



**EUROPEAN NETWORK
FOR ACADEMIC INTEGRITY**

The international research and practical conference
**THE DEVELOPMENT OF MEDICAL SCIENCES:
PROBLEMS AND SOLUTIONS**

April 27-28, 2018

Proceedings of the Conference

*Clinical Medicine,
Theoretical Medicine,
Pharmaceutical Sciences*

Brno – 2018

Organising Committee

Mgr. Tomas Foltýnek	Ph.D. – Head of the Board;
Mgr. Eva Klepárníková	Ph.D. – Deputy Head of the Board;
Kostiantyn Shaposhnykov	Professor, Head of Black Sea Research Institute of Economy and Innovation, Ukraine.

The development of medical sciences: problems and solutions: Conference Proceedings, April 27-28, 2018. Brno: Baltija Publishing, 172 pages.

CONTENTS

SECTION 1. CLINICAL MEDICINE

Investigation of the influence of certain genes on the course of bronchial asthma in the context of overweight or obesity Lahoda D. O., Velichko V. I.	1
Порушення показників ендокринного статусу при чоловічому безплідді в умовах стресу Ломейко О. О.	4
Ефективність використання гепатопротектору у лікуванні гетерозиготної сімейної гіперхолестеринемії з неалкогольним стеатогепатитом Мазніченко Є. О.	6
Якість Життя, Пов'язана Зі Здоров'ям, Дітей З Гемофілією А В Україні За Результатами Пілотного Тестування Опитувальника Наемо-QoL Маркін А. І.	9
Диференціальна діагностика анемії за допомогою лабораторних методів Меркулова В. Б.	12
Dynamics of microbiological indicators in complex treatment of chronic generalized catarrhal gingivitis in children with cystic fibrosis Nazaryan R. S., Tkachenko M. V., Kovalenko N. I., Adofoh Gabriel Anyan, Shevchuk D. V.	16
Morbidity of one year old children who were born prematurely Oliinyk V. S., Yushchenko L. O., Oniskova O. V.	19
Awareness of Ukrainian population towards seasonal influenza vaccination Oniskova O. V., Yushchenko L. O., Tikholaz V. O.	21
Імунологічні аспекти ідіопатичних шлуночкових аритмій Перемот С. Д., Волянський А. Ю., Смілянська М. В., Кашпур Н. В., Юдін І. П., Кліса Т. Л.	24
Features of adrenergic adjusting hypothalamic-hypophysial-ovarial systems for patients chronic salpingo-oophoritis Plotnikova V. N., Lutsenko N. S., Mazur O. D., Zvarich L. I., Shapoval O. S.	29
Порушення функціонального стану печінки у хворих на інфаркт міокарда Прокопович О. А.	32
Injections of platelet rich plasma for treatment of the knee meniscal lesions Holiuk Ye. L., Pshenychnyi T. Ye., Lyhodi V. V.	36
Influence of antihypertensive therapy on aggregation of platelets and von willebrand factor in patients with osteoarthritis and hypertension, who takes meloxicam Rodionova V. V., Khmel O. S.	38
Оцінка антиоксидантного дисбалансу у хворих із коморбідною патологією Романуха В. В.	40

DYNAMICS OF MICROBIOLOGICAL INDICATORS IN COMPLEX TREATMENT OF CHRONIC GENERALIZED CATARRHAL GINGIVITIS IN CHILDREN WITH CYSTIC FIBROSIS

Nazaryan R. S.

Doctor of Medical Science, Professor

Tkachenko M. V.

Assistant

Kovalenko N. I.

Candidate of Biological Sciences, Associate Professor

Adofoh Gabriel Anyan

Student

Shevchuk D. V.

Student

Department of Pediatric Dentistry,

Pediatric Maxillofacial Surgery and Implantology

Kharkiv National Medical University

Kharkiv, Ukraine

Chronic generalized catarrhal gingivitis is one of the common lesions of the oral cavity of children with cystic fibrosis. In patients with cystic fibrosis, chronic respiratory bacterial infection develops, which affects the biotope of the oral cavity [1]. Microflora of dental plaque is the main etiologic factor in dental pathology [2-4]. Imbalance of endogenous human microflora and opportunistic bacteria plays an important role in the development of oral infections of patients with cystic fibrosis [5].

In order to prevent and treat infection in chronic generalized catarrhal gingivitis in children suffering from cystic fibrosis, a treatment-prophylactic complex is proposed that combines the use of a gel containing chlorhexidine, bigluconate, aminofluoride and betaine; mixture of 12.5% acridonacetic acid solution and 0,9% solution of sodium chloride for oral baths; ultrasound and electrotherapy with a remedy containing 0.01% solution of myramistin. Therapeutic measures were prescribed after professional hygiene and sanitation of the oral cavity. Duration of treatment was 7-10 days in accordance with the degree of gum inflammation. The studies were carried out immediately after the end of treatment and after three months.

