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БИОХИМИЧЕСКИЙ МАРКЕР ICAM-1 В ОЦЕНКЕ СТЕПЕНИ ОПУХОЛЕВОЙ ПРОГРЕССИИ ПРИ РАКЕ ТЕЛА МАТКИ

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Актуальность исследования: ежегодно в мире регистрируется свыше 180 000 новых случаев рака тела матки (РТМ). Несмотря на значительный прогресс, достигнутый в диагностике и лечении этого вида рака, в последние десятилетия отмечается постепенный и неуклонный рост заболеваемости, а также смертности от данной патологии. Актуальным является поиск наиболее значимых опухолевых маркеров для дооперационной оценки прогрессирования РТМ. Одной из таких молекул является трансмембранный гликопротеин – ICAM-1.

Цель: провести сравнительный анализ уровня растворимой формы sICAM-1 в сыворотке крови пациенток с различной распространенностью и степенью дифференцировки РТМ с тем, чтобы оценить возможность использования sICAM-1 в качестве маркера прогрессирования опухоли.

Материалы и методы исследования: материалом служила сыворотка крови 107 пациенток, страдающих РТМ, и 20 клинически здоровых лиц. Концентрацию ICAM-1 определяли методом иммуноферментного анализа.

Результаты исследования: установлено, что в сыворотке крови пациенток концентрация ICAM-1 увеличена на 84% по сравнению с группой контроля ($p<0,05$). При этом уровень ICAM-1 в 1,8 раза выше в группе пациенток с III-IV стадиями РТМ по сравнению с группой пациенток с I-II стадиями ($p<0,05$). Выявлена заметная корреляционная связь концентрации ICAM-1 в крови пациенток со стадией РТМ ($R=0,60$; $p<0,01$). У пациенток с высокой и промежуточной степенью злокачественности концентрация ICAM-1 в крови выше на 26 % по сравнению с пациентками с низкодифференцированным РТМ ($p<0,05$).

Вывод: возрастание ICAM-1 в сыворотке крови по мере прогрессирования опухолевого процесса свидетельствует о том, что данный показатель является прогностически значимым в дооперационной диагностике РТМ в качестве маркера опухолевого роста.

PROBIOTICS AND INTESTINAL MICROFLORA OF HIV-INFECTED PATIENTS

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Background: HIV-1 infection results in marked immunologic insults, including pronounced CD4+ T-cell loss from gut lymphoid tissue, and structural damage to the intestinal mucosa following dysfunction of the gastrointestinal system, including compromised barrier function. Increased intestinal permeability and microbial translocation promote systemic immune activation, which is implicated in disease progression. While the development of highly active antiretroviral therapy (HAART) has been a major advancement in the treatment of HIV-1 infection, the need for novel complementary interventions to help repair intestinal structural and functional integrity remains unmet. Known properties of probiotics suggest that they may be useful tools in restoring normal intestinal flora. In this regard, the aim of the present study was to evaluate changes in microflora of the large intestine in chronic HIV infection and the possibility of correction by means of bacterial preparations (probiotics).

Methods: The study involved 40 HIV-1-infected patients of the regional center of prevention and control of AIDS in Kharkov. The intestinal microflora of patients with HIV was examined by simple bacteriological method. Dysbiosis correction circuit was designed for one

month taking of probiotic preparations. It contained such microorganisms as *Lactobacillus spp., Streptococcus thermophylus, Bifidobacterium spp., Escherichia coli, Saccharomyces boulardii.* Six weeks later the follow-up study was conducted to investigate gut microflora of 20 HIV-infected patients.

Results: Changes of intestinal microflora were found in all of the patients. The decrease in the obligatory microorganisms quantity, especially in bifidobacteria (lower than reference ranges in 90% of patients) was the most frequent finding. Bacterial overgrowth of opportunistic pathogenic biota (mainly S. aureus and Candida spp.) was registered in only a minority of patients. The probiotic interventions resulted in significantly elevated levels of beneficial bacteria load (such as *Bifidobacterium spp, Lactobacillus spp.*) and a decrease in patogenic bacteria load (such as *Clostridium, Candida spp*).

Conclusions: Probiotic preparations can successfully augment the levels of probiotic species in the gut during chronic HIV-1 infection. These findings may help inform future studies aimed at testing pre- and probiotic approaches to improve gut function and mucosal immunity in chronic HIV-1 infection.

EFFECT OF SYNBIOTIC THERAPY ON CYTOKINES CONCENTRATIONS IN PRE-PRESCHOOL CHILDREN WITH COMMUNITY-ACQUIRED PNEUMONIA

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The diseases of the respiratory system occupy the first position which constitutes nearly 62-65 % in the structure of child morbidity. Community-acquired pneumonia (CAP) is one of the most common diseases of modern society. Cytokines play a central role in inflammatory response that is a basis for further immune response.

Our **aim** was to study the effect of synbiotics on pro- and anti-inflammatory serum cytokines (IL-8 and IL-4) concentrations in pre-preschool children with CAP**.**

Materials and Methods

We examined 27 children (aged 1–3 years), who were hospitalized with CAP in the infectious unit No. 1 of St. Zinaida Sumy City Children's Hospital between 2011 and 2013. The patients were divided into two groups. 14 children with CAP, who received standard therapy, composed group 1. 13 patients, who received therapy combined with synbiotic therapy, entered group 2. 18 apparently healthy children of appropriate age and gender composed the control group.

Serum cytokines (IL-4 and IL-8) concentrations were measured by the ELISA using the test-systems. The evaluations were conducted during acute period (on 1st–2nd day after hospitalization) and etiotropic treatment interruption (on 10–14th days).

Results and Discussion

At onset of disease IL-8 concentration increased significantly ($p < 0.001$); IL-4 concentration also increased ($p < 0.001$) in groups 1 and 2 in comparison with the control group.

During the early recovery period IL-4 concentration increased significantly in group 1 comparing with the acute period ($p < 0.05$). However, IL-8 concentration was unchangeable ($p > 0.05$) due to the received therapy. At the same time, the indices were not standardized ($p < 0.001$).

Combination of complex therapy and symbiotic therapy for CAP treatment reduced concentrations of pro- and anti-inflammatory cytokines. For example, the significant decrease in IL-4 ($p < 0.01$) and IL-8 ($p < 0.01$) concentrations occurred in group 2. Unfortunately, the indices were still higher than in the apparently healthy patients ($p < 0.001$, $p < 0.05$).

Thus, combination of standard therapy with symbiotic therapy for CAP can potentiate the therapeutic effect by inhibiting inflammation for patients.