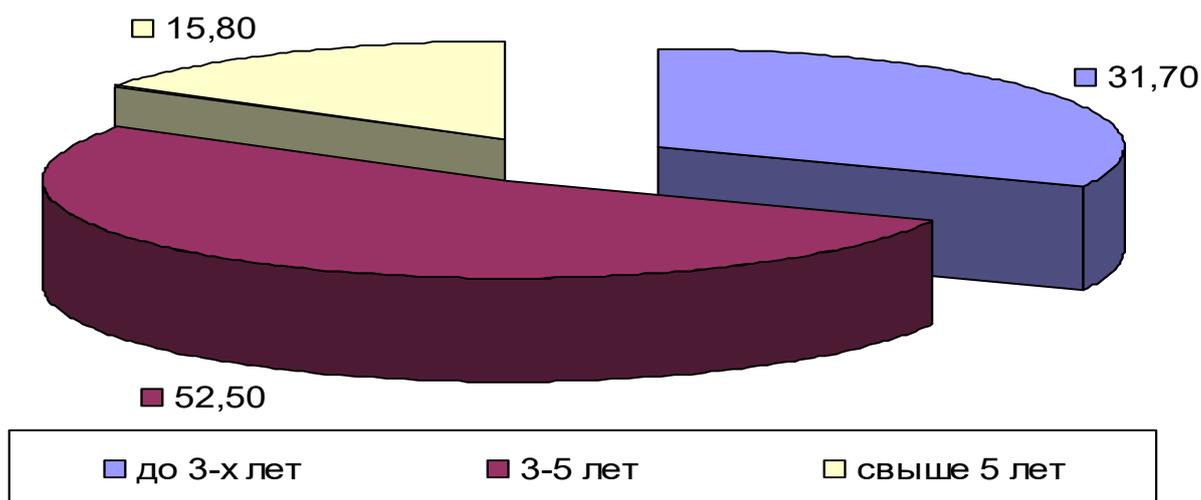


Fig. 3.1. Duration of XGV course

Tablet B 3.3 presents clinical symptoms of CHB and a combination of CHB with diseases of the oral cavity (DOOC).

**Table 3.3.**

**Frequency of the main clinical symptoms of CHB and the combination of CHB and organ pain.**

Sign	XGV		XGV+ ZOPR		P
	n = 30		n = 40		
	press	% ± m	press	% ± m	
Paleness and dryness of the skin	19	63.3±7.1	35	87.5±4.3	< 0.01
Decreased appetite	20	46.7±7.3	40	100,0	< 0.01
Pain in the flesh	21	70.0±8.2	34	85.0±3.5	< 0.001
Irritability	12	40.0±7.8	36	90.0±4.1	< 0.001
Weakness	19	63.3±8.2	38	95.0±6.3	< 0.01
Flatulence, nausea	18	60.0±8.5	35	87.5±7.9	> 0.05
Feeling of heaviness in the right hypochondrium	10	33.3±7.9	40	100±3.2	< 0.001
Subicteric sclera	24	80.0±9.2	38	95.0±5.7	> 0.05

Bleeding from the nose and gums	15	50.0±7.6	35	87.5±5.9	< 0.01
Extrahepatic signs	19	63.3±8.3	30	75.0±6.2	> 0.05
Telangiectasias on the trunk	12	40.0±7.6	29	72.5±5.8	> 0.05
Cookie Enlargement	28	93.3±8.1	40	100,0	< 0.001
Enlarged spleen	4	13.3±7.5	10	25.0±9.7	> 0.05

A child with combined pathology (CHB+ZOP) showed manifestations of asthenovegetative syndrome, nosebleeds and gum bleeding, and hepatomegaly.

Telangiectasias were more often registered in children with combined pathology. IX localization was varied, but they were most often found on lice, neck and palmar surface of hands.

Thus, we have shown that patients with combined pathology of CHB and ZOPR have more pronounced local and general manifestations of pain, which are characterized by two interrelated processes. The presented data dictate the need for an in-depth study of clinical and biochemical parameters in patients with combined pathology to clarify the nature of endogenous intoxication in this contingent of patients.

### **Characteristics of biochemical blood parameters in children with chronic hepatitis B and oral diseases**

During the study, some biochemical parameters of the blood of 60 patients were also studied. Of these, 20 children were in the control group, 20 children with CHB and 20 - a combination of CHB and the affected field of the oral tract (AFOR).

The results of the functional indicators of the treatment oven in the surveyed hospitals are presented in Table 3.4.

**Table 3.4**

**Results of the functional probe of the oven and the examined table**

Pointer	Practical healthcare (n=20)	Children with XGV ( n = 20)	Children with CHB and ZOPR ( n =20)
ALT, μmol/l	0.27±0.014	1.24±0.17***^^^	2.1±0.03***^^^ooo
AST, μmol/l	0.29±0.019	1.02±0.08***^^^	1.64±0.08 ***^^^ ooo
Total protein, g/l	74.6±5.6	60.1±5.7	55.4±7.6 *
γ-globulin, %	16.7±0.81	20.6±1.4 *^	24.3±1.5 ***^^^ °
Thymol test, ed.	1.2±0.01	5.22±0.9 ***^^^	9.51±0.72 ***^^^ °
Bilirubin:			
- total, μmol/l	8.4±0.61	22.1±2.3 ***^^^	33.1±1.9 ***^^^ °
- directly, μmol/l	2.2±0.17	3.4±0.4 ***^^^	5.32±0.08 ***^^^ ooo
Cholesterol mmol/l	4.2±0.11	6.24±0.44 ***^	6.92±0.52 ***^
SMP, ed.	0.13±0.008	0.76±0.08 ***^^^	1.23±0.07 ***^^^ ooo
Central Election Commission, ed.	0.29±0.02	0.68±0.07 ***^^^	0.90±0.08 ***^^^ °
LDG:			
- general, I /l	168.4±11.2	478.0±18.2 ***^^^	459.8±12.6 ***^^^
- LDH- 4, %	5.6±0.05	17.2±1.21 ***^^^	22.4±2.71 ***^^^
- LDH- 5, %	2.8±0.04	20.8±2.13 ***^^^	25.8±2.14 ***^^^ oo
LII, ed.	0.39±0.005	0.47±0.01 ***^^^	0.81±0.05 ***^^^ ooo

As can be seen from Table 3.4, in all patients of the main group, the biochemical liver test indicators were significantly higher, in comparison with practically healthy individuals (  $P < 0.05$  -  $R < 0.001$ ).

On the severity of cytolytic syndrome in my study on the activity of the ALT and AST levels in the blood serum, which were the highest in patients with XGV in combination with oral disease. The ALT level in sick children increased 4.6 times compared to healthy patients and 7.8 times without ZOPR. The average AST value in patients with combined pathology is 5.7 times higher than in the control group, 1.61 times - compared to ZOPR without ZOPR.

The level of total bilirubin in children with combined pathology increased by 3.9 times (  $P < 0.001$ ) and 1.5 times compared to the control group and without ZOPR, respectively (  $P < 0.01$ ). A similar picture was observed for direct bilirubin (  $P < 0.001$ ). The average cholesterol level in patients of the main group was significantly higher than in the group of healthy children (  $P < 0.05$ ). In mesenchymal-vascular syndrome, the thymol test level increased sharply by 7.9 times and 1.8 times compared to patients of the main group and the comparison group (  $P < 0.05$ ).

When analyzing the frequency and severity of specific symptoms of endotoxemia syndrome, the level of SMP in the blood serum was  $1.23 \pm 0.07$ , on average for the group -  $1.23 \pm 0.07$ . ed. and significantly exceeded the corresponding indicators in patients with XGV, which was  $0.76 \pm 0.08$  conventional ed. (  $P < 0.001$ ).

The indicators of the total level of LDH and its isoenzymes - LDH-4 and LDH-5 (liver fraction) in the blood serum and observed patients differ in activity. Thus, the main increase in the total activity of LDH was observed in children with combined pathology.

The isozyme spectrum is characterized by a significant increase in the activity of fractional LDH-4 and LDH-5, the expression of which depends on a combination of pathological factors. The greatest increase in LDH-4 and LDH-5 was observed in patients with mixed pathology -  $22.4 \pm 2.7\%$  and  $25.8 \pm 2.14\%$ , respectively. The level of LDH-4 and LDH-5 in patients with combined pathology was 4 and 9.2 times

higher than in healthy children and children with CHB (  $P < 0.01$ ), i.e. exceeded 1.3 and 1.4 times, respectively.

Thus, the study of biochemical indices in patients with diseases - TTO expressed, cholestochemistry and inflammation of the functions of the bisco-synthetic function was in the pianama dependence and combined factors With a large Accent of Violations in the shirt with a hairstyle. Table expressed names of biochemical indices in the blood of patients with combined pathology, possibly due to chronic intoxication processes in the body of children, which had an unpleasant effect on the course of the inflammatory process in the body, frequent recurrence of the underlying disease XGV.

### **Features of changes in the oral cavity organs in children with XGV**

Children with XGV have been shown to have an increased incidence of dental disease compared to healthy children.

The main signs of changes in the oral cavity in children with CHB included: dryness, bitterness and soreness in the oral cavity, bleeding gums when brushing teeth and eating.

It is also noted that multiple dental caries, painful periodontal disease and the development of increased caries in a child are XGV. The most common symptoms in a patient are visual impairment and swelling of the tongue (41%), discomfort on the tongue (27.5%), swelling of the tongue (56%). In this regard, we decided to study the frequency of oral diseases in children with XGV.

### **The state of the oral mucosa in children with XGV**

When examining the oral strip in most children with CHB, the first thing that catches the eye is the subicteric nature of various areas of the oral mucosa. According to our data, icteric coloration of the mucosa was observed in 75% of patients with the localization of coloration and the main concentration in the area of soft tissues (Table 3.5).

**Table 3.5.****Primary clinical and pathological changes of the oral mucosa**

Signs and Symptoms	Children with XGV (%)	Control group (%)
Dryness	45	3.1
Bitter	33	-
Color of the sclerosis (icterism)	75	
Pallor	13	
Vlinennost SOPR		
1. Sniena	35	
2. Norm	12	
3. Increased	-	
Hemorrhagic syndrome	62	
Sign of oral candidiasis	27	
Localization of plaque in candidiasis		
1. cheek,	12	
2. Language,	17	
3. Nyobo	9	
Enlargement of the regional lymphatic system	34	

Dry mouth was often registered in children with CHGV (45%), associated with impaired secretory function of the salivary glands, indicating a type of hyposalivation, which is confirmed by the data of our functional studies presented below. In 13% of the examined subjects, the mucous membrane of the oral strip was pale, in 74.2% - jaundice; in 20.3% of patients - erosions ranging in size from 1 to 4 mm. During an exacerbation of the disease, sharp imprints of teeth were observed on

the mucous membrane of the oral strip and lateral surfaces of the tongue (41%), indicating swelling of the oral mucosa. (Table 3.6). In CHGV, we quite often noted candidal lesions of the mucous membrane of the oral field (27%).

Hemorrhagic syndrome in the form of hemorrhagic bleeding of the mucous membrane is observed in 62% of patients with CHB. Basically, bleeding of the gums was noted when eating, brushing teeth. Hemorrhages on the mucous membrane of the oral strip varied in shape, size, quantity and localization of hemorrhagic elements. In our observations, hemorrhagic elements with a ratio of petechiae ( 1 mmdiameter v) to hemorrhages ( 3 cmdiameter up to 2-v) (Table 3.6).

**Table 3.6.**

**Primary clinical and pathological changes in the oral cavity organs in children with XGV**

Signs and Symptoms	Number of patients (%)	Control group (%)
Nature of pain	27	-
Bleeding pattern	49	7.9%
Change in gum color	63	
Gingivitis, periodontitis	76	
Hemorrhagic syndrome	5	

In 67.5% of cases, pathological changes in the mucous membranes were detected (Table 3.7). Thus, in 67.5%, the dry form of exfoliative kyatt was detected, in 29% - glandular kyatt, in 11.3% - the herpetic form of the disease, in 49.5% - increased flaking of the lips, in 5% - cracked lips.

**Table 3.7.****Primary clinical and pathological changes of the lip**

Signs	He said he was sick. (%)	Control group (%)
cheilitis	67.5	-
1. Exfoliating	29	-
2. Glandular	11	-
3. Meteorological	7	-
4. Contact	15	1.7
Cracked lip	5	0.6
Increased lip pursing	49.5	1.2

Tablet 3.8 presents data from examination of the tongue in children with XGV.

**Table 3.8.****Primary clinical and pathological changes of the tongue**

Signs and Symptoms	He said he was sick. (%)	Control group (%)
Dryness	32.4	1.8
Bitter	27.3	2.3
Hemorrhagic syndrome		-
Swollen tongue (teeth marks)	41	-
Coating on the tongue	56	3.5
Color of the coating on the tongue	27	
1. Belly	32	
2. Series	30	
3. Jelly	11	
4. Brown		

Localization sucks		
1. Koren	32	
2. Back	15	
3. The entire dorsal surface)	53	
Glossitis		
1. Desquamative	25	
2. Rhomboid	13	
3. Storage	17	
Sign of oral candidiasis	27	
Localization of plaque in candidiasis		
1. cheek	12	
2. Language	17	
3. Nyobo	9	
Enlargement of the regional lymphatic system	34	

When examining the tongue, its swelling is noticed, which is confirmed by the scalloping of the lateral surface and the shell of the tongue formed by the opening teeth.

In patients with XGV, plaque on the roots was detected in 56% of cases. The color of the plaque varied from white to brown.

In children with CHB, plaque was most often localized on the root of the tongue - in 32% of cases, on the back - in 24%, on the entire surface - in 56% of patients. Most patients with CHB (39.9%) had a yellow rash, 32% - serous. Brown plaque was found in 11% of cases.