The results of bacteriological studies of clinical material from 30 patients with cystic fibrosis in children were used in this work. As a clinical material, smears from plaque were used. Etiological significance of the disease was taken into account at a level of microbial number for bacteria 10^5 CFUs and 10^3 CFUs for fungi.

Microbiological study included the isolation of bacteria from plaque, identifying morphological, cultural and biochemical properties of isolated strains according to the Order of the Ministry of Health Care № 535 from 22.04.1985 [6].

In the study of the etiological structure of microbiota in the plaque of patients with cystic fibrosis, 54 strains of opportunistic microorganisms were isolated immediately after treatment and 61 strains after 3 months. After treatment, α -hemolytic streptococci (51.85%) and *Neisseria* spp. (18.52%) were most often isolated. An increase in the frequency of α -hemolytic streptococci was observed from 40 to 51.85% compared to the data before treatment, although the density of microbial colonization decreased from 6.18 to 5.6 lg CFU/g. At the same time, golden staphylococci were not detected at all, although it was isolated in 8.5% in the case of treatment. In addition, in children after treatment in single cases, *E. faecalis*, *E. coli*, *E. aerogenes*, *K. pneumoniae* and *P. aeruginosa* (within 1.85-7.41%) appeared. Fungi *C. albicans* were isolated in 7.41% of cases after treatment, whereas the percentage of fungi before treatment was 18.6%.

The results of the survey, conducted 3 months after treatment, indicate a decrease in the rates: for α -hemolytic streptococci up to 45.9% and for *Neisseria* up to 16.4%. The frequency of isolation of Gram-negative opportunistic bacteria almost did not change, however *S. aureus* appeared (6.6%) and the number of fungi *C. albicans* increased to 14.7%.

Attention is also drawn to the fact that, in addition to the redistribution of the species composition of microorganisms after treatment, there were changes in the number of species of microbiocenosis. So, after treatment monoculture was isolated in 40% of cases, while before treatment the association of microorganisms was detected in 90%. In monoculture, α -hemolytic streptococci were isolated in 83.3% of cases, while *E. faecalis* and *E. aerogenes* in 8.33% each. The associations included α -hemolytic streptococci in combination with *Neisseria* spp. or with Gram-negative rods, and in 11.1% of the associations fungi *C. albicans* joined to the bacteria.

In studying the dependence of the prevalence of microorganisms on the age of children, it was found that most strains (29.6%) were isolated in children in the age group of 0-3 years, while in children aged 13-17 years only 20.4% of strains were sown. In the younger age groups (0-3 and 4-7 years), α -hemolytic streptococci accounted for 56.2 and 57.1%, and in children 8-12 and 13-17 years – 46.1 and 45.4% respectively. Prior to treatment, the same indicators for these bacteria were 53.3 and 42.9% and 34.8 and 33.3% for age groups respectively. That is, after treatment, α -hemolytic streptococci predominate in microbiocenosis, which displace opportunistic bacteria. The proportion of fungi *C. albicans* was slightly higher in older children (9.1%) compared to other groups, where the fungi were detected in 6.25-7.1%.

Thus, as a result of the treatment, the normal microflora of the plaque was restored on account of α -hemolytic streptococci and *Neisseria* spp., resulting in a 1.6 fold reduction in the formation of associations of microorganisms and suppression of *S. aureus* and a decrease in the proportion of *C. albicans* from 18.6% to 7.41%. However, after 3 months the colonization of the studied biotype with golden staphylococcus occurs again and the number of *C. albicans* increases. The obtained results indicate the need for regular monitoring of the local microflora for the correction of therapeutic measures in order to decrease the contamination of the oral cavity with opportunistic bacteria and fungi and to reduce the inflammatory processes.

References:

1. Капранов Н. И., Каширская Н. Ю. Муковисцидоз. М., 2014. 672 с.
2. Гасюк П. А., Гасюк Н. В. Особливості морфологічної будови ясен у нормі та при хронічних гінгівітах: навч. посібник. Тернопіль : ТДМУ, 2014. 92 с.
3. Григорьян А. С., Рахметова С. Ю., Зырянова Н. В. Микроорганизмы в заболеваниях пародонта: этиология, патогенез, диагностика. М. : ГЭОТАР-Медиа, 2007. 56 с.
4. Царев В. Н., Давыдова М. М. Микробиология полости рта (издание третье). М. : УМО МЗ РФ, 2008. 50 с.
5. Ільченко С. І. Клініко-мікробіологічні особливості перебігу муковісцидозу у дітей великого промислового міста. *Патологія*. 2014. № 3 (32). С. 73-77.
6. Приказ МЗ СССР № 535 от 22.04.1985 г. Об унификации микробиологических (бактериологических) методов исследования, применяемых в клинко-диагностических лабораториях лечебно-профилактических учреждений. М., 1985. 62 с.