Nanotechnology Perceptions
ISSN 1660-6795
www.nano-ntp.com

Results Of Microbiological Research In Patients With Acute Odontogenic Purulent Inflammatory Diseases

Xingwei Lu*[1] , Kuryazov Sh.A.[2]

[1]Department Of Stomatology, Central Hospital Affiliated To Shandong First Medical University, Jinan 250013, Shandong Province, China
[2]Urgench Branch Of Tashkent Medical Academy

Introduction

Relevance of the study. In children with odontogenic inflammatory diseases, a sharp change in inflammatory processes is observed due to the relative maturity of organs and tissues, imperfection of immunity, incomplete formation of lymphatic tissues, the presence of anatomical and physiological features of the structure of teeth and jaws, susceptibility to injury and its complications. The results of numerous epidemiological studies show that an average of 3-5 acute respiratory viral infectious diseases (O'RVI) have been found to have a tendency to be diagnosed per child per year. The greatest prevalence of acute respiratory infections is seen in young children, preschool children and primary school children. Children in the first 3 years of life are diagnosed with infectious diseases 10-10 times more often than children aged 2-2.5 years and older in one year. Severe respiratory infections lead to a violation of the functional state of the body, lead to a violation of adaptation and the development of chronic pathology [1.3.5.7.9].

Diseases of the affected infection are often viruses (mainly respiratory syncytial, influenza and parainfluenza, adenoviruses), pathogens of the Chlamydia and Mycoplasma family (especially Chlamydia pneumoniae and Mycoplasma pneumoniae), Haemophilus influenzae bacteria (often Type B), Streptococcus pneumoniae, S. pyogenes, Staphylococcus aureus, Moraxella [2.4.6]. The main bacterial agents are beta-hemolytic streptococci Group a (BGSG), Staphylococcus aureus (S. aureus), which are able to form mixed infections with respiratory viruses [10.12.21.22]. Low immune system, metabolic disorders, decreased pain sensitivity change the clinical picture and the course of many surgical diseases, which can lead to serious diagnostic errors and negatively affect the results of surgical pathology.

It was concluded that odontogenic inflammatory diseases and their complications in children with frequent diseases are precisely microcirculation disorders, the presence of microtrombs, dystrophic and necrotic processes, the predominance of the inflammatory component over reparative, the formation of cell proliferation, the formation of phagocytic activity of leukocytes, incomplete phagocytosis, microbiological damage to their tissues with certain

characteristics characterized by high-level microcirculation diseases, a decrease in general and local immunological reactivity. An analysis of studies conducted in Uzbekistan showed that scientific research was carried out on the prevalence, clinical picture, etiopathogynesis, treatment methods, preventive measures of jawperiostitis, abscess and phlegmona, odontogenic osteomyelitis in children with odontogenic inflammatory diseases. Among dental diseases, the number of people with odontogenic inflammatory diseases accounts for 10-11% of total applicants, which is the 2nd most common after caries and its complications [11.13.15.17.19].

A number of studies have been carried out among preschool and school-age children with odontogenic inflammatory diseases, focusing on the methods of treatment of jawperiostitis, abscess and phlegmona, prevalence, clinical manifestations of odontogenic osteomyelitis, etiopathogynesis. There has also been no development of a perspective-setting system for the Prevention of odontogenic inflammatory diseases among school-age children. Therefore, the urgent solution to the need for a complex approach in determining the problem of odontogenic inflammatory diseases in preschool and school-aged people, to identify the advantages and disadvantages of various programs based on comparative analysis, and to offer optimal solutions is one of the necessary problems.

Microbiological analysis was carried out in order to determine the microflora composition in patients with acute odontogenic purulent-inflammatory diseases, as well as correlations in research groups of patients. Acute odontogenic purulent-inflammatory diseases in 151 children, when a purulent exudate obtained during surgery was studied, it was determined that 62.5% of the 8 species studied from colony-forming microorganisms were obligate-anaerobic bacteria, among them Neisseria spp., Bacillus sp., E. cloacae, Proteus spp., Cl. perfringens defined. The concentration of microorganisms listed in the pus exudate varied from 3.71*103 to 2.71*105 Koe/ml (colony-forming unit in 1 ml). Facultative-anaerobic microorganisms were formed from more gram-positive species (staphylococci, streptococci, corinebacteria). The concentration of these microorganisms in the pus furnace changed from 2*103 to 1*106 Koe/MLD, that is, their amount is 10-100 times less than the amount of obligate anaerobes [12.14.16.18]. This data confirms the opinion of most researchers about the predominance of anaerobic microflora in diseases of the face-jaw odontogenic inflammation.