Thus, in children with XGV, the dorsal surface of the zyika undergoes pathological changes, the nature and degree of expression of which depend on the course of the underlying disease. Thus, with candidiasis of the oral mucosa, patients presented with dryness and birth in the oral cavity, impaired taste perception.

It has been established that in children with CHB, a symptom complex of changes is formed in the oral cavity, caused by increased damage to hard dental tissues by caries, which indicates the development of a pronounced cariogenic situation, pathological changes in tissues. periodontal and oral mucosal lesions are more pronounced and widespread, as well as during an exacerbation of the disease. Unsatisfactory and poor oral hygiene is also often recorded, aggravated by the lack of knowledge about hygienic care of the oral cavity and the correct use of oral hygiene products according to age and indications. The identified changes in the child's stomach organ with CHB, under the influence of a general somatic disease, create conditions for the formation and maintenance of an increased cariogenic situation in the child's stomach and the development of pathological changes in the child's body.

### **Frequency of dental caries and tooth decay**

The results of a comprehensive observation of patients with chronic hepatitis B indicate a significantly higher incidence of primary dental diseases compared to the healthy control group (Table 3.9).

**Table 3.9.**

### **Frequency of dental diseases is revealed by XGV**

The fans under examination	Toothache					
	Caries		Gingivitis		Periodontitis	
	abs. h	%	abs. h	%	abs. h	%
Control group	20	78	5	25	0	0
XGV	320	100	280	95.7	28	8.75
P	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001

A study of the intensity of dental caries in children with CHB showed fairly high rates (Table 3.10)

**Table 3.10.**

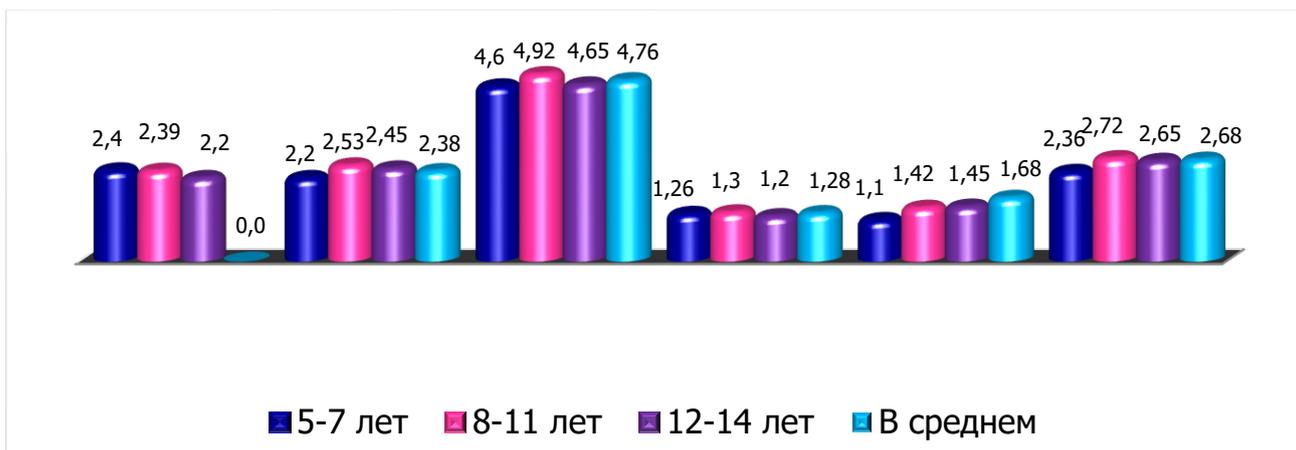
### Indicators of caries intensity in children with XGV

Age of patients (for rent)	Children with XGV			Control group		
	baby teeth cm.	permanent teeth CPU	sum of KPU±kp	baby teeth	permanent teeth	sum of KPU±kp
5-7	2.4± 0.02	2.20± 0.03	4.60± 0.04	1.26± 0.02	1.10± 0.02°	2.36± 0.03 degrees
8-11	2.39± 0.04	2.53± 0.05	4.92± 0.03	1.30± 0.02	1.42± 0.02 degrees	2.72± 0.03
12-14	2.20± 0.03	2.45± 0.03	4.65± 0.03	1.20± 0.01 <sup>oo</sup>	1.45± 0.01 <sup>oo</sup>	2.65± 0.02°
I am average	-	2.38± 0.05	4.76± 0.07	1.28±	1.68±0.03	2.68± 0.03

Admixture. The reliability of the difference with data for children with dental caries: ° - P <0.05; <sup>oo</sup> - P <0.001.

The high percentage of dental caries in children with CHB is noteworthy - it was 100%. Compared with the control group, the intensity of dental caries in children with CHB is significantly higher - 1.86 and 1.79 times, which corresponds to practically healthy children.

When examining the tooth surface, high values of the indices of KPU, KPU+kr are revealed in CHB, which indicates a high intensity of dental caries and the development of a nix-cariogenic situation in the tooth surface (Fig. 3.2). The average value of KPU in patients with CHB was 2.38±0.05, in the control group - 1.68±0.03, KPU+kp - 4.76±0.07, KPU+kp - 2.68±0.04 (r<0.1-r<0.001), the higher this is, the more practically healthy it is.



**Fig. 3.2 Indicators of the intensity of dental caries in the examined children.**

A detailed study of a child with CHB showed that the index of KPU, KPU+kp has a high value, which indicates a high intensity of dental caries and the development of a carious situation in the child. The average value of KPU in the group of patients with CHB was  $2.38 \pm 0.05$ , in the control group, respectively,  $1.68 \pm 0.03$ , and KPU+kp -  $4.76 \pm 0.07$ , and KPU+kp - 20 ( $p < 0.1-0.001$ ), which is practically reliable data.

We have established that the main structural unit and the index of the KPU and patients with hepatitis are the K indicator, i.e. caries and its weakening. The prevalence of focal demineralization of enamel is 26.4%, the intensity is  $0.7 \pm 0.04$ , which is significantly higher than in the control group (Table 3.10), i.e. The higher the activity of the disease, the higher the ODE index and in children with CHB.

**Table 3.11.**

**Frequency of occurrence of focal enamel demineralization in observed children**

Group	Prevalence of ODU %	Intensity of the musculoskeletal system
XGV	$26.4\% \pm$	$\pm 0.71$
Control	$3.7\% \pm$	$0.31 \pm 0.02$

Admixture. Reliability of control in horses: \* -  $R < 0.05$ ; \*\* -  $P < 0.001$ ; from data in children with dental caries: -  $P < 0.05$ ; °° -  $P < 0.001$ .

ODA with caries and white spot stages were manifested in sick children mainly in permanent teeth, cervical area of incisors, premolars and first permanent molars. Carious spots were taken into account, and in most cases they have a sickle-shaped or oval shape, the size of which is 0.5- 3,5 mm, and are located on the visible surface of permanent teeth.

We also found an increase in the frequency of focal demineralization of enamel in sick children depending on the form and severity of the underlying disease: with an increase in the activity of the pathological process in the liver, the frequency of focal demineralization of enamel increased.

When comparing the intensity of the musculoskeletal system, there are also significant differences that depend on the activity of the pathological process and the liver.

In my opinion, it is children with XGV who have a high intensity of dental caries and ODU, which is significantly influenced by a severe underlying disease. When redeemed, the value of the XGV KPU index is adjusted.

### **Oral and periodontal hygiene status in children with XGV**

It should be noted that high values of the KPU index were observed against the background of unsatisfactory hygienic condition of the oral cavity (Table 3.12.).

Depending on the hygiene index, 5 types of oral cavity condition were conditionally identified. With a hygiene index of 1-1.4 points, the oral cavity condition was considered good, with an index of 1.5-1.8 points - satisfactory, with an index of 1.9-2.5 points - unsatisfactory. The average level of GI is 2.6-3.8 points in the index, and the opening level is the level of 3.9-5 points. It is noted that the most frequently diagnosed patients have a low hygiene level - 32.5%, of which 31.2% have a low hygiene level, and the general health level is 63.7%, which means that more than half of the patients have a low hygiene level. hygiene level.

**Table 3.12****Hygienic condition of the oral cavity in the examined children**

Oral hygiene status	Children with XGV		Control group	
	abs.	%	abs.	%
Good	15	9.4	16	28.1
Satisfactory	18	11.3	17	29.8
Unsatisfactory	25	15.6	10	17.5
Ploxo	52	32.5	9	15.8
Very bad	50	31.2	5	8.8
All	160	100	57	100

In our observations, attention is drawn to the percentage of children with poor and good oral hygiene, which is significantly higher than in the control group - 1.32 ( $r < 0.05 - 0.001$ ). Probably, this is one of the links that contribute to the development of pathological changes in the oral cavity organs.

Low levels of hygiene allow the development of periodontal disease in sick children (Table 3.13).

**Table 3.13.****Prevalence of gum disease in children with XGV**

The indicator under study (%)	Gingival		Chronic gingivitis	
	Control group	Patient XGV	catarrhal	hypertrophy
RMA	12.5%	79%	86.4%	13.6%

In the control group, periodontal diseases were detected in 12.5% of patients only in the form of chronic catarrhal gingivitis (CCG). Chronic catarrhal gingivitis was significantly ( $**r < 0.01$ ) higher than in the control group, the percentage of which was 86.4%. (Table 3.12)

**Table 3.14****Prevalence of nosological forms of periodontal diseases in children with XGV**

Age, let it be	Number of children	Gingivitis	Parodon-tit of the light steppe	Moderate periodontitis	Healthy children, Count gr. (%)
5-7	44	67.9±0.82			4 (19.1)
8-10	39	72.3±1.03			2 (9.5)
11-13	37	81.7±1.02			3 (14.3)
14-15	40	74.5±1.05	1.6±0.04	1.4±0.07	6 (28.6)
All	160				

Pathological changes in the soft tissues of the periodontium were also revealed. Various forms of gingivitis were diagnosed in 79% of patients with XGV. Thus, gingivitis was detected in 12.5±2.3% of practically healthy children. Chronic catarrhal gingivitis was diagnosed in 86.4% of patients, hypertrophic gingivitis - in 13.6%, and the generalized form - in 61%. Chronic catarrhal gingivitis, according to this PMA index, was more often encountered in severe and moderate degrees.

Of the periodontal diseases, children mainly suffer from gingivitis of various etiologies, which is why this level varies depending on age. Periodontitis of severe and moderate forms is formed already by the age of 14-15, which must be taken into account by the dentist when developing a program of therapeutic and preventive dental care for sick children.

It should be noted that there is a high prevalence and intensity of dental plaque in children with CHB (Table 3.14.).

**Table 3.14****Intensity and prevalence of periodontal diseases in children with XGV**

Periodontal pathology	Pointer		
	short	moderate	high
Caries:			
Spreading, %	0-34	40-60	71-100

Average number of affected sextants	0-1.4	1.6-3.7	3.5 >
Blood pressure model: Spreading, %	0-21	25-40	45-100
Average number of affected sextants	0-0.5	0.6-1.7	1.7 >

Table 3.15 shows that one of the early signs of gum disease is bleeding gums.

**Table 3.1 5**

**Early signs of periodontal disease in children.**

Sextant of health	Grow	Number of people examined	Periodontal pathology, %			Healthy periodontium	Average number of affected sextarians		
			nature of bleeding	dental caries	pathology of the ZDK		nature of bleeding	dental caries	Pathology or ZDK
1.5±0.08	5-7	52	35.7±0.75	56.4±0.26	-	8.5±0.1	2.6±0.07	3.9±0.25	-
1.4±0.07	8-11	54	29.8±0.56	59.4±0.78	-	13.4±0.32	2.63±0.08	4.21±0.25	-
1.6±0.09	12-14	63	37.9±0.42	56.7±0.80	-	18.5±0.36	1.7±0.09	3.8±0.15	-

In a child, the patient had different values depending on the patient's age and ranged from 35.7±0.75 to 37.9±0.42. In 37.75±0.75% of patients, the blood circulation pattern was without other pathological changes and periodontal fixation. In the control group, the results of healthy children were significantly lower.

The entire prevalence and intensity of dental deposits was registered in eight age groups. Moreover, in 62.5-67.5% of the examined, *the* presence of supra- and subgingival dental deposits was combined with bleeding gums. The average number of sextants with this sign of pathology, depending on the age, ranged from  $8.5 \pm 0.1$  to  $18.5 \pm 0.36$ . Periodontal pockets of deep 3- 4mm were found in  $1.7 \pm 0.07\%$  of sick children.

In poor and very poor hygienic conditions of the oral cavity strip, the PMA index increases significantly in sick children of all groups. Thus, the average PMA under good sanitary and hygienic conditions was  $25.4 \pm 2.42\%$ , and the average PMA under acceptable sanitary and hygienic conditions was  $38.25 \pm 2.76\%$ , and under non-technological, level and open floors it was satisfactory  $54.0 \pm 2.12$ ,  $58.4 \pm 3.2$  and  $78.5 \pm 3.62\%$ . In 57.8% of children sick with CHB, there was an increase in gum bleeding.

The study of the intensity and prevalence of periodontal diseases was of a moderately high nature (Table 3.16).

The use of the SR I TN index in examining the periodontium of children, according to WHO recommendations, allows us to determine the indicators of the intensity of the pathological process as a sum of sextants with various signs of diseases. The data presented in Table 3.16 characterize the clinical picture of a painful periodontium, which manifests itself in a combination of various symptoms (the nature of bleeding, tartar) and depends on the severity of pathological changes.

