

THE EFFECT OF combine PROBIOTIC LACTO ON INTERLEUKIN'S LEVELS IN ACUTE INTESTINAL INFECTIONS CAUSED BY OPPORTUNISTIC MICROORGANISMS

Devid Chilufya Mvamba

Mentor – Polovyan K. S.

Summy State University, Department of Infectious Diseases and Epidemiology

Relevance. Acute intestinal infections (AII) caused by opportunistic microorganisms (OM) family Enterobacteriaceae are one of the most actual health problem. At present, information about the features reactivity of the immune system in response to the invasion of OM has not been studied. Was found that immune parameters have a higher prognostic rank than clinical and medical history and other laboratory data. Thus, monitoring the levels of cytokines in the serum of patients allows to identify patients at increased risk of complications and possible protracted disease course and justify the effectiveness of therapeutic agents.

The purpose of the study – to study effect of combined probiotic Lacto on interleukin's levels in AII caused by OM.

Materials and methods. The study involved 50 patients with moderate course of AII caused by OM hospitalized at (1.38 ± 0.1) days from the onset of the disease, mean age (42.51 ± 2.87) years. Depending on the regimen, patients were divided into two groups of 25 people each. Persons in group 1st received standard treatment – gastric lavage and / or bowel, diet № 4, rehydration, enzymes and sorbents, 2nd – in addition to the basic therapy – combined probiotic “Lacto” 1 caps. 3 times per day for 5 days. Gender, etiology, clinical forms groups were comparable. According to the medical history and physical examination the chronic pathology of the gastrointestinal tract, hepatobiliary system was deleted. In addition to general clinical tests in all patients were examined serum levels of IL-1 β , IL-6, IL-4 and IL-10 at admission and (5.76 ± 0.16) day from the onset of the disease. The control group consisted of 20 clinically healthy donors.

Results. At admission in all patients studied cytokine levels were higher than control ($p < 0.001$). Thus, the levels of IL-1 β arrived at values (accordingly 1st, 2nd and control groups (4.45 ± 0.48) , (4.81 ± 0.48) and (1.81 ± 0.03) pg/mL), IL-6 – (according to (26.22 ± 1.58) , (25.76 ± 1.34) and (1.21 ± 0.16) pg/mL), IL-4 – (accordingly (8.26 ± 0.52) , (9.20 ± 0.30) and (0.97 ± 0.13) pg/mL) and IL-10 – (accordingly (17.83 ± 0.28) , (18.90 ± 0.40) and (0.62 ± 0.13) pg/mL).

In the early recovery period in two groups IL-1 β declined to normal (1.88 ± 0.09) and (1.76 ± 0.16) pg/mL, $p < 0.001$; other cytokines were less in dynamics ($p < 0.001$), but higher than normal ($p < 0.001$). In this period levels of IL-6, IL-4 and IL-10 were higher in 1st group than in 2nd. The results of levels of cytokines in the early recovery period are: IL-6 – 1st group – (8.43 ± 0.20) , 2nd – (3.87 ± 0.29) pg/mL, $p < 0.001$; IL-4 – 1st group – (5.36 ± 0.43) , 2nd – (3.30 ± 0.23) pg/mL, $p < 0.001$; IL-10 – 1st group – (3.72 ± 0.22) , 2nd – (2.70 ± 0.10) pg/mL, $p < 0.05$. Lower concentrations of IL-6 and IL-4 in 2nd group in the early recovery period points to reduce the risk of inflammatory response to normal flora and possible chronization of pathological process in the colon compared to the patients of 1st group.

Output. When using combined probiotic Lacto in the treatment of AII, caused by OM, compared with basic therapy decreases the severity of inflammatory and destructive changes in the gastro-intestinal tract.