The purpose of the study. Patients with acute odontogenic purulent-inflammatory diseases improve methods of studying the microflora of the oral cavity. The analysis we conducted showed that the composition and structure of microflora in different age groups is faqr [18.19.20.21.22]. The least number of species were identified in children between 2 and 3 years of age. This age group was dominated by streptococci and corinebacteria. It is noteworthy that the composition of the complications included 2-3 species, in which the quantitative ratio facultative and obligate anaerobes became almost identical (from 2*104 to 1*106 Koe/ml). The overall concentration of microorganisms was one to two times lower compared to other groups. A similar rate was observed in children aged 4-6 years. But in the composition of the assosias appeared anaerobic microorganisms that do not form spores (bacteroids, fuzobacteria). Between 2 and 4 species were identified in the associations. In the case where anaerobes were present, they dominated the Assyrians and were expressed in very

high concentrations (1.8*108 Koe/ml). In the age group of 7-11, both a sharp increase in the number of microbial complications and the predominance of anaerobes that do not form spores were observed in them, the frequency of bacteriological separation of Streptococci, staphylococci, corinebacteria decreased. Among anaerobes, a lot of Fusobacteria, peptostreptococci, bacteroids were identified. That being said, the amount of staphylococci isolated in this age group was only 7.6%, at which time the literature recorded a significant number of observations of these microorganisms in the observation group of inflammatory diseases of the face-jaw in children.

An expressive trend towards greater dominance in strict anaerobic Association was also found in the 12-17 age group. There was an increase in both Gram-negative (bacteroids, fuzobacteria) and Gram-positive bacteria. In this case, the separation frequency of anaerobes was higher than 60.0%, that is, the microbial "landscape" approached the appearance in adults [17.19.21.22]. At the same time, the percentage of Streptococci remained high enough, which is not observed in adults. In this age group, there was a further decrease in the percentage of corinebacteria and staphylococci, the other specific side of which was isolated (4.0%). In this group, the concentration of microorganisms ranged from 2*106 to 4*108 Koe/ml, in which obligate anaerobes were separated in higher concentrations than facultative ones. There are acute odontogenic purulent inflammatory diseases the fact of a large difference in the composition of ascosias in children of different groups, in our opinion, most of all, patients are associated with the peculiarities of oral microbiocenosis, which, undoubtedly, is associated with a weakening of the child's body at the base of accompanying diseases in the observation group.

The above makes it possible to conclude that in the formation of acute odontogenic purulent inflammatory diseases in patients of the observation group, there is not only an odontogenic pathway of entry into the microflora, but also an endogenous pathway [20.21.22]. On the day of application of patients with acute odontogenic purulent inflammatory diseases, an emergency surgical purulent inflammatory ulcer was opened, and an ECMA was taken for microbiological research from an exudate detached from the purulent ulcer. The results of the microbiological study are presented.

In an analysis of research materials from Observation Group (N=122) patients, S. aureus has been observed in 75 (61.47%) of total patients, with an average of 4.83±0.17 × 105 KHQB Log/ml detected. pyogenes was found to average 4.21±0.26 x 105 KHQB Log/ml in 49 (40.16%) patients. The next place in the occurrence of the bacterial environment in the patients of the observation group is E. coli was occupied,averaging 2.33±0.14 × 104 KHQB Log/ml per 42 (34.43%) of total patients. Cl. perfringens is found in 32 (26.23%) patients with an average of 2.27±0.21 × 104 KHQB Log/ml,Proteus spp. An average of 2.71±0.21 × 105 KHQB Log/ml was found in 25 (20.49%) patients. With similar rates, 23 (18.85%) patients had E. cloacae averages 2.34±0,19X104 KHQB Log/ml and Neisseria spp. it averaged 3.71±0.21 × 103 khqb from Log/ml. Bacillus sp, identified only in the minimum 6 (4.91%) patients in the bacterial environment. showed an average of 1.08±0.19 × 105 KHQB Log/ml.

Conclusion. In patients with acute odontogenic purulent inflammatory diseases existing control group (n=29), a large difference in the composition of the complications was observed. Bunda S. aureus averaged 3.32±0.18 × 105 KHQB Log/ml,s in 22 (75.86%) patients. pyogenes averaged 2.87±0.42 × 105 KHQB Log/ml,E. in 13 (44.82%) patients. coli was found to

average 6.75±0.21 × 103 KHQB Log/ml in 4 (13.79%) patients. Only 1 (3.45%) of control group patients had Cl. perfringens have been observed at 8.91 × 102 KHQB Log/ml whereas 2 patients have Proteus spp. as well as E. cloacae were identified at 4.28±0.19 × 103 KHQB Log/ml and 4.54±0.22 × 103 KHQB Log/ml,respectively. In 3 (10.34%) patients of the group, Neisseria spp. The average was found at 8.20±0.28 × 102 KHQB Log/ml. In control group patients, Bacillus sp. was not detected.