**Table 3.16**

**Periodontal lesions according to the indications of the Central Pediatric Intensive Care Unit in the examined children**

Age, let it be	Such a healthy periodontoma (code 0)	Average number of sextants with bleeding gums, tartar (code 2+3+4)	Number of examined patients with tartar, periodontal pockets (code 2+3+4)	Number of patients examined with periodontal pockets (code 2+3+4)

5-7	1.6±0.07	4.7±0.14	-	-
8-10	1.9±0.08	4.6±0.15	-	-
11-13	1.3±0.06	4.81±0.12	-	-
14-15	1.4±0.05	4.9±0.10	5.3±0.11	0.3±0.05
I am average				

Comparing the prevalence rates of periodontal diseases registered according to the nosological principle with the manifestations of SR and TN, it should be noted that the majority of forms of pathology are defined differently.

Among the factors influencing the occurrence of these disorders, the first to be noted is the unsatisfactory hygienic condition of the oral cavity. This is due to the fact that children often have problems with oral hygiene, as a result of which they suffer from caries and tooth decay, as well as general health problems that interfere with healthy and complete individual hygiene.

During the study, a dental index of the correlation level between levels was established, and a positive correlation index was determined between the values of positive correlation between all groups of patients.

### **Biochemical changes in the secretory function of the salivary glands are shown.**

The next part of our work is the study of the main physicochemical parameters of homeostasis in patients with CHB, including the determination of the secretory function of saliva, the average amount of unstimulated and stimulated mixed saliva, viscosity and stability of the acid-base balance of mixed saliva.

The study of the secretory function of saliva shows the average amount of unstimulated and stimulated mixed saliva of patients with hepatitis B according to the method of V.K. Leontyeva. The results obtained are presented in Table. 3.17.

From these tables it is evident that the level of secreted saliva in patients with CHB is sharply understandable. The average amount of mixed saliva in patients with CHB was 0.35±0.02 ml/min. The obtained results show that the average amount of

stimulated mixed saliva in the group of patients with hepatitis significantly ( $r < 0.01$ ) differs from that in the control group.

The next stage of this block of studies was the analysis of the integral indicator of the physicochemical homeostasis of the oral cavity - the viscosity of saliva, which correlates with the smooth secretion of saliva. The result of determining the viscosity of mixed saliva in the observed groups is presented in Table 3.17.

**Table 3.17**

**CCC and viscosity of mixed saliva in children with CHB**

Age, let it be	Number of children	Viscosity	SSS	KOSRE test	pH
5-7	34	3, 25 ±0.0 6	0, 38 ±0,0 3	3, 6 ±0,06	6.20
8-11	41	4, 15 ±0,1 2	0.35 ± 0.02	3, 8 ±0,09	6.17
12-14	45	3.6 2 ±0.1 5	0.3 2 ±0.02	4 , 1 ±0.07	6.15
I am average	120	3.67 ± 0.11	0.35 ± 0.02	3.8 ± 0.07	6.17
Control group	20	1.5 ± 0.2	0.52 ± 0.04	2.9 ± 0.02	7.0

The data in the table indicate an increase in the viscosity of mixed saliva in all age groups relative to the control group ( $r < 0.001$ ).

The work is based on the obtained results, since the excess viscosity of mixed saliva and hyposalivation are similar to the mineral, protective and opening functions of saliva and provoke its accumulation.

The pH values of mixed saliva differ significantly ( $p < 0.05$ ) in group observations. As can be seen from data table 3.18, the mixed saliva coefficient in children in the control group was 7.0, while the average value in children with CHB was 6.17. In my opinion, with CHB this occurs when the acid-base balance of mixed saliva increases and acidosis occurs.

The analysis of the table explains that children with chronic HBV have a decrease in the CVS and an increase in the viscosity of saliva, which is apparently associated with the action of mutually aggravating factors, namely chronic HBV

infection and oral diseases. It was found that in children with XGV, the secretion of viscosity and a simultaneous decrease in the CVS of saliva are in direct dependence between the growth of secretions and the viscosity of mixed saliva. 73.80% of children with low CVS have saliva of high viscosity, and 26.2% of children with normal CVS have saliva of low viscosity.

A decrease in the SSS, combined simultaneously with high saliva density, is an unfavorable factor that aggravates and weakens the processes of physiological self-cleaning of the oral cavity of sick children. In his case, a violation of the physiological process of self-healing of a baby tooth leads to an increased risk of developing caries in healthy children, and in children, CHB is the main factor that increases the risk of developing multiple dental caries and the development of caries in a sick child.

Of interest is the determination of the level of correlation between the values of saliva viscosity, pH and the amount of salivation in patients with chronic hepatitis B (Table 3.18.).

**Table 3.18**

**Correlation coefficient of mixed saliva with physicochemical parameters**

	Patient XGV		
	1	2	3
1	1	0.96	0.89
2		1	0.82
3			1

1- quantitative indicator of the secretory function of the salivary glands.

2 - viscosity of saliva

3 - Saliva area

In groups of patients with hepatitis B, a high direct correlation was observed between the indicators of the rate of salivation and the acid-base state in the oral cavity.

When conducting a correlation comparative analysis of the viscosity of saliva and the rate of excretion, a high inverse correlation was established in patients with hepatitis B (at  $r = -0.81$ ). Consequently, with a decrease in the amount of secreted saliva in patients with parenteral hepatitis, its viscosity increases.

The results show that in patients with CHB there is a high correlation between the physicochemical parameters of mixed saliva, and it was also established that there is a high inverse correlation between the amount of saliva secreted and its viscosity.

Thus, it can be noted that children with XGV had a reliable change in the number of indicators of the secretory function of the salivary glands, why the degree of these changes varied depending on the form of the disease and the age of the children. The conducted analysis of the results of the study of secretory homeostasis indicates a violation of the functions of the salivary glands, which indicate the development of hyposalivation. In such conditions, the risk of active caries, the development of inflammation of the marginal periodontium, inflammation of the marginal periodontium, pain in the mucous membrane, the occurrence of the underlying pathology increases. healing of the salivary gland is enhanced, which leads to the development of pathogenic microflora and other unpleasant pathological consequences, which is confirmed by our clinical and bacteriological studies.

## **DENTAL CARIES**

The degree of demineralization in carious lesions in patients was determined using the method of L. A. Aksamit (1978) using the possibility of staining carious lesions with a 2% solution of methylene blue. The diagnosis of ODE was made based on the clinical picture (color, size, shape, localization, and condition of the enamel surface were taken into account) and the sorption of the staining dye methylene blue.

In the group of white carious spots, all single and multiple spots located in the cervical area and on the visible surface of the enamel were taken. The sizes of the spots varied: from point-like to those occupying 1/3 of the surface of the tooth crown. Spots with a shiny smooth surface (Group I) and spots with a matte, grayish or loose surface (Group II) were identified. The degree of demineralization of tooth enamel was determined by the blue color scale. The results are presented in Table 3.19.

**Table 3.19.**

**Distribution of children by the presence of dental plaque cariogenicity**

Degree of demineralization	with	Cariogenic toothache	Non-cariogenic dentistry course
Easy		2 (20%)	6 (80%)
Average		23 (79.9%)	7(20.1%)
Tall		17(100%)	0

Changes in the physical and chemical properties of oral fluid lead to enamel demineralization and increased cariogenicity of dental plaque. Caries-associated dental plaque is directly dependent on the degree of enamel demineralization, which allows predicting a high risk of developing caries in children with CHB.

In the case of a mild degree of enamel demineralization, the cariogenicity of dental plaque was determined in (20%) of the examined children, in the case of a moderate degree, 69.9% of children had increased cariogenic activity of dental plaque. In the case of a high degree of enamel demineralization, the presence of increased cariogenic activity of dental plaque was established in all examined children. 14.5% of enamel had a mild degree of demineralization, 54.5% had a moderate degree, and 30.9% had a high degree (Fig. 3.3).

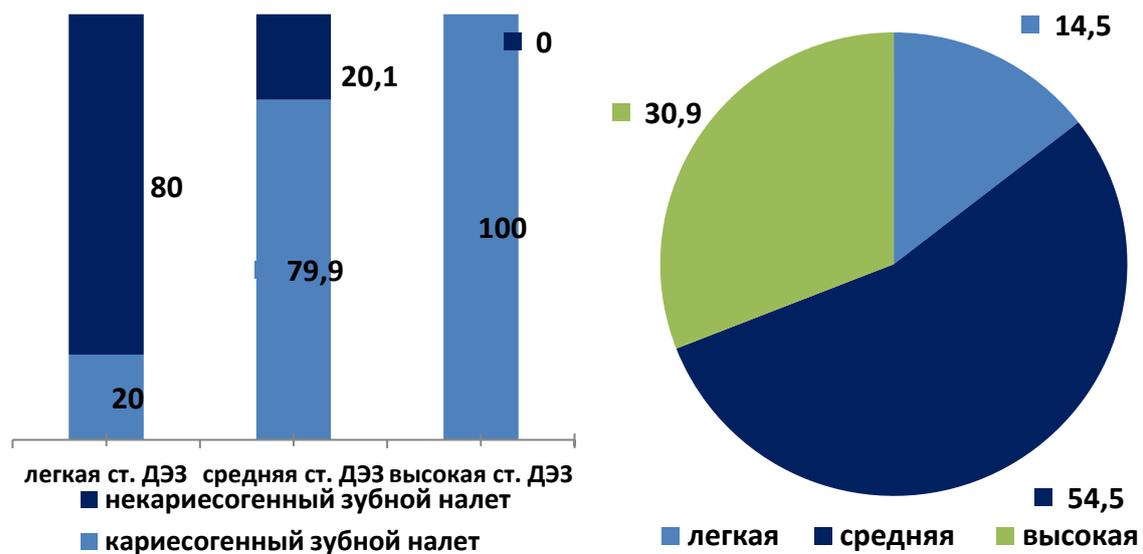


Fig. 3.3. Cariogenicity of dental plaque and degree of enamel demineralization, %.

Determining the degree of enamel demineralization and assessing the level of hygienic condition of the oral cavity of patients allowed us to identify a certain relationship between these indicators. With a mild degree of demineralization, a satisfactory hygienic condition of the oral cavity was more often determined. With an average degree of damage, the hygienic condition of the oral cavity was more often determined as unsatisfactory.

With a high degree of demineralization, unsatisfactory and poor oral hygiene are more common.

Consequently, a tendency has been revealed that with deterioration of the hygienic condition of the oral cavity in children, an increase in the degree of demineralization of tooth enamel is observed. The occurrence and development of the carious process is largely determined by the number of dental indicators in children (Table 3.20).

However, there is an opinion that the qualitative characteristics of dental plaque are of much greater importance, and we have established that in the presence of *Str.mutans* in dental plaque, the degree of demineralization of tooth enamel is more pronounced.

Thus, 8 (14.5%) children had a mild degree of enamel demineralization, 30 (54.5%) had a moderate degree, and 17 (30.9%) teeth had a high degree of enamel demineralization (Table 3.20).

**Table 3.20**

**Distribution of children by the degree of demineralization of tooth enamel**

Gradual demineralization enamel	Number of children examined
Easy	8(14.5 % )
Average	30(54,5 %)
Tall	17 (30.9 %)
CONCLUSION:	55(100%)

Analyzing the received data, we came to the conclusion that the outfit with the generally accepted opinion that there is a large amount of active acid-forming microflora in the teeth plaque is one of the most important motives in the occurrence of carious changes in enamel and dentin, according to our data, it becomes obvious to the baby. The fact is that the deterioration of the hygienic condition of the oral cavity leads to an increase in the cariogenic activity of plaque, an increase in the degree of demineralization of the enamel located under this plaque and the development of an early stage of dental caries.

And in the mechanism of caries occurrence, the main role is played by microorganisms producing organic acids, especially *Str.mutans*, which produce a large amount of organic acid. With mass deposits of dental plaque, the acid accumulating in it dissolves the inorganic substance of the enamel, as a result of which microcavities are formed, which are filled with bacteria, salivary and bacterial proteins, leading to even greater absorption of pathology. The conducted studies show that dental plaque is capable of significantly changing the level of the main physiological parameters of enamel, triggering the pathogenetic mechanisms of dental caries development in children.

Pathogenic action of cariogenic microflora is realized only in the mountains, when the mother is fixed on the tooth, i.e. in the dental plaque. In 90% of cases, the child's teeth are infected with pathogenic streptococci, identical to streptococci isolated from the oral cavity of older relatives. Streptococcal way to create a sultry plaque immediately getting into the heart of the child's mouth. To reduce this probability, under the guidance of parents of children it is necessary to maintain a high level of oral hygiene from an early age.

Thus, the obtained results show that the clinical course of CHB is characterized by local and general clinical symptoms. In patients with CHB without ZAPR, clinical symptoms are rare and quite moderate, probably due to the absence of an additional damage factor (combined pathological). An increase in the frequency of manifestations and manifestations of clinical syndromes in the middle sections of the heart and brain of combined pathology was established.

The study of biochemical indices and observed patients showed that the severity of syndromes - cytolytic, mesenchymal-inflammatory, cholestatic, endotoxemic and protein-synthetic function of the liver does not depend on the main factors of hair pathology. The table shows changes in biochemical blood indices in patients with combined pathology, possibly caused by chronic intoxication processes and at an early stage in children, which has a negative effect on the course of the inflammatory process in the liver, causing frequent relapses of the underlying disease. XGV.

It has been established that in children with CHB, a symptom complex of changes is formed in the oral cavity, caused by increased damage to hard dental tissues by caries, which indicates the development of a pronounced cariogenic situation, pathological changes in tissues. Periodontal and oral mucosal lesions are more pronounced and widespread, as well as during an exacerbation of the disease. In sick children, poor and good oral hygiene is aggravated by the lack of knowledge about oral hygiene and the correct use of oral hygiene products according to age and indications, and in combination with the influence of a general somatic disease,

conditions are created for the formation and maintenance of an increased cariogenic situation and other pathological changes in primary and secondary patients.

