**INFLUENCE OF SODIUM DESOXYRIBONUCLEATE ON ANTI-WAR-FECTIONAL PROTECTION AND BLOODING IN SUFFICIENTS WITH POLYTRAUMA**

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**Аbstract.** A single-center, double-blind, placebo-controlled study of the effectiveness of sodium deoxyribonucleate was performed in 54 patients with polytrauma. Main group: 27 people (21 men/6 women, age 39(29;51) years, severity of injury ISS 26(22;34) points, severity of shock ±T=+12.9 (8.7;15.9) hours). