

**МІНІСТЕРСТВО ОСВІТИ І НАУКИ УКРАЇНИ
СУМСЬКИЙ ДЕРЖАВНИЙ УНІВЕРСИТЕТ
КАФЕДРА ІНОЗЕМНИХ МОВ
ЛІНГВІСТИЧНИЙ НАВЧАЛЬНО-МЕТОДИЧНИЙ ЦЕНТР**

**МАТЕРІАЛИ
VIII МІЖВУЗІВСЬКОЇ НАУКОВО-ПРАКТИЧНОЇ
КОНФЕРЕНЦІЇ
ЛІНГВІСТИЧНОГО НАВЧАЛЬНО-МЕТОДИЧНОГО ЦЕНТРУ
КАФЕДРИ ІНОЗЕМНИХ МОВ**

“TO LIVE IN A SAFER WORLD”

(Суми, 28 березня 2014 року)

The eighth scientific practical student`s, postgraduate`s and teacher`s
LSNC conference

CHARACTERISTIC OF COLON MICROBIOCENOSIS AMONG PRESCHOOL CHILDREN SUFFERING COMMUNITY-ACQUIRED PNEUMONIA ASSOCIATED WITH IRON DEFICIENCY ANEMIA

Kh. I. Vasylyshyn – Sumy State University
S. G. Zolotova – E L Adviser

An important physiological role in the body of the child has a normal intestinal micro flora, which in connection with person's microorganism is regarded as a kind of extracorporeal organ. According to several authors, 88.6 % of children with acute respiratory diseases reveal disbiotic changes of intestinal micro flora. Among patients with pneumonia revealing frequency of the third level dysbiosis is 44.4 %, and besides quantitative violations there occurs also a high-quality disintegration of components of micro ecological system.

Objective: To investigate the qualitative and quantitative changes in micro biota of the colon among preschool children, patients with community-acquired pneumonia (CAP) associated with iron deficiency anemia (IDA).

Materials and methods:

We examined 48 children of the age from one to three years old concerning the CAP. The patients were divided into two groups. Group I included 25 children with CAP without IDA. Group II included 23 patients with CAP associated with IDA of light degree. The control group included 18 healthy children of appropriate age.

Studies were carried out during the acute illness (for 1 day admission to hospital) and the period of early recovery and cancellation etiotrop treatment (10-14 days).

Results and Discussion

The studies revealed significant changes in the quantitative and qualitative composition of the colon micro flora at children with CAP.

When analyzing disbiotic changes of the colon among children with CAP without IDA at the beginning of the disease was found a significant decrease in the number of bifida and lactobacilli, *Escherichia coli* and an increase of containing the pathogenic

microflora (PM), staphylococci, and fungi of the genus *Candida* compared to the control group.

Similar changes in micro-ecology of the colon at the beginning of hospitalization were observed at children with CP with IDA. Among patients with CAP with IDA compared with the data of healthy children were identified significant reduction in the amount of bifida bacteria, *Lactobacillus*, *Escherichia coli*, increase in PM, *Staphylococcus*, and fungi of the genus *Candida*.

When comparing the colon micro flora at children of groups I and II at the beginning of the disease, it was found that patients with CAP with IDA had a significant decrease in the intensity of colonization by bifida bacteria, lactic acid bacteria and a significant increasing the number of PM against the relevant indicators among children with CAP without IDA.

Estimating changes in the composition of intestinal micro flora among children with CAP in both groups after standard treatment showed no positive dynamics. Thus, among children in group I the number of bifida bacteria, lactobacilli, *Escherichia coli*, PM, *Staphylococcus* and *Candida* fungi did not change significantly.

Among children with CAP with IDA after treatment the number of lactic acid bacteria, *Escherichia coli*, PM, *staphylococcus* and fungi of the genus *Candida* has not changed relatively to the acute period, while containing of bifida bacteria was significantly reduced.

At the end of treatment indicators such as total number of bacteria and bifida bacteria at children of group II compared with patients in group I were significantly lower, and the titer of PM - significantly higher.

Thus, significant changes of qualitative and quantitative composition of the colon micro flora among children with CAP conditioned by decrease in the detection rate of the indigenous micro flora and increased contamination of given pathogenic and conditionally - pathogenic microorganisms. Disturbance of the colon micro-ecology at children with CAP associated with iron deficiency anemia can be the basis for inclusion in the complex of pathogenic probiotic therapy aimed at correcting the disturbance.