It should be noted that in sick children there was a reliable change in the number of indicators of the secretory function of the salivary glands, why the degree of these changes varied depending on the form of the disease and the age of the children. The conducted analysis of the results of the study of secretory homeostasis indicates a violation of the functions of the salivary glands, which indicate the development of hyposalivation. In such conditions, the risk of active tooth decay, the development of inflammation of the marginal periodontium, diseases of the oral mucosa increases significantly and the course of the underlying pathology is aggravated. With a decrease in salivary secretions, self-cleaning of the oral strip also worsens, which contributes to the development of pathogenic microflora and leads to other unfavorable pathological consequences, which is confirmed by our clinical bacteriological studies. The conducted studies explain that dental plaque can significantly change the level of the main physiological parameters of enamel , triggering the pathogenetic mechanisms of caries, teeth and children. To reduce this likelihood, children need to maintain a high level of oral hygiene from an early age under the guidance of parents and under the constant supervision of dentists.

It was found that the increase in the viscosity of CHB and the simultaneous decrease in the SSS of saliva are directly related to the secretion rate and viscosity of mixed saliva. 73.80% of children with low SSS had high-viscosity saliva, and 26.2% of children with normal SSS had low-viscosity saliva. A decrease in SSS, combined simultaneously with high saliva viscosity, is an unfavorable factor that aggravates and weakens the processes of physiological self-cleaning of the oral strip in sick children. In turn, disruption of the physiological self-healing zone leads to an increased risk of dental caries in healthy children, and in children, CHB is the main factor increasing the risk of multiple caries in children and other pathological disorders in children.

**CHAPTER IV**

**EFFECTIVENESS OF TRADITIONAL AND PROPOSED COMPLEX OF  
TREATMENT AND PREVENTIVE DENTAL MEASURES IN  
HOSPITALISTS WITH COMBINED PATHOLOGY OF THE RTA I XGV  
POLITICAL ORGANS**

**Evaluation of the clinical effectiveness of a therapeutic and preventive  
complex of dental procedures and identification of pathological processes in  
chronic hepatitis B**

We analyzed the dynamics of clinical symptoms, both from the oral cavity and from chronic hepatitis, when using complex treatment. The results are presented in Table 5.1.

General signs of diseases in patients with combined pathological organo-cavity of the RTA and XGV also changed unequally under the influence of traditional and complex methods of treatment. The use of the proposed complex of dental treatment and preventive measures against the background of basic therapy of the outfit with significant regression of local clinical symptoms in the RTA area had a noticeable effect on the dynamics of general clinical symptoms in children with combined pathology.

Thus, after treatment of patients who were on the proposed therapy, in comparison with children who received traditional therapy, asthenovegetative manifestations in the form of malaise, lethargy, headaches and irritability were reliably recorded.

**Table 4.1**

**Dynamics of clinical manifestations of CHB in children with the use of complex therapy in children with CHB**

Clinical signs	Before treatment , n= 30		After treatment , n= 30		After 6 months , n= 30		After 1 year , n= 3 0	
	press	%	press	%	press	%	press	%
Paleness and dryness of koji	29	96.7±3.3	4	11.5±6.2***	7	15.7±5.2***	8	25.3±7.4***
Decreased appetite	30	100,0	2	6.7±4.6***	4	10.7±4.8***	7	18.5±6.1***
Pain in the flesh	27	90.0±5.5	0	0	1	3.7±2.1	4	13.3±5.4***
Irritability	26	86.7±6.2	1	3.3±3.3***	2	5.8±3.1***	5	14.8±6.2***
Flatulence	24	80.0±7.3	3	10.0±5.5***	7	98.4±5.3***	8	20.8±7.5***
Nausea	13	43.3±9.0	0	0	2	4	4	10.4±5.4**
Heaviness in the right hypochondrium	28	93.3±4.6	4	13.3±6.2***	2	6	5	14.5±5.7***
Icterus of the skin and sclera	29	96.7±3.3	2	6.7±4.6***	4	9.2	8	16.2±7.2*** ^
Nosebleeds and bleeding gums	19	63.3±8.8	0	0	3	6.0±3.2***	8	14.9±7.6** ^^
Palmar erythema	21	70.0±8.4	10	33.3±8.6**	11	24.0±6.4**	14	34±8.2
Telangiectasias on the trunk	19	63.3±8.8	9	30.0±8.4**	10	26.0±6.7*	13	40±5.6
Hepatomegaly	30	100,0	29	96.7±3.3	24	78.5±6.9** ^	24	82.0±7.8** ^
Splenomegaly	7	23.3±7.7	4	13.3±6.2	4	15.1±4.9	5	14.7±1.1
Combination of 2 or more characters	24	80.0±7.3	13	43.3±9.0**	14	34±8.1**	20	60.0±7.8

Notes:      \*- differences compared to data before treatment values (\* -  $P < 0.05$ , \*\* -  $P < 0.01$ , \*\*\* -  $P < 0.001$ ); - differences compared to data after treatment values

Paleness and dryness of the skin were noted in  $15.2 \pm 5.1\%$  of children in the main group ( $P < 0.001$ ), which is 3.1 times less than in the control group ( $42.8 \pm 8.7\%$ ,  $P < 0.001$ ). Irritability was significantly reduced in both groups of patients, it was  $2.5 \pm 1.2\%$  compared to the main group, and the data of the control group of patients were 11.6 times higher compared to  $29.0 \pm 9.1\%$  ( $P < 0.001$ ).

Positive dynamics after treatment and manifestations of dyspeptic syndrome in patients of the main group are also noted. All patients of the main group ( $P < 0.001$ ) had symptoms such as nausea and vomiting, while in the control group the symptoms were noted in  $21.9 \pm 6.8\%$  ( $P < 0.05$ ) and  $4.5 \pm 3.2\%$  of cases ( $P < 0.001$ ), respectively. ( $P < 0.001$ ). Decreased appetite was registered in the main group and was 2.7 times higher than in the control group of patients ( $P < 0.001$ ). Flatulence and a feeling of heaviness in the right hypochondrium significantly decreased in both groups of patients, respectively ( $12.3 \pm 5.4\%$ ,  $P < 0.001$  and  $45.1 \pm 8.7\%$ ,  $P < 0.01$ ) and ( $15.3 \pm 5.7\%$ ,  $P < 0.001$  and  $36.7 \pm 8.8\%$ ),  $P < 0.001$ ). Cholestasis syndrome after the therapy was observed in the majority of patients and persisted with scleral jaundice only in  $7.2 \pm 4.5\%$  of patients in the main group and in  $43.5 \pm 7.5\%$  in the presence of only CHB ( $P < 0.001$  in group comparisons). (Table 5.1)

Hematopoiesis disorder was registered in ( $29.5 \pm 7.8\%$ ) patients with CHB after traditional therapy ( $P < 0.01$ ). Whereas in children who were on complex therapy, this symptom was not detected in any case ( $P < 0.001$ ).

Extrahepatic signs in the form of palmar erythema and telangiectasias on the trunk tend to decrease in frequency after proven conservative treatment. It was found that palmar erythema and telangiectasias were more common in patients receiving complex therapy, in  $26.8 \pm 7.6\%$  ( $P < 0.01$ ) and  $31.4 \pm 6.9\%$  ( $P < 0.05$ ) of cases, and in patients with CHB analogue values after traditional therapy -  $47.2 \pm 8.2\%$  ( $P > 0.05$ ) and  $45.2 \pm 8.5\%$  ( $P > 0.05$ ).

In 84% of patients with the main group, pallor and dryness of the skin were completely relieved in 84% of cases, decreased in 10% of patients, without changes in 6%, in the mountainous as in the group with XGV, the signs were relieved in 42%, decreased in 14%, did not decrease in 44% dyspeptic syndrome in the form of

dyspeptic syndrome, flatulence, nausea and pain in the life of the child after traditional therapy and treatment 92.0%, 88.0%, 100% and 100.0%, and the child received complex therapy, these indicators were completely relieved.

In 96.0% and 88.0% of patients with combined pathology, irritability and pain in the right hypochondrium ceased after treatment, in 4.0% and 10.0% of patients - decreased sensitivity, and in 60% of patients - symptoms of CHB, <0% and 54.0%, decreased and 28.7% and 26.0% of children, respectively (Table 5.1).

In 24% and 26% of patients with combined pathological extrahepatic symptoms, such as palmar erythema and telangiectasia of the trunk, which were relieved after the proposed therapy, they decreased by 20% and 16.7%, respectively, and after traditional treatment, similar indicators significantly ceased and remained at the same level in 45.3% and 40.1% of patients.

Analyzing the effectiveness of the proposed therapy and catamenesis, it is emphasized that the proposed complex dental therapeutic and prophylactic therapy of the organ layer has a significant positive effect on the regression of all clinical symptoms and observed patients during the observation process.

Thus, pallor and dryness of the skin by the 6th month of observation after the tested complex of dental therapeutic and prophylactic treatment were noted in 15.7% ( $P < 0.001$ ) of patients, at the end of the year - in 26.7% ( $P < 0.001$ ), abdominal pain appeared by the 6th month only in 3.7% ( $P < 0.001$ ), after a year - in 13.3% ( $R < 0.001$ ), icterus of the skin and sclera - in 9.2% ( $P < 0.001$ ) and 16.2% ( $R < 0.001$ ), nosebleeds nature of bleeding - 6.0% ( $R < 0.001$ ) and 14.9% ( $R < 0.001$ ), respectively.

However, despite the complex therapy, in children of the main group the size and spleen in most cases remained enlarged, although the object is to decrease the proportion of such patients in percent. Thus, hepatomegaly was 78.5% after 6 months of treatment ( $P < 0.01$ ) and remained within these limits until the end of observation. Splenomegaly by 6 months of observation after treatment was noted in 15.1% of patients, by the end of the year - in 14.7%.

In most patients who were on traditional therapy, after 6 months, an increase in the style of intoxication in the form of malaise, lethargy, irritability and paleness of the skin was noted. Changes in the skin in the form of dryness and paleness by the 6th month were observed in most children in 58% of cases ( $P < 0.001$  to the indicator before treatment), which is on average 1.4 times higher compared to the data after treatment. After a year, this indicator increased and amounted to 90% ( $P < 0.01$  to the indicator after 6 months of follow-up). In 60.5% ( $P < 0.001$ ) of children in this group, by 6 months, complaints of decreased appetite were registered, in 51.4% ( $P < 0.001$ ) - pain in the vital area, in 44.6% ( $P < 0.05$ ) - flatulence, however, after a year, the frequency of the above-mentioned signs of the disease significantly increased and amounted to 90% ( $R < 0.001$ ), 92.4% ( $R < 0.001$ ) and 70.6% ( $R < 0.01$ ), respectively.

It is important to note that the frequency of observation of patients in the control group is high. Thus, a feeling of heaviness in the right hypochondrium after one year was detected in 21% ( $P < 0.01$  difference compared to the data after 6 months) of patients, yellowness of the skin and sclera - in 46.7% ( $R < 0.001$ ), telangiectasias on the trunk - 40.1% ( $P < 0.001$ ). The liver and spleen were enlarged in all (100.0%) patients in the control group.

The obtained observation results allow us to establish that after complex dental treatment and prevention similar changes were observed in the study group and depending on the therapy, but statistically significant positive results were achieved only in those patients who received complex therapy. He is a patient receiving traditional therapy, clinical symptoms of the disease tend to increase, he is more than half of the patients, and the duration of observation is not significant, and the predelex is the initial size.

Thus, the effect of complex therapy was long-term and stable, with a serious regression of local pathology, as evidenced by a significant decrease in the frequency of relapses of the disease against the background of general treatment of CHB and children for the entire period of our observation.

## **Dynamics of biochemical blood tests and children with chronic hepatitis B with oral diseases against the background of complex treatment**

Study of changes in biochemical indices of endotoxemia character, as well as detection and treatment of observed mix. It should be emphasized that a high percentage of biochemical changes in the examined contingent may be due to a violation of local immunity of the oral cavity against the background of insufficient liver function, which is a feature of combined changes.

The results obtained are presented in Table 4.2.