LITERATURE USED

1. **Kamalova F.R., Tasheva G.S.** Chabges in microflora non-specific factors protection of the oral cavity in children with inflammatory diseases of maxillofacial area // Evropean chemical Bulletin. – 2023. – № 12(Special Issue 1). – C.1827-1831. (Scopus).
2. **Tasheva G.S.** Treatment of odontogenic inflammatory diseases in frequently ill children // Web of Scientist: International Scientific Research Journal. – 2021. – T. 2, № 07. – C.178-184. (Web of Science).
3. **Камалова Ф.Р., Ташева Г.С.** Одонтоген йирингли-яллиғланиш касалликлари асоратларининг ёшга боғлиқ кўрсаткичлари // Тиббиётда янги кун. – Бухоро, 2023. – № 2(52). – С. 7-15. (14.00.00; №22).
4. **Ташева Г. С.** Одонтоген яллиғланиш билан касалланган болаларни комплекс даволаш усуллари // Журнал стоматологии и краниофациальных исследований. – 2023. – Том 4, № 2. – С. 71-74. (14.00.00; №53).
5. **Ташева Г. С.** Тез-Тез одонтген яллигланиш касалликлари билан касалланган болаларда бактериологик даволаш усуллари // Ўзбекистон тиббиёт журнали. – 2023. – № 2. – С. 73-77. (14.00.00; №8).
6. **Eronov, Y. K., & Mirsalikhova, F. L.** (2021). Indications for the comprehensive prevention and treatment of dental caries in children with cerebral palsy. Annals of the Romanian Society for Cell Biology, 25(1), 5705-5713. Retrieved from www.scopus.com
7. **Rakhmatillaevna, K. F.** (2020). Diagnostic value of salivator cytokines in dental diseases in children with diabetes mellitus type 1. European Journal of Molecular and Clinical Medicine, 7(3), 1518-1523. Retrieved from www.scopus.com
8. **Rakhmatillaevna, K. F., & Torakulovich, E. G.** (2020). Early diagnosis and prevention of dentoalveolar anomalies and cariogenic situation in children suffering from diabetes. European Journal of Molecular and Clinical Medicine, 7(3), 2468-2472. Retrieved from www.scopus.com
9. **Fozilov U.A., Olimov S.Sh., Badriddinov B.B.** Characteristic change in the protrusion of the upper jaw in children // Journal of new century innovations. Vol. 30 No. 4 (2023): Volume30 Issue-4. – P. 175-179
10. **Fozilov Uktam Abdurazakovich., Badriddinov Baxrom Baxtiyorovich.** Preventive measures aimed at preventing complications in the orthodontic treatment of patients // International Journal of Health Systems and Medical Science. ISSN: 2833-7433 Volume 2, No 6, June – 2023. -P.53-57
11. **Mirsalikhova F. L., Eronov Y. K., Radjabov A. A.** Prevention and treatment of caries in children with cerebral palsy //ACADEMICIA: An International Multidisciplinary Research Journal. – 2019. – Т. 9. – №. 12. – С. 68-70.
12. **Мирсалихова Ф. Л.** Минимально инвазивный метод лечения кариеса зубов у детей //Стоматология детского возраста и профилактика. – 2018. – Т. 17. – №. 1. – С. 28-30.
13. **Мирсалихова Ф. Л**. Отсроченное пломбирование при кариесе постоянных зубов у детей с несформированными корнями //Клиническая стоматология. – 2018. – №. 1. – С. 4-7.
14. **To'raqulovich E. G.** The Modern Concept of the Origin of the Dental Anomaly //International Journal of Integrative and Modern Medicine. – 2024. – Т. 2. – №. 4. – С. 16-19.

15. **To'raqulovich E. G.** Methodical Approach to the Occurrence, Early Diagnosis and Complex Treatment of Anomalies in the Gums //International Journal of Alternative and Contemporary Therapy. – 2024. – Т. 2. – №. 4. – С. 23-25.
16. **To'raqulovich E. G.** Analysis of the Share of Scientific Literature on the Spread and Causes of Dental Anomalies //World of Medicine: Journal of Biomedical Sciences. – 2024. – Т. 1. – №. 4. – С. 40-44.
17. **Eshonqulov G. T.** Criteria for evaluation of early diagnosis of tooth-jaw system anamalies //Community Dent Health. – 2002. – Т. 19. – С. 161-165.
18. **Eronov Y. Q., Mirsalixova F. L.** TREATMENT OF CHRONIC CATARRHAL GINGIVITIS IN CHILDREN WITH DISABILITIES IMPROVEMENT //World Bulletin of Social Sciences. – 2021. – Т. 3. – №. 10. – С. 71-74.
19. **Eronov Y. Q., Mirsalixova F. L.** DIAGNOSIS, PROPHYLAXIS AND TREATMENT OF CHRONIC CATARRHAL GINGIVITIS IN CHILDREN WITH DISABILITIES IMPROVEMENT //World Bulletin of Social Sciences. – 2021. – Т. 3. – №. 10. – С. 67-70.
20. **Eronov Y. Q., Mirsalixova F. L.** Dynamics of the prevalence of diabetes and the study of dental status in children of the bukhara region //International Journal of Applied Research. – 2019. – Т. 5. – С. 151.
21. **Eronov Y. K., Mirsalikhova F. L.** Indications for the comprehensive prevention and treatment of dental caries in children with cerebral palsy //Annals of the Romanian Society for Cell Biology. – 2021. – Т. 25. – №. 1. – С. 5705-5713.
22. **Eronov Y. Q., Kamalova M. Q.** Evaluation of caries prevalence in children with cerebral palsy //Academicia: an international multidisciplinary research journal. – 2020. – Т. 10. – С. 85-87.