



TREATMENT OF ODONTOGENIC INFLAMMATORY DISEASES IN FREQUENTLY ILL CHILDREN

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Abstract

Epidemiological studies indicate that, on average, every child suffers from 3 to 5 episodes of acute respiratory viral infectious diseases (ARVI) per year. The greatest incidence of acute respiratory infections is observed in young children, preschoolers and primary school children. Children of the first 3 years of life get SARS within a year 2-2.5 times more often than children aged 10 years and older. Recurrent respiratory infections lead to violations of the functional state of the body, can cause a breakdown of adaptation and cause the development of chronic pathology [Klyuchnikov S. O. with savt., 2017].

Repeated infections are most often caused by viruses (mainly respiratory syncytial, influenza and parainfluenza, adeno-viruses), pathogens of the Chlamydia and Mycoplasma family (especially Chlamydia pneumoniae and Mycoplasma pneumoniae), by Haemophilus influenzae (most often type b), Streptococcus pneumoniae, S. pyogenes, Staphylococcus aureus, Moraxella (Branhamella) catarrhalis, etc. [Klyuchnikov S. O. with savt., 2017].

The main bacterial agents are beta-hemolytic streptococcus group A (BGSA), staphylococcus aureus (S. aureus), which are capable of forming mixed infections with respiratory viruses [Lopatin A. S., 2001].

The Purpose of the Work

To study the course and improve the results of complex treatment of patients with odontogenic inflammatory diseases of the maxillofacial region and their complications by topical application of the drug staphylococcal bacteriophage liquid "MediPhag".

Material and Methods

The results of surgical correction of odontogenic diseases in 48 sick children with recurrent respiratory infections hospitalized in the department of maxillofacial surgery of the Bukhara Regional Children's Multidisciplinary Medical Center (BODMPMC) will be studied.





The issues of odontogenic infection are relevant not only for a dentist, but also for a pediatrician, since the frequency of inflammatory diseases of the face and neck in children largely depends on the effectiveness of the treatment of dental caries and its complications, which in turn can lead to the development of a general somatic disease or its exacerbation. Of extreme concern is the fact that children with a severe course of odontogenic infection can develop terrible complications in the form of sepsis, mediastinitis, thrombosis of the sinuses of the dura mater, etc. Quite often, children who have undergone odontogenic inflammation have complications in the form of a violation of the development of teeth, their eruption, delayed growth of the jaws, and many others. All this determines the relevance of the problem, which should be solved taking into account the age-related anatomophysiological features of the dental and maxillofacial system and the body as a whole, since they determine the specifics of the approach to solving the issues of diagnosis, treatment and rehabilitation of children with odontogenic infection jointly by a dentist and a pediatrician. Knowledge of the main clinical signs of traumatic injuries of soft tissues, teeth, jaws and the consequences of trauma, the possibilities of providing emergency care to a child, are necessary for a pediatrician to prevent the development of serious complications in a child.

To fully master the topic of this lesson, the student must repeat the material from the following sections: Normal anatomy: anatomical features of the structure of teeth and jaws in different age periods, topographic anatomy of the maxillofacial region. Radiation diagnostics and radiation therapy: methods of radiation diagnostics used in the maxillofacial region. General surgery: trauma, transport immobilization, bleeding\ Pathological physiology: pathomorphology of inflammation. Pharmacology: medicines used in the treatment of inflammatory diseases (antibiotics, sulfonamides, antihistamines, vitamins, etc., the mechanism of their action, indications, contraindications, doses), premedication and anesthesia Medical rehabilitation and physiotherapy: methods of physiotherapy treatment of inflammatory diseases and traumatic injuries. Clinic, emergency care, treatment principles. Features of surgical treatment of wounds on the face. Bruises, dislocations, fractures of teeth. Clinic, emergency care, treatment principles. Injuries to the bones of the facial skeleton. Clinic, emergency care, treatment principles. Emergency care for bleeding, asphyxia and traumatic shock. Immediate and long-term complications of CHLO injury, their prevention. Anesthesia in dentistry: local, general. According to the clinical course, acute (serous and purulent) and chronic (simple and hyperplastic) odontogenic periostitis are distinguished. The clinical manifestations and course of periostitis of the jaws depend on the reactivity of the patient's body, the type of





inflammatory reaction and the localization of the inflammatory process. Clinically, in practice, serous periostitis is not isolated as a separate nosological form as a disease. Acute purulent odontogenic periostitis develops as the next stage of the inflammatory process and in practice is allocated to an independent nosological form of the disease. At the same time, there is a deterioration of well-being, weakness, body temperature rises to 38°C, sleep is disturbed, appetite, headache appears. Patients complain of pain in the area of the "causal" tooth, which can radiate to the temple, ear, etc., as well as swelling of the cheek. The configuration of the face was changed due to edema of the parotid soft tissues. There is an increase in regional lymph nodes and their soreness during palpation, there may be a difficult and painful opening of the mouth. Hyperemia and swelling of the mucous membrane appear in the oral cavity, smoothness of the transitional fold in the area of the "causal" teeth, fluctuation is determined. A "causal" tooth, may be under a filling or destroyed, changed in color. The percussion of the "causal" tooth is positive, and the adjacent teeth are painless. There are no changes in the bone tissue of the jaw on the X-ray, except for changes in the area of the tip of the "causal" tooth. During the development of the disease, there is an increase in the number of white blood cells in the blood, neutrophilosis due to an increase in the number of segmented and rod-shaped white blood cells, an increase in ESR. When examining the urine, no changes are detected, sometimes a protein appears, a small number of white blood cells. The treatment of acute periostitis is complex and consists of emergency surgical intervention and drug therapy. At the same time, an opening of the inflammatory focus is performed in order to create a free outflow of the formed exudate (periostotomy) and decide the fate of the "causal" tooth. To prevent the edges from sticking together, the wound is drained for 1-2 days. They remove "causal" baby teeth and permanent destroyed ones that have lost their functional value and are not amenable to conservative treatment. They preserve single-root permanent "causal" teeth. After surgery, a sparing diet, bed rest, abundant drinking, rinsing the oral cavity with decoctions of herbs (chamomile, sage, St. John's wort) are prescribed. Drug therapy is carried out depending on the age of the child, his general condition and the presence of concomitant pathology. Antibiotics are indicated for young children (up to 5 years old) with a severe course and the presence of concomitant pathology. Detoxification, hyposensitizing, restorative and symptomatic therapy are carried out. If the tooth is preserved, it should be trepanned on the day of treatment and sealed until the wound heals under the guise of drug therapy. In the treatment of patients with acute periostitis, in order to eliminate edema, inflammation, pain, and improve the trophic tissues, physiotherapy is used: UHF therapy with a course of 3-5 procedures, fluctuating currents (daily, with a





course of up to 5 procedures), ultrasound (every other day, with a course of up to 8 procedures), a helio-neon laser with a course of 3-5 procedures. With a prolonged course: paraffin, electrophoresis with 3% potassium iodide, lidase. After timely surgical intervention, after 1-2 days, the patient's general condition improves, pain disappears, body temperature normalizes, and the disease can also turn into acute odontogenic osteomyelitis. Chronic odontogenic periostitis of the jaws occurs more often in children. There are simple and hyperplastic chronic periostitis. Most often, this is a primary chronic disease, the cause of which is a chronic odontogenic infection and is characterized by a sluggish current localized inflammation of the periosteum. The main complaints of patients about the thickening of the jaw, which they associate with periodic pain in the tooth. The lower jaw (body, angle and branch) is most often affected. The clinical signs of chronic periostitis are a dense, painless thickening of the jaw, according to the "causal" tooth. The mucous membrane above the formation in remission is cyanotic or not changed, the "causal" tooth is destroyed or under a seal, its percussion is painless. The general condition does not suffer. Submandibular lymph nodes are enlarged, compacted, but painless. On the X-ray there is a "bulb symptom" or excessive bone formation under the periosteum in the form of strips of bone (osteoid) tissue located parallel to the edge of the jaw or cortical plate. In addition, there is a change in the area of the roots of the "causal" tooth, the structure of the bone tissue of the body of the lower jaw, as a rule, is not disturbed. Treatment of chronic periostitis begins with the decision of the fate of the "causal" tooth. All milk and multi-root permanent teeth are removed. They conduct a course of treatment (10-14 days). The course of treatment includes antibacterial therapy, preferably with antibiotics having bone tropism and hyposensitizing therapy. Physiotherapy is an important component of treatment (electrophoresis with potassium iodide, lidase, ultrasound, laser therapy). In the case of positive dynamics, we are talking about a simple chronic periostitis and the course of treatment is repeated until recovery. In the absence of positive dynamics, an additional surgical intervention should be used to remove excess bone tissue (modeling of the jaw). In the case of assimilation of excessively formed bone tissue and the formation of a stable deformation of the jaw, they speak of ossifying periostitis. Its treatment also requires modeling of the jaw, often for cosmetic reasons. In acute and chronic periostitis, treatment in a hospital is often required. Indications for hospitalization in acute periostitis are: the general serious condition of the child; the presence of concomitant somatic pathology; the absence of positive dynamics within 24 hours after radical care in a polyclinic; lack of opportunity to provide effective assistance in outpatient settings (absence of a surgeon, psychoemotional state of the child, etc.). Osteomyelitis is an infectious





purulent-necrotic process that develops in the bone, periosteum and surrounding soft tissues under the influence of aggressive factors of physical, chemical or biological nature against the background of preliminary sensitization of the body. Osteomyelitis of the jaws can be: odontogenic, hematogenic, traumatic. According to the clinical course, osteomyelitis is distinguished between acute and chronic.

Results

Acute odontogenic osteomyelitis in children develops quite quickly and depends on the virulence of microorganisms, the state of reactivity of the body, the age of the child. The general condition of the child is sharply disturbed, the symptoms of intoxication of the body are pronounced. There is pallor of the skin, lethargy, adynamia, an increase in body temperature above 38°C, chills, poor sleep, lack of appetite, dyspeptic 6 phenomena. Young children may have a serious condition: - vomiting, convulsions, gastrointestinal disorders appear. The child is concerned about the pain in the area of the "causal" tooth. The local clinical picture is characterized by facial asymmetry on the affected side, an increase in regional lymph nodes and their soreness during palpation. In the oral cavity: hyperemia and swelling of the mucous membrane of the alveolar process," muff-like "thickening of the jaw, mobility and soreness with percussion of the "causal" and adjacent teeth. Acute odontogenic osteomyelitis is accompanied by neutrophilic leukocytosis, the appearance of young young forms of leukocytes (rod-shaped, young, myelocytes), eosin-and lymphopenia, acceleration of ESR. C-reactive protein appears in the blood serum of sick children. Protein, red blood cells, and cylinders appear in the urine. All children with acute odontogenic osteomyelitis are subject to urgent hospitalization in a specialized dental department. Treatment is based on the elimination of the odontogenic cause of inflammation (the decision of the fate of the "causal" tooth), the necessary surgical intervention (periostotomy), the appointment and conduct of antibacterial, desensitizing, detoxification, general strengthening, immunostimulating therapy, physiotherapy. Chronic odontogenic osteomyelitis occurs in the form of a destructive, destructive-productive and productive process. The chronic process in the jaw bones occurs more often in children with weakened immunity against the background of prolonged sensitization of the child's body by chronic foci of infection, with concomitant unfavorable conditions (not sanitized children who are often ill for a long time, or have chronic diseases). In addition, the occurrence of chronic osteomyelitis is facilitated by late seeking medical help, erroneous diagnosis, long-term conservative methods of treatment, irrational administration of antibiotics, preservation of the "causal" tooth, etc. The destructive form of chronic osteomyelitis occurs more often in young children.





The process is characterized by the melting of bone elements, the formation of foci of bone necrosis and the formation of bone sequestrs. Often, the rudiments of permanent teeth are involved in the process (the death of the rudiment of the tooth). The productive form of osteomyelitis is observed in older children and proceeds as a primary chronic process.

Conclusion

It is characterized by a cyclical course – periods of exacerbation of the process, accompanied by periods of remission. The rudiments of permanent teeth can also be involved in the inflammatory process. In such cases, the pathological manifestations of the process and the duration of the course of the disease are aggravated. The general condition of children with chronic forms of osteomyelitis during remission is satisfactory. Complaints of minor soreness in the area of the affected jaw or tooth. The asymmetry of the face is insignificant, the jaw is thickened, the mucous membrane is edematous and hyperemic. With a destructive form of inflammation, fistulas with purulent discharge are noted. The teeth in the area of the affected jaw may be mobile. Periods of exacerbation resemble acute odontogenic osteomyelitis with corresponding changes in the general condition of the child and the local clinical picture of inflammation.

1. The high frequency of inflammatory diseases and their complications in frequently ill children was determined.
2. Will be reviewed for features and treatment outcome of inflammatory diseases and their complications in frequently ill children.
3. First we have developed a modified method of treatment inflammatory diseases of the oral and maxillofacial region in frequently ill children local the use of the drug staphylococcal bacteriophage liquid “MediPhag”
4. Will be developed prognostic criteria of severity inflammatory diseases of the oral and maxillofacial region in children with recurrent respiratory infections.

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