**Table 4.2 .**

**Dynamics of biochemical blood parameters in the patient's body after the implementation of a therapeutic and prophylactic treatment complex**

Pointer	Do Lehenia	After treatment					
		Proposed treatment, n=40			Traditional treatment, n=20		
		Mail Lehenia	cookie 6 months	through one god	Mail Lehenia	cookie 6 months	through one god
ALT, $\mu\text{mol/l}$	2.08 $\pm$ 0.02	0.98 $\pm$ 0.07* ^	0.56 $\pm$ 0.02*	0.44 $\pm$ 0.03* ^	1.26 $\pm$ 0.12*	1.02 $\pm$ 0.58	0.72 $\pm$ 0.06*
AST, $\mu\text{mol/l}$	1.56 $\pm$ 0.09	0.84 $\pm$ 0.04* ^	0.52 $\pm$ 0.03* ^	0.36 $\pm$ 0.02* ^	1.12 $\pm$ 0.08*	0.91 $\pm$ 0.03*	0.76 $\pm$ 0.07*
Total protein, g/l	59.4 $\pm$ 6.6	59.3 $\pm$ 4.3	52.5 $\pm$ 4.7	72.4 $\pm$ 5.1	50.8 $\pm$ 3.9	61.9 $\pm$ 6.7	62.7 $\pm$ 5.3
Gamma globulin, %	24.5 $\pm$ 1.2	20.5 $\pm$ 1.05*	18.7 $\pm$ 1.02*	16.9 $\pm$ 0.82* ^	23.1 $\pm$ 1.1	22.3 $\pm$ 1.07*	21.2 $\pm$ 1.15*
Thymol test, ed.	8.41 $\pm$ 0.87	5.9 $\pm$ 0.46*	2.5 $\pm$ 0.41* ^	1.5 $\pm$ 0.07* ^	7.44 $\pm$ 0.71	7.19 $\pm$ 0.65	6.48 $\pm$ 0.62
Bilirubin is normal, $\mu\text{mol/l}$	29.5 $\pm$ 2.1	17.9 $\pm$ 0.68*	15.1 $\pm$ 0.91* ^	11.5 $\pm$ 0.87* ^	20.5 $\pm$ 0.87*	20.1 $\pm$ 1.11*	17.9 $\pm$ 0.79*
Direct bilirubin, $\mu\text{mol/l}$	4.5 $\pm$ 0.10	4.1 $\pm$ 0.41* ^	3.2 $\pm$ 0.44* ^	2.7 $\pm$ 0.35* ^	4.5 $\pm$ 0.4	5.1 $\pm$ 0.42	4.7 $\pm$ 0.35
Cholesterol mmol/l	5.7 $\pm$ 0.62	5.5 $\pm$ 0.45	4.5 $\pm$ 0.35	4.9 $\pm$ 0.36*	5.3 $\pm$ 0.81	5.4 $\pm$ 0.57	5.2 $\pm$ 0.65
SMP, ed.	1.12 $\pm$ 0.09	0.52 $\pm$ 0.06* ^	0.38 $\pm$ 0.04* ^	0.25 $\pm$ 0.04* ^	0.96 $\pm$ 0.01	0.86 $\pm$ 0.08*	0.78 $\pm$ 0.07*
Central Election Commission, ed.	0.95 $\pm$ 0.81	0.71 $\pm$ 0.08	0.40 $\pm$ 0.05* ^	0.38 $\pm$ 0.05* ^	0.81 $\pm$ 0.08	0.81 $\pm$ 0.09	0.65 $\pm$ 0.07*
LDH: - total, I/L	451 $\pm$ 16.5	320 $\pm$ 13.5* ^	224 $\pm$ 11.8* ^	204 $\pm$ 13.5* ^	375.0 $\pm$ 10.8*	364.5 $\pm$ 11.9*	319.5 $\pm$ 12.8*
LDH-4, %	19.4 $\pm$ 2.10	11.7 $\pm$ 0.8*	7.2 $\pm$ 0.7* ^	5.6 $\pm$ 0.7* ^	14.5 $\pm$ 0.92*	15.1 $\pm$ 0.79*	10.7 $\pm$ 0.85*
LDH-5, %	27.9 $\pm$ 3.0	12.6 $\pm$ 0.9* ^	7.5 $\pm$ 0.9* ^	4.5 $\pm$ 0.6* ^	21.5 $\pm$ 1.42*	21.6 $\pm$ 1.36*	18.9 $\pm$ 1.83*
LII, ed.	0.71 $\pm$ 0.02	0.70 $\pm$ 0.05	0.42 $\pm$ 0.06*	0.41 $\pm$ 0.02*	0.59 $\pm$ 0.06	0.51 $\pm$ 0.07*	0.51 $\pm$ 0.05*

Notes: \* - differences compared to pre-treatment values (\* - P <0.05); ^ - the difference between traditional data and the proposed treatment is significant (^ - P <0.05)



Construction of biochemical homeostasis parameters is unnecessary, since all the studied indices in the treatment of children with combined pathology significantly exceed those in the comparison groups of children (which corresponds to  $P < 0.05$  -  $R < 0.001$ ). The table shows that the symptoms of cytolysis syndrome have significantly decreased in the children of the main group. Thus, the average ALT index has decreased and normalized, reaching 2.12 times. As a result of such changes, AST, the average level of which during treatment was  $1.56 \mu\text{mol/l}$ , decreased by 1.8 times after treatment ( $0.30 \mu\text{mol/l}$ ,  $P < 0.05$ ). Also, under the influence of the proposed therapy, the indices of cholestatic syndrome changed, with a reliable decrease noted in all indices. In particular, the average level of total bilirubin decreased by 1.64 times, direct bilirubin by 1.1 times ( $P < 0.05$ ).

It was shown that with a characteristic mesenchymal-inflammatory syndrome, as well as with an initial positive effect from therapy, the level of gamma globulin was observed to decrease significantly by 1.9 times (up to  $20.7 \pm 1.07\%$ ,  $P < 0.05$ ) and the thymol test by 1.3 times ( $5.9 \pm 0.40$  units,  $R < 0.05$ ).

Activation of systemic endogenous detoxification is confirmed by a reliable decrease in the level of SMP by 2.15 times from  $1.12 \pm 0.09 \text{ mg/ml}$  to  $0.52 \pm 0.06 \text{ mg/ml}$  ( $P < 0.05$ ). Also, the average level of CIC and LII increased by 1.33 times and 1.13 times, respectively ( $0.71 \pm 0.08$  units and  $0.79 \pm 0.06$  units,  $P > 0.05$ ). Positive indicators of arterial pressure and the dynamics of total LDH and the spectrum of isoenzymes and blood serum of the main group of patients were obtained. Thus, after the proposed therapy, the mean arterial pressure was significantly lower than the total LDH (up to  $320.0 \pm 13.5 \text{ IU/l}$ ,  $P < 0.05$ ) and the ego-fraction - LDH-4 (up to  $11.7 \pm 0.8\%$ ,  $R > 0.05$ ) and LDH-5 (up to  $12.6 \pm 0.9\%$ ,  $R < 0.05$ ).

Analysis of biochemical parameters 6 months after the complex treatment showed that the analyzed biochemical parameters significantly differed from the parameters of similar treatment, maintaining positive dynamics ( $P < 0.05$ ). Significant changes were noted in the following parameters : ALT and AST levels - by 1.75 and 1.6 times, respectively, LDH-5 - by 1.68 times, thymol test - by 2.4 times, SMP - by 1.13 times - by 1.73 times, LDH-4 - by 1.6 times, total bilirubin -

by 1.18 times, direct bilirubin - by 1.28 times, total LDH - by 1.1 times and gamma globulin - by 1.1 times (  $P < 0.05$ ).

Further observations showed that after 1 year of the proposed therapy, most biochemical parameters are characteristic of endogenous intoxication of the main blood group, which indicates a positive effect of the developed therapeutic and prophylactic patented measure and background scheme of basic therapy. Thus, the data of the observation period for patients with a decrease in the average ALT and AST values and patients of the main group exceed the data of the control group by 2.1 and 2.3 times, respectively (  $P < 0.05$ ). The average value of total and direct bilirubin also decreased by 1.8 and 1.3 times, respectively (reliably to the indicator before treatment,  $P < 0.05$ ).

Analysis of biochemical parameters, taking traditional therapy, watching a picture on TV. After a course of traditional therapy, the levels of ALT and AST were  $1.26 \pm 0.12 \mu\text{mol/l}$  and  $1.12 \pm 0.08 \mu\text{mol/l}$ , respectively, which was acceptable and did not lead to a cure ( $R < 0.05$ ), which showed statistically higher results than after treatment with the proposed therapy ( $R < 0.05$ ).

The level of total and direct bilirubin remained elevated and amounted to  $20.5 \pm 0.87 \mu\text{mol/l}$  (  $P < 0.05$ ) and  $5.0 \pm 0.4 \mu\text{mol/l}$ , respectively (  $P > 0.05$ ).

We did not note any significant effect of traditional therapy on the synthetic function of the liver, since the total protein content was within the starting value of  $50.1 \pm 3.9 \text{ g/l}$  (  $P > 0.05$ ). There was also a change in the indicators of mesenchymal-inflammatory syndrome and indicators of mesenchymal-inflammatory syndrome, in which the level of the thymolytic probe decreased to 1.13 units, gamma globulin - by 1.1% (  $P > 0.05$ ). The average blood cholesterol level was  $5.3 \pm 0.81 \text{ mmol/l}$  (  $P > 0.05$ ).

Insignificant bleedings, indicating endogenous intoxication after traditional therapy, were also observed in the SMP, LII and CIC ( $P > 0.05$ ). General treatment of patients in the control group showed reliable results only when showing LDH and EE isoenzymes, which decreased to  $375.0 \pm 10.8 \text{ IU / l}$  (total LDH), LDH-4 -  $15.7 \pm 0.71\%$ , LDH-5 -  $21.5 \pm 1.42. \%$ , ( $R < 0.05$ ).

By the 6th month of observation, most children (81.8%) showed worsening of the general symptoms of CHB in children, biochemical parameters changed insignificantly compared to similar indicators after treatment. And by the end of the year, almost all indicators were close to the indicators 3 months after treatment. Thus, by the 6th month of observation, ALT and AST activity decreases to  $1.02 \pm 0.58 \mu\text{mol/l}$  ( $P > 0.05$ ) and  $0.91 \pm 0.03 \mu\text{mol/l}$  ( $P < 0.05$ ), respectively, and by  $0.72 \pm 0.06$  and  $0.76 \pm 0.07 \mu\text{mol/l}$  ( $P < 0.05$  to the indicator before treatment) in the concentration range. During the entire observation period, the rate of normalization of total and direct bilirubin indicators decreased ( $P > 0.05$ ).

In children of the main group, the thymol test and gamma globulin values decreased to 7.19 and 22.3% by 6 months of observation and remained at this level throughout the entire observation period. The average value of total protein in the control group increased significantly to 61.8 g/l ( $P > 0.05$ ) after 6 months and to 62.7 ( $P > 0.05$ ) in the control group.

By the 6th month, the indices of endogenous intoxication of the SMP, LII and CIC decreased to  $0.86 \pm 0.08$  units;  $0.51 \pm 0.07$  units ( $P < 0.05$ ) and  $0.86 \pm 0.09$  units ( $R > 0.05$ ), respectively. In this study, the activity of total LDH and the ego fraction, respectively, decreased to  $364.5 \pm 11.8$  IU/L;  $15.7 \pm 0.75\%$  and  $21.6 \pm 1.76\%$  ( $P < 0.05$ ) and maintained reliability until the end of the observation period.

The data can be closed, since the development of biochemical remission was observed in 81.8% of patients (in the control group - 54.5%,  $R < 0.05$ ). Based on the data obtained, it can be stated that the dental treatment and prevention complex against the background of general treatment of XGV is effective in combined pathology in children.

**The state of biophysical properties of mixed saliva in children with chronic hepatitis B in complex therapy.**

We studied the influence of the rate of dental plaque formation (RDF) on the biophysical properties of mixed saliva and the development of cariogenic situations in children with CHB.

Depending on the time of the study, patients were divided into 2 groups: Group 1 - before treatment, Group 2 - after a course of inpatient treatment on the day of discharge from the hospital.

In the first group of children, the determination of the SOS is controlled every other day, the vestibular surface of the teeth is controlled, the upper jaw is auto-imaged and Table 5.3.

**Table 4.3.**

**The rate of plaque formation in group 1 patients**

Dental order number.	1 milk (M+M, ball)	4 milk (M+M, balls)
1	2.2 ±0.7	3.2 ±0.9
2	3.1 ±0.5	3.6 ±1.0
3	3.2 ±0.3	4.5 ±0.8
Quantity	8.5 ±0.9	11.30 ±1.6
Average value	2.55 ±0.04	3.76 ±0.9

The study of the difference in the average rates of dental plaque formation after 24 hours was 2.55 points, after four days 3.76 points. The results obtained indicate a high rate of soft plaque formation in children of the first group and susceptibility to the development of multiple dental caries. According to the authors of this method, with a difference of 0.6 points, the rate of plaque formation is considered increased and the observed are caries-susceptible. According to our data, these indicators were increased by 4.7 and 6.2 times. This indicates a sharp increase in the SOZN, indicating a high risk of multiple dental caries, the need for urgent active anti-caries measures.

**Table 4.4..**

**The rate of dental caries formation was revealed in 2 groups.**

Dental order number.	1 milk (M+M)	4 milk (M+M)
1	2.0 ±0.2	2.2 ±0.4
2	2.1 ±0.3	2.4 ±0.6
3	2.3 ±0.5	2.6 ±0.5
Quantity	6.4.0 ±0.8	7.2 ±0.9
Average value	2.13 ±0.4	2.4 ±0.6

In the second group (Table 5.4), the difference in the average indicators of the SOSN exceeds the corresponding analog indicators in the norm by 4.1 and 5.6 times, which indicates a sharp increase in the SOSN.

The increase in the SOSN in children with XGV was combined with a high degree of cariogenicity. Thus, a high degree of cariogenicity activity of dental plaque was established and CFU – Str . Mutans is equal to  $1 \times 10^{8-9}$  ml. In the second middle stage, the CFU index of streptococcus Str . Mutans is  $1 \times 10^7$  ml.

Analysis of the table shows that children with XGV experience a decrease in CVS and a simultaneous increase in saliva viscosity, probably associated with the course of a general somatic disease.

It was found that in children with XGV, the elimination of viscosity and simultaneous reduction of the CCC of saliva are in direct dependence between the growth of secretions and the viscosity of mixed saliva. In 73.8% of children with low CCC, saliva has high viscosity, and in 26.2% - low-viscosity saliva with normal CCC.

A decrease in the SSS, combined simultaneously with high saliva density, is an unfavorable factor that aggravates and weakens the processes of physiological self-cleaning of the oral cavity of sick children. In turn, a violation of the processes of physiological self-cleaning of the oral cavity leads to an increased risk of developing a cariogenic situation in healthy children, and in children with XGV it is the main risk factor for the development of multi-natural caries of the body and an increased cariogenic degree.

A direct correlation was found between the blood CCC, the viscosity of mixed saliva and the level of the hygienic state of the heart. These disorders in the oral cavity of patients (both individually and in combination) indicate the development and establishment of an increased cariogenic situation and the risk of developing multiple dental caries in children with XGV.

### **The Impact of Complex Dental Treatment on Oral Organs in Children with XGV**

The clinical and pathological manifestation of periodontal diseases and periodontal diseases is based on a change in the symptom complex, which is determined by an increase in the lesion of hard dental tissues by caries, which indicates the development of an increased cariogenic situation, a pathological change. The periodontal tissue and mucous layer are more pronounced during an exacerbation of the disease. Unsatisfactory and poor oral hygiene is aggravated by a low level or lack of knowledge about ingenious oral care and the property of using oral hygiene products according to age and indications. The identified changes in the organ layer of the child's body in order to affect the general somatic disease create conditions for the formation and maintenance of a situation of increased caries and other clinical and pathological changes in the child's body.

And depending on the method used, 80 parts are divided into 2 groups. In the first initial group (40 children), the teaching method is presented. The second group (comparison) - 40 children who received traditional dental treatment. Dental treatment in both groups was carried out against the background of treatment of a general disease - XGV.

Complex dental treatment included: deep fluoridation of hard tissues of the marrow with the drug Gluftored, irrigation of the oral cavity with the antiseptic solution Eludril after each meal with subsequent application of the gums with the gel Parodium in children with increased bleeding of the gums. The hygienic floor is washed 2 times in the morning and evening with the toothpaste "Elgidium" and the toothbrush "Elgidium" according to the clinical standard method, and for the

prevention of viral rash and oral mucosa no longer viferon, with candidiasis - funistatin. For irrigation of the oral cavity of sick children, the antiseptic drug of local action Eludril developed and produced by the pharmaceutical company EUROMEDEX (France) was used, daily for 10 days during the period of exacerbation of the underlying disease.

### **Dynamics of the hygienic index of the RTA area under the influence of the proposed treatment and children**

We studied the effect of the drug Elludril on the level of oral hygiene.

Initially, a standard level of hygiene was determined and the patients were divided into two groups: Group 1 - with a non-standard level of hygiene (31 children) with a hygiene index from 1.9 to 2.5 points; Group 2 - hygiene level (31 children) - more than 2.6 points.

Each group was divided into 3 subgroups (10 children in each). In subgroup A, the child underwent a rational hygienic procedure using the antibacterial toothpaste "Elgidium", which lasted 1-2 minutes according to the standard method. Determination of the index of hygienic products and technologies for 5 days. During all 5 days, after breakfast and at night, a rational hygienic regime is carried out, and the antibacterial toothpaste "Elgidium" is used to open the teeth. 5 hours after the morning hygienic measures, the level of oral hygiene was determined.

In subgroup V - rational hygiene and washing the floor with an antiseptic solution Eludril and running for 0.5 minutes. Subgroup V also includes clean teeth and a 5-day antibacterial toothpaste Elgidium, as well as other drugs according to the scheme. Additionally, after brushing the teeth, simply spread Eludril. Each child also determined the hygiene index 5 hours after the combined use of the antiseptic Eludril.

The third subgroup C - children with striped cotton wool in the morning and evening with the antiseptic Eludril instead of standard hygienic measures, since in the presence of inflammatory phenomena and polystyrene of hygienic measures due to illness.

When analyzing the results of the study, it was revealed that the hygiene index underwent significant changes in the process of using the antiseptic Eludril and other hygiene products (Table 5.5.).

**Table 4.5.**

**Values of the oral hygiene index before and after hygiene measures in children with chronic hepatitis B.**

Parameters studied	Group 1		Group 2	
	Ish. GI level	After Hyg.merop., G.I.	Ish. GI level	After Hyg.merop.-GI
	GI- in Ballax			
Subgroup A	2.2±0.3	1.3±0.2	2.7±0.07	1.6±0.15
Difference	-0.9		-1,1	
Subgroup V	2.3±0.1	1.2±0.03	2.6±0.05	1.1±0.02
Difference	-1,1		-1.5	
Subgroup C	2.3±0.03	1.6±0.1	2.8±0.08	1.8±0.17
Difference	-0.7		-1.0	
Control group	2.1±0.04	1.8±0.01	2.7±0.03	2.2±0.02
Difference	0.3		0.5	

In the first group, with an initially low working level of hygiene, the dynamics of GI is characterized by the following picture: in subgroup "A" under the influence of rational hygiene, GI of Elgidiya drops from 2.2±0.3 to 1.5±0.2 times per second. They are equal to 0.8 points. In subgroup "V" with a combination of rational hygienic rinsing with the drug Eludril, the difference between the initial indicators and the data after hygienic measures was reliable and amounted to 1.8 points. In subgroup "C" when rinsing the floor with the antiseptic Eludril, a decrease in GI by 0.6 points was obtained, although the changes obtained are not very high, and there is no tendency to improve the level of hygiene in patients with CHB. 2 times more than in the detailed control group.

In the first group, it was established that the effect of preventive and hygienic measures was obtained in subgroup "V", when a combination of rational hygiene and additional rinsing was carried out with the drug Eludril.

In the second group with initially high hygienic indicators, the positive effect of preventive and hygienic measures was more pronounced compared to the first group. Thus, in subgroup "A" the GI decreased by 1.1 points, in subgroup "V" - by 1.5 points, and in subgroup "S" - by 1.0 points.

Thus, the results of the studies showed that the use of the studied preventive and hygienic measures gave positive results in children with XGV, depending on the degree of expression. The greatest effect was obtained by a combined method in two subgroups of "V" - the first and second groups, with unproductive and low levels of hygiene. Based on the obtained drug, Elludril moino is recommended for use in children with XGV, during an exacerbation both independently in the form of rinsing, and additionally in combination with rational oral hygiene. Constant adherence to the hygiene regimen, the level of ego and children, a patient with XGV is the primary link and prevention of dental caries and helps to prevent the development of pathological changes in the oral cavity, reduces the risk of caries and periodontal pain.

In addition, the results of published studies indicate that dentists are not working enough with children with CHB and that there is a need for broad and targeted health education and treatment and preventive work to prevent the development of dental diseases in children with CHB.

Children with chronic hepatitis B, against the background of treatment of the underlying disease, need practical training in oral care skills with systematic monitoring of the quality of hygienic dental care at a pediatric dentistry appointment at least 3-4 times per year.

## **Some aspects of mineralizing potential of oral fluid in children with XGV**

Our studies have allowed us to conclude that in children with XGV, an increased cariogenic situation in the oral cavity leads to the development of periodontal tissue damage in the form of chronic catarrhal gingivitis. And by this connection, we have studied a number of clinical indices characterizing the state of the RTA under the effect of the provided treatment (Table 5.6.).

Under the influence of the tested proposed treatment, the caries growth rate after 6 months was 0.4, after a year 1.27, which is more significant compared to traditional treatment. The growth of the ODU also decreased, the dental caries index decreased by 1.6 times after 6 months and by 1.71 after 1 year.

The caries resistance of dental caries (CRD) to treatment had a high value -  $2.78 \pm 0.11$ , after 6 months it decreased to  $2.41 \pm 0.13$ , and after a year - to  $2.5 \pm 0.09$ , remained weakly positive. These changes indicate a decrease in caries resistance (CRD).

A decrease in PMA indicates a decrease in the inflammatory reaction of the gums and a reduction in the general clinical symptoms of gingivitis.

**Table 4.6 .**

**Dynamics of clinical indicators in a patient according to the complex of treatment and preventive measures**

Clinical index	Original meaning	Results of the medical and preventive treatment complex			
		after treatment	3 months.	6 months.	In 1 year
CPU	3.41±0.15	3.41±0.04	3.41±0.05	3.82±0.03*	4.68±0.04**
CPU+KP	4.26±0.07	4.76±0.03	4.76±0.04	4.82±0.05*	4.89±0.06**
ODE	0.71±0.09	0.45±0.03	0.48±0.03	1.06±0.03**	1.71±0.03**
Dental Plaque Index Di	2.41±0.02	2, 1 4 ± 0.09	2.27±0.07	2.36±0.05	2.63±0.05
Dental calculus indices Ci	2.43±0.12	1, 31 ±0.03	1.67±0.05	2.19±0.03**	3.11±0.08**
Hygienic index	2.78±0.13	1.5±0.03	1, 9±0,05	2.29±0.1	2.60±0.15
KZN	2.78±0.11	1.35±0.04**	2.47±0.09	2.41±0.13**	2.5±0.09**
KOSRE test	3.70±0.09	2.50±0.06**	2.60±0.05**	3.18±0.07**	4.2±0.12**
RMA Index	46.8±2.17	32.1±1.93	34.2±1.74	41.5±1.5	45.2±1.7
SOZN	3.76±0.21	2.59±0.09	2.72±0.07	3.15±0.9*	3.62±0.47*

Admixture. Reliability of differences from the initial value: \* -  $R < 0.05$ ; \*\* -  $P < 0.001$ .

**Table 4.7 .**

**Dynamics of changes in mixed saliva in the patient's body after the implementation of a therapeutic and prophylactic treatment complex**

Pointer	Initial data	After treatment	In 6 months.	In 1 year
Viscosity of saliva	3.45±0.19	2.3±0.07**	2.7±0.07**	3.10±0.04**
SSS	0.37±0.03	0.47±0.05*	0.42±0.06*	0.40±0.05*
pH	6.01*	6.89*	6.72*	6.58*

Admixture. Reliability of differences from the initial value: \* -  $R < 0.05$ ; \*\* -  $P < 0.001$ .

As evidenced by the data of Table 5.7. Under the action of the proposed complex of therapeutic and preventive dental measures, there was a decrease in the viscosity of the oral fluid from 3.45±0.19 to 3.10±0.04. The pH value immediately after post-treatment increased from 6.01 to 6.89 and remained mainly at the pre-treatment level and 1 year after treatment. At the same time, an increase in the SSS was noted with a decrease in its viscosity from 0.37±0.3 to 0.40±0.05 mm/min, which is evidence of improved physiological washing of the entire tooth surface with oral fluid. This contributes to an increase in the remineralizing function due to greater contact with the surface of the tooth enamel.

Between the SSS, the viscosity of mixed saliva and the hygienic index of the plain, the direct correlation dependence of mixed saliva on the mineralizing potential of the blood. It is obvious that sick children need to be accustomed to constant sanitary and educational work, training in oral care skills with systematic quality control of hygienic dental care at the premiere in pediatric dentistry at least 3-4 times a year.

**Clinical correlation analysis of the effectiveness of the drugs Elludril and Parodiy in pathological changes in the mucous membrane of a child, in patients with chronic hepatitis B.**

has been proven . The study included 62 children with SHS, 20 children with SHS aged 6 months to 5 years, 20 children with candidal stomatitis aged 6 months to 3 years. 10 children of that age with a display with a control function, who received traditional treatment.

Depending on the treatment provided, children were divided into 2 groups. Children with candidal stomatitis: Group 1 - received traditional medicine, the second group - the drugs Eludril and Parodium.

In the results of the study, Elludril showed an increase in local immunity: lysozymous, phagocytic index and secretory IgA . Immunological studies of saliva show that the phagocytic index is significantly higher in children with herpes -  $44.5 \pm 1.3\%$ , in children with candidal stomatitis -  $41.7 \pm 1.2\%$  compared to practically healthy children -  $58.2 \pm 1.5$ , which is significant for candidiasis.

A similar law of lysozyme and saliva. In candidiasis ( $11.3 \pm 0.4 \text{ mg} < 7$ ) ego-deficiency is more pronounced than in herpetic stomatitis ( $13.2 \pm 0.5 \text{ mg} \%$ ), with the norm being  $19.7 \pm 0.7 \text{ mg} \%$ . In both pathological processes, secretory IgA is of no significant importance, since it is practically a healthy detail.

We studied the correlation links between the microbiocenosis indices and the state of non-specific oral cavity protection factors in normal children and in children suffering from acute gastritis during traditional and specific treatment. The analysis of the correlation data between the number of microorganisms in normal children and in acute gastritis showed that the most pronounced links are observed in peptostreptococci ( $r=0.66$ ), Staphylococcus aureus ( $r=0.38$ ), Grybac rhoda Candida ( $r=0.37$ ). At the same time, the number of hemolytic streptococci and lactobacilli has a negative average correlation ( $g=-0.44$  and  $g=-0.49$ , respectively).

Comparing these data after the tested treatment , we obtained data characterizing sharp changes in the microbial landscape. Lactobacilli and lactobacilli have a weak negative relationship ( $g = +0.79$ ), and Candida fungi also have a changed relationship. There is a positive average correlation with an undefined GCS and a correlation coefficient that is characterized by a strong inverse relationship ( $g = +0.33$  before correction and  $g = -0.68$  after correction).

The greatest number of interesting data were obtained by us during the analysis of the relationship of immunological indices of the oral cavity in children in norm and in patients with AHS before and after special treatment. Yes, normally they have an inverse correlation of medium strength. At the same time, after the proven special treatment by using the drug Eludril and the gel Parodium the picture has completely changed. All the studied immunological indices in patients suffering from AHS after the proven treatment acquired a pronounced strong, all such inverse relationship. The obtained results indicate the existence of direct and inverse relationships between the quantities of microbiocenosis parameters and immunological indices of the oral strip in children with AHS before and after the developed treatment method. Based on the obtained data, it is possible to conclude that the traditional treatment of acute herpetic stomatitis does not cause a real effect on the correlation links between the manifestations of the microbiocenosis and non-specific factors of oral protection in children, on the contrary, there is a strengthening and weakening of these links.

Clinical correlation analysis showing microbiocenosis and the presence of non-specific factors of the immune system protective layer. Comparative analysis of the relationship between microorganisms and candidal stomatitis showed that there is a strong direct correlation between the protein ( $g = + 0.84$ ), and a strong correlation with *Candida* fungi ( $g = + 0.60$ ), as well as hemolytic and golden staphylococci ( $g = + 0.56$  and  $g = + 0.44$ , respectively). Reversible relationship have group D streptococcus ( $g = - 0.56$ ), epidermal staphylococcus ( $g = - 0.61$ ) and *Escherichia coli* ( $g = - 0.47$ ). At the same time, after special treatment of candidal stomatitis by using the drug Citeal, golden staphylococcus has the same strength ( $g = + 0.43$ ).

However, the most significant movements in the relationships between personal indicators of oral microorganisms in children suffering from candidal stomatitis occurred after the proof of special treatment using Eludril and Parodium. So, hemolytic microorganisms changed their status dramatically after the proven treatment. They had a direct connection of medium strength, in the mountains as

after treatment, the relationship of hemolytic microorganisms became the opposite of medium strength. A similar picture is observed in epidermal staphylococci ( $g = +0.74$ ). In children suffering from candidal stomatitis, before treatment, a direct and reverse clinical-correlation relationship was established between the clinical parameters of the microbiocenosis and the immunological indicators of the oral cavity. After the implementation of the proposed method, the established correlation relationship is significantly enhanced, which prolongs the remission of pain syndrome.

The conducted correlation analysis showed that more pronounced positive results, as well as microbiocenosis and immunological indices are more often observed when using Eludril and Parodium. The obtained results allow us to recommend the wide use of Eludril and Parodium in children with acute gastritis and candidiasis, as well as in other diseases of the oral mucosa, as the most effective drugs that exhibit not only a rapid clinical effect, but also exhibit microbiocenosis and non-specific factors of skin protection.

#### **Prevention of dental caries with the drug Gluftored in children with XGV.**

In this part of the work, we studied the caries-preventive effectiveness of the deep floating method in comparison with traditional methods of treatment and prevention of initial dental caries in children with XGV.

Dental observation of the subjects was conducted for 2 years. During examination of the oral strip of children, the condition of hard canal teeth was assessed, the presence of carious teeth and teeth removed due to caries and its complications was identified. The intensity of caries was calculated using the indices of KPUZ of teeth and KPUp - surfaces of teeth of constant occlusion. Particular attention was paid to the detection and narrowing of dental caries at an early stage, the stage of a white carious spot on the vestibular surfaces of teeth.

Resistance to caries should be judged by the condition of the tooth enamel, its hardness, resistance to acid. The caries-preventive effectiveness of the method of

deep fluoridation with the drug Gluftored was determined in relation to traditional fluoroprophylaxis fluorlac .

The examined children were divided into 2 groups and treated.

The results, calculated according to the indicators of the intensity of dental caries in children, are reflected in Table 5.7.1.

**Table 4.8.**

**Dental caries intensity indicators in children**

Study group	Dental caries intensity indicators		
	CPU+KPz	CPU+CPU <sub>p</sub>	ODE
1 gr. Main	4.76±0.07	4.85±0.05	1.50±0.02
2 gr. Control	2.68±0.03	2.7±0.07	0.31±0.01

In children with chronic hepatitis B, an increase in the intensity and prevalence of dental caries has been found in the oral cavity during periods of exacerbation of the underlying disease.

A study of the dynamics of the KOSRE test indicators revealed a reliable increase in the time of restoration of the enamel structure in the etched area, indicating an increase in remineralizing saliva when using local fluoroprophylaxis methods in children (Table 5.9.).

**Table 4.9.**

**Dynamics of the KOSRE test indicators**

Group	Ish. Danny	After treatment	In 6 months.	In 1 year	In 2 years.
1 group	3.7±0.05	3.1±0.07	3.9±0.09	3.9±0.08	3.7±0.06
2 groups	3.8±0.07	2.2±0.04	2.0±0.05	3.0±0.04	3.4±0.03

In the main group, high treatment efficiency, caries situation, intensity and spread of caries, bleeding of soft periodontal tissues are observed by 19.2%, reduction in the rate of formation of dental plaque by more than 19.2%. more than 2

times, caries of caries by 21%. Reliable efficiency of the drugs eludril, parodium and elgidum in the complex treatment of dental caries and other diseases of the oral cavity in children with XGV during the exacerbation of the underlying disease has been established.

The data analysis shows that the traditional use of fluoride for the prevention and treatment of dental caries (ODE) has a temporary and anti-caries effect, which lasts up to 6 months, as shown by the KOSRE test (Table 5.9). Deep fluoridation with Gluftored enhances the processes of ion exchange between saliva and tooth enamel, maintaining the caries-preventive effect mainly up to 1 year of observation. The data obtained indicate active stimulation of de- and remineralization processes in the oral cavity of sick children against the background of basic XGV therapy.

Based on the data obtained, we can state that the method of deep fluoridation with the drug Gluftored is the most effective caries-preventive agent for children with XGV today. It should be noted that Gluftored can increase the remineralizing potential of mixed saliva in children against the background of basic treatment of XGV, as well as purposefully regulate the process of demineralization of enamel of children's teeth.

### **Efficiency of the drug funistatin in candidal stomatitis and detection of XGV**

We have studied the effectiveness of the drug funistatin in candidal stomatitis in children with XGV.

I observed 50 children with candidal stomatitis aged 1 to 5 years, patients with CHB and 20 healthy children of the same age, who formed the control group. And depending on the decision, it is divided into two groups:

Group 1 - 25 children with candidal stomatitis, receiving traditional treatment - treatment with 2% sodium bicarbonate solution, Lugol's solution, vitamin A applications.

Group 2 - main and included, 25 children with candidal stomatitis, who were treated with Funistatin.

Funistatin is a powder for the preparation of a suspension for oral administration, contains 100,000 units of nystatin in each 1 ml. Nystatin exhibits

fungistatic and fungicidal properties in vitro against yeast and yeast-like fungi. Nystatin binds sterols of fungal cell membranes, increasing the permeability of cell membranes and the destruction of fungal cells.

Funistatin is administered orally at 4-6 ml 4 times a day (400,000 - 600,000 IU nystatin). Half the dose is applied to one side, half to the other. The medicine should be kept in the mouth for some time, avoiding swallowing. Funistatin treatment was continued for 48 hours after the disappearance of oral candidiasis symptoms and normal test results. The course lasts 2 weeks.

In patients with candidal stomatitis, the microflora of oral fluid was analyzed before and after treatment.

Initially, in children with candidal stomatitis, a decrease in anaerobic microorganisms with an increase in the amount of facultative flora was observed in mixed saliva. The amount of anaerobes is  $4.39 \pm 0.21$  CFU/ml, and the amount of aerobes is  $8.60 \pm 0.69$  CFU/ml - this is 3 orders of magnitude higher than anaerobes.

Along with this, a reliable toric immunodeficiency was noted, so the lysozyme level was  $11.3 \pm 0.4$  mg%, while the norm is  $19.7 \pm 0.70$  mg%, the phagocytic index was  $41.7 \pm 1.2\%$ , while the norm is  $58.1 \pm 1.50\%$ .

Traditional treatment of candidiasis and children with CHB in general had a positive effect on the oral microflora. Particularly pronounced positive changes are observed in relation to anaerobic flora: after treatment  $5.01 \pm 0.17$  CFU / ml, before treatment  $4.39 \pm 0.21$  CFU / ml and normal  $5.69 \pm 0.15$  CFU / ml. This cannot be said about the facultative flora: before treatment -  $8.60 \pm 0.69$  CFU / ml, after treatment -  $7.37 \pm 0.69$  CFU / ml, normal  $5.30 \pm 0.17$  CFU / ml, in women the total number of aerobes decreased, but there is no need to talk about complete recovery. The condition is stable after traditional treatment of quantitative parameters for such microbes as *Staphylococcus aureus* - before treatment  $2.30 \pm 0.19$  CFU/ml, after treatment -  $2.47 \pm 0.13$  CFU/ml, pyogenic streptococci upon admission  $4.60 \pm 0.27$  CFU/ml, after treatment -  $3.89 \pm 0.17$  CFU/ml, lactose-negative *Escherichia* before treatment  $5.12 \pm 0.41$  CFU/ml, after treatment  $3.12 \pm 0.19$  CFU/ml, normally strains of these microbes are absent.

In addition, the most significant indicator of dysbiosis of the oral cavity and ethix of children are the quantitative parameters of fungi of the genus *Candida* . The amount of Ix before treatment was  $7.89 \pm 0.52$  CFU/ml, after treatment  $6.12 \pm 0.37$  CFU/ml, (normally  $2.15 \pm 0.18$  CFU/ml).

The qualitative and qualitative shifts in the autoflora of the oral cavity that we identified could lead to the chronicity of diseases, so it was necessary to study more effective methods of treatment that act both on the clinical picture and on the restoration of the biological balance of macro- and micro-organisms.

A child with candidal stomatitis against the background of chronic hepatitis B, who is treated with funistatin, noticeable changes are observed from the first time. The oral mucosa turned pale, the amount of plaque decreased. The child began to suckle and stopped being capricious. On the 2-3 day, there was practically no plaque, no new rashes were observed, only a slightly hyperemic slippery membrane of the oral strip became. When treating the mucous membrane with funistatin, clinical recovery occurs in 4-5 days.

Microbiological studies in sick children with candidal stomatitis using funistatin revealed the disappearance of dysbiosis phenomena, the microflora in all parameters was normal.

Based on the data obtained, I can say about the complete quantitative restoration of both anaerobic and facultative groups of microbes. Complete elimination of aggressive microbes indicates that the concentration of the drug for providing therapeutic assistance of choice is right. Based on the above, I can conclude that funistatin is a fairly effective and safe antifungal drug in the treatment of candidiasis of the oral mucosa in sick children with complex dental therapy against the background of basic treatment of CHB.

Summarizing the above in this chapter, we can conclude that the use of a complex of dental treatment and preventive measures led to an improvement in the physicochemical state of the oral cavity organs in children with XGV. The positive results obtained showed high efficiency of the complex, a decrease in the cariogenic situation, inflammatory reaction and bleeding of the soft tissues of the periodontium,

a decrease in the rate of formation of dental plaque by more than 2 times, a decrease in ego-cariogenicity by 21%, an increase in the rate of salivary secretion (SSS), the nature of bleeding by 19.2%.

The obtained data allow us to recommend the studied drugs in the development of pathological changes in the oral cavity and the establishment of a cariogenic situation, if necessary, for possible use ix over a long period of time (up to 6 months) depending on the severity of the pathological process.

It should be noted that this group of children requires increased attention from dentistry and belongs to the risk group for the development of dental caries, which must be taken into account when planning treatment and caries prevention measures and indicates insufficient borate dentistry for children with diseases of internal organs, puts forward the task of broad and selenium-oriented implementation of sanitary-educational and treatment-preventive work, as well as prevention and development of dental diseases in children with CHB.

## CONCLUSION

The importance of pediatric dental pathology as a medical problem is determined by the need to develop effective methods of diagnosis, treatment and prevention. In the treatment of patients with pathology of the oral cavity organs, a comprehensive pathogenetic approach is considered justified, especially in the presence of concomitant pathology of internal organs and systems, in particular, chronic viral hepatitis B.

Chronic viral hepatitis is a serious problem for Uzbekistan, since the region is highly endemic in the spread of viral hepatitis. The proportion of hepatitis B in children among all deciphered viral liver diseases fluctuates, amounting to 11% to 15%. The danger of this disease is not only in unfavorable outcomes, the formation of liver cirrhosis, disability, but also in the accumulation of an epidemiologically significant contingent of people who maintain a high level of viral hepatitis morbidity and, thus, continue to increase the number of patients with acute and chronic hepatitis. Another important aspect of this problem is the systemic damage to organs and systems in XGV. In particular, there are a number of publications devoted to the formation of pathology of the oral cavity organs in chronic liver pathology.

In connection with this dental care, my patient acquires great practical significance and poses new work for my dentist. Among them are the study of the prevalence and intensity of the carious process, periodontal diseases and the level of basic (protective) salivation, taking into account the form, severity and duration of the general disease.

Among the factors influencing the occurrence of dental status disorders, first of all, it is necessary to note the unsatisfactory hygienic condition of the oral cavity, which is indicated by a number of authors (Ts.G. Snigireva, 2000; I.V. Postnova, 2003). This is due to the fact that patients with hepatitis often suffer from hepatitis,

as a result of which the general condition of the patient suffers, as well as the health of the patient due to the disease, which does not allow for full individual hygiene.

Most patients with CHB had icteric coloration of the soft palate and anemic color of the mucous membrane of the hard palate (the "Dawn" symptom). A decrease in the moisture content of the mucous membrane of the oral strip was revealed.

Dryness in the oral cavity was associated with a violation of the secretory function of the salivary glands according to the hyposalivation type.

When studying the manifestation of hemorrhagic syndrome, hemorrhagic elements were localized in the mucous membrane of the gums and soft tissues.

Erosive-burns of the oral mucosa were found in 41.2% of patients with chronic hepatitis B. Most often, erosive-burning elements are localized in the redness and mucous membrane, which explains, first of all, frequent damage to the ethix-zone of the oral mucosa and the result of biting the mucous membrane and the result of trauma to the edge of the mucous membrane, destroyed teeth.

When observing swelling of the tongue, 47% become ill. The plaque on the tongue was localized on the corn in 59% - with XGV, on the back in 50%. The color of the plaque varied from white to brown. Changes in the dorsal surface of the tongue with hepatitis B, as well as the papillary layer, and the main color of the papillae also changes with the disease.

Thus, with viral hepatitis B, the dorsal surface of the tongue undergoes changes, the nature and degree of severity of which depend on the nosological form of the disease.

When studying the oral mucosa of patients with parenteral hepatitis, candidal candidiasis of the mucous membrane was detected in 23.5% of patients with chronic hepatitis.

The conducted studies confirmed the opinion that the organs of the oral cavity are a "mirror" of general somatic health.

During the study, some biochemical parameters of the blood of 60 patients were also studied. Of these, 30 were children with CHB combined with lesions of the oral cavity organs and 30 children with CHB without ZOPR.

We assessed the severity of cytolytic syndrome based on the level of ALT and AST activity in the blood serum, which were most elevated in the group of patients. The ALT level in patients of the main group was increased by 3.5 times ( $P < 0.001$ ). The average AST value in the hospital exceeded the indicators of children with XGV by 2.4 and 1.5 times ( $R < 0.001$ ). Biochemical indicators of cholestasis syndrome were associated with the activity of the pathological process in the liver. Thus, the level of total bilirubin in the children's group was increased by 2.3 times ( $P < 0.001$ ) and 1.3 times compared to the children's comparison group ( $P < 0.01$ ). A similar picture was characteristic of direct bilirubin ( $R < 0.001$ ).

We have established a mixture of acid-base balance in the oral cavity and in patients with parenteral hepatitis B and C with sideronic acidosis ( $p < 0.05$ ). It is known that a shift in the pH of mixed saliva and the acidic side leads to demineralization of tooth enamel and the occurrence of caries. The results obtained indicate the protection of secretion mechanisms and the maintenance of homeostasis in field conditions, which include: a decrease in saliva secretion, buffer density and an increase in viscosity, which is associated with the functional activity of the salivary gel and the ecological balance in field conditions.

It was found that children with XGV have a decrease in SSS and a simultaneous increase in saliva viscosity. 73.8% of children with low SSS have high viscosity saliva, and 26.2% of children with normal SSS have low viscosity saliva.

A decrease in the CCC, combined with high saliva viscosity, is an unfavorable factor that aggravates and weakens the processes of physiological self-cleaning of the oral cavity. In turn, this leads to an increased risk of developing a cariogenic situation in healthy children, and in children with XGV it is the main risk factor for the development of multiple dental caries and an increased degree of cariogenicity.

A direct correlation was found between the blood CCC, the viscosity of mixed saliva and the level of the hygienic state of the heart. These disorders in the oral cavity in children with XGV indicate the development of an increased cariogenic situation and the risk of developing multiple dental caries.

The next stage of our research is to study the effectiveness of various correction methods.

Depending on the treatment method used, 80 children were divided into 2 groups of 40 patients - the main group (proposed treatment regimen) and the control group (basic therapy).

The scheme we propose includes: deep fluoridation of hard teeth, preparation of Glufluor, irrigation of the oral strip with Eludril solution after each meal, followed by the use of gums with Parodium gel in children with increased bleeding of the gums. The hygienic floor is cleaned twice in the morning and evening with Elgidium toothpaste and an Elgidium toothbrush according to the clinical standard method, Viferon oil for the prevention of viral rash and oral mucosa, and funistatin for candidiasis. For lesions of the oral cavity, the local antiseptic drug Eludril was used daily for 10 days during the period of exacerbation of the underlying disease.

The rate of therapy effectiveness increases after the end of the course of therapy, as well as 3.6 months and 1 year after the end of therapy.

The use of complex dental treatment and preventive measures led to the improvement of the physicochemical state of the oral cavity organs in children with XGV. The positive results obtained showed the high efficiency of the complex, a decrease in the cariogenic situation, inflammatory reaction and bleeding of the soft tissues of the periodontium, a decrease in the rate of formation of dental deposits by more than 2 times, a decrease in ego-cariogenicity by 21% , an increase in the rate of secretion of saliva (SSR) and a decrease in the rate of bleeding by 19.2%.

The obtained data allow us to recommend the studied drugs in the development of pathological changes in the RTA strip and the establishment of a cariogenic situation, if necessary, for a long time (up to 6 months) depending on the severity of the pathological process.

The next stage of the study was to examine the effect of Elludril on the level of oral hygiene.

When analyzing the results of the study, it was found that significant changes were observed in the hygiene index during the use of the antiseptic Eludril and other

hygiene products. The dynamics of the change in ethix was not the same in the group of children with an unsatisfactory level of hygiene compared to the group of children with an even level of oral hygiene.

In both study groups, the level of oral hygiene changed differently under the influence of preventive and hygienic measures.

In the first group, in subgroup "A", GI decreased from  $2.2 \pm 0.3$  to  $1.5 \pm 0.2$ . In subgroup "V", the difference between the main indicators and post-hygienic management data was more significant and amounted to 1.8 points. Subgroup V "S" received a GI score of 0.6 points. The best effect of preventive and hygienic medicamentous medicine is achieved with a combination of rational hygiene products and Eludril detergents that complement them. This indicates that in children with CHB in the oral cavity, the established poor hygienic condition and increased formation of dental plaque are not removed by cleaning the teeth alone.

Fluoride varnish and glutored were used to accelerate mineralization of hard dental tissue in sick children. Analysis of the obtained results showed that traditional use of fluoride for prevention and treatment of childhood caries (CDC) has a temporary anti-caries effect, which lasts up to 6 months of observation and is manifested by the KOSRE test. Deep fluoridation with Gluftored enhances the processes of ion exchange between saliva and goiter enamel, maintaining the caries-preventive effect for up to 1 year of observation. The obtained data indicate active stimulation of de- and remineralization processes in the oral cavity in sick children against the background of basic XGV therapy.

Comparative analysis of various dosage forms of the studied drugs: "Eludril" and "Elgidum" showed similar antimicrobial action and primer Str . mutans . At the same time, it was noted that the drug does not cause the formation of resistant strains and obvious disruption of the oral microbiocenosis of children with XGV. This allows us to recommend long-term use of the studied antiseptic drugs in both adults and children.

The next stage of the study was to conduct microbiological studies to study the sensitivity of microorganisms in the oral cavity, isolated from children with XGV, to certain drugs.

It was found that virtually all the tested chemotherapeutic drugs had a certain antibacterial effect on gram-positive coccal flora, but in terms of strength of action and spectrum they are located in the following descending row, Eludril, Elgidium, Gluftored and Viferon. The weak antibacterial effect of Viferon can be explained by the fact that it is an antiviral drug.

Traditional treatment of candidiasis and children with CHB in general had a positive effect on the oral microflora. Particularly pronounced positive results were observed in relation to anaerobic flora: after treatment  $5.01 \pm 0.17$  CFU/ml, before treatment  $4.39 \pm 0.21$  CFU/ml and normal  $5.69 \pm 0.15$  CFU/ml. This cannot be said about facultative flora: before treatment -  $8.60 \pm 0.69$  CFU/ml, after treatment -  $7.37 \pm 0.69$  CFU/ml, normal  $5.30 \pm 0.17$  CFU/ml, in women the total number of aerobes decreased, but there is no need to talk about complete recovery. Stable condition after traditional treatment of quantitative parameters for such microbes as *Staphylococcus aureus* - before treatment  $2.30 \pm 0.19$  CFU/ml, after treatment  $2.47 \pm 0.13$  CFU/ml, pyogenic streptococci upon admission  $4.60 \pm 0.27$  CFU/ml, after treatment  $3.89 \pm 0.17$  CFU/ml, lactose-negative *Escherichia* before treatment  $5.12 \pm 0.41$  CFU/ml, after treatment  $3.12 \pm 0.19$  CFU/ml, and the normal strain of these microbes is absent.

The most significant indicator of oral dysbiosis in these children are the quantitative parameters of *Candida* fungi . The amount before treatment was  $7.89 \pm 0.52$  CFU/ml, after treatment  $6.12 \pm 0.37$  CFU/ml (normally  $2.15 \pm 0.18$  CFU/ml).

The qualitative and quantitative shifts in the autoflora of the oral cavity that we have identified can lead to chronicity of diseases, so it was necessary to study more effective methods of treatment that lead to both clinical catina and restoration of the biological balance of macro- and micro-organisms. A child with candidal stomatitis against the background of CHB, who is treated with funistatin, noticeable changes

are observed from the first time. The oral mucosa turned pale, the amount of plaque decreased. The child began to suckle and stopped being capricious. On the 2-3 day of summer, there was practically no plaque, no new rashes were observed, only slightly hyperemic mucous membrane of the oral strip became. When treating the mucous membrane with funistatin, clinical recovery occurs in 4-5 days.

Clinical correlation analysis showing microbiocenosis and the presence of non-specific factors in the protective layer of the skin, as well as a detailed comparative analysis of the relationship of microorganisms with candidal stomatitis showed that there is a strong direct correlation between the protein ( $g = + 0.84$ ), as well as a moderate correlation between *Candida* and fungi ( $g = + 0.60$ ), as well as hemolytic and golden staphylococci ( $g = + 0.56$  and  $g = + 0.44$ , respectively). Reversible relationships have group D streptococcus ( $g = - 0.56$ ), epidermal staphylococcus ( $g = - 0.61$ ) and *Escherichia coli* ( $g = - 0.47$ ). At the same time, after special treatment of candidal stomatitis, golden staphylococcus has the same strength ( $g = + 0.43$ ).

However, the quantitative indicators of microorganisms in the area of the most severe and interrelated diseases are those observed in candidal stomatitis, which occurs as a result of special treatment using the drugs Eludril and Parodium, indicated above. - the described scheme. Thus, the hemolytic microorganism had a direct relationship with the treatment, but after the treatment, the hemolytic microorganism had an inverse relationship. A similar picture is observed in epidermal staphylococci ( $g = + 0.74$ ). In children suffering from candidal stomatitis, before the treatment, a direct and inverse clinical correlation relationship was established between the functional parameters of the microbiocenosis and the immunological indicators of the oral cavity. After the implementation of the proposed method, the established correlation relationship is significantly enhanced, which prolongs the remission of the pain syndrome.

Thus, today one of the effective means for the treatment of diseases of the oral mucosa of the herpetic harakarta are the drugs Eludril and Parodium. The obtained results allow us to recommend the wide use of Eludril and Parodium in children with candidiasis, as well as with other diseases of the oral mucosa, as the most effective

drugs that exhibit not only a rapid clinical effect, but also exhibit microbiocenosis and non-infectivity. specific factors in the treatment area.

After complex therapy, significant positive changes in the structure of the isolated microflora and comparative treatment indicators were noted. The video composition of the microbial flora was presented in the video monoflora. The patient who was on traditional therapy was found in 29.4% - monoflora, in 26.4% - associative microorganism.

After the therapy, the treatment results were assessed according to the following gradation: significant improvement - in 73.4%, improvement - in 20.0% and unchanged - in 2 patients. A significant increase in patients after traditional therapy is 26.7%, an increase of 33.3% and 40.0%, the condition of patients remains unchanged.

## CONCLUSIONS

1. The dental status of children with CHB indicates a high prevalence and intensity of goiter caries, painfulness of the mucous membranes of the oral cavity, dysfunction of the salivary glands and weakening of the physiological self-cleaning processes of the oral cavity. Art lesions in children with CHB are distinguished by their combinatorial nature, the frequency of ix increases as the pathological process in the liver progresses.
2. In children with CHB, a mesoreliable decrease in the secretory activity of the salivary gland, a change in the acid-base balance of mixed saliva and an increase in acidosis and viscosity are observed, which indicates a violation of the secretory function of the salivary gland.
3. Diseases of the oral cavity (caries, periodontal disease and oral mucosa) against the background of chronic hepatitis B lead to the development of a severe form of chronic hepatitis B, increase the rate of progression of plaque and cause some unfavorable outcomes.
4. The combined course of diseases of the oral cavity organs against the background of chronic hepatitis B leads to a disruption of the balance of opportunistic microflora of the oral fluid, the development of a cariogenic situation

and inflammatory diseases of the oral mucosa; the combination of diseases is manifested by more pronounced interdependent biochemical and microbiological changes.

5. During the period of exacerbation of chronic hepatitis B and children, pathological changes develop in the oral cavity in the form of increased bleeding, soreness and swelling of the gums, which complicate the implementation of evening hygienic procedures for oral care. The therapeutic effect of the drugs eludril, parodium and elgidium indicates the possibility of their use as the main hygienic means in children during the period of exacerbation of chronic hepatitis.

6. The drug Glutored helps to increase the remineralizing potential of mixed saliva in sick children against the background of the cystic fibrosis treatment, and also allows selenium-directed regulation of the process of demineralization of enamel of children's teeth, reducing the risk of caries development.

7. The proposed algorithm of the dental treatment and prevention complex used in diseases of the organs of a child with chronic hepatitis B allows normalizing clinical and functional indicators, the level of opportunistic microflora, which leads to the restoration of the biocenosis and correction of humoral and cellular factors of the local protective zone. As a result, sick children experience an extension of the remission period, a decrease in the number of relapses, and an improvement in the prognosis for the development of diseases of the oral cavity.

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**LIST OF DESIGNATION CONVENTIONS**

ALT – alanine aminotransferase

AST – aspartate aminotransferase

GI – Hygiene Index

DE – enamel demineralization

IDC – Index of Differentiated Cells

KOSRE test - Clinical determination of the rate of remineralization of dental enamel

CRN – plaque resistance to caries

KSB – coefficient of balanced factor of local immunity.

LDH - lactate dehydrogenase

EDM – enamel demineralization.

PMS - antimicrobial agents

PMA – papillary-marginal-alveolar

SMP – medium molecular weight peptides

SOPR – mucous membrane layer

RSS – rapid salivation.

FAN – phagocytic activity of neutrophils

PI – phagocytic index

PH – phagocytic enzyme

XGV – chronic hepatitis B.

CCG – chronic catarrhal gingivitis

CIC – circulating immune complex

sIgA - secretory immunoglobulin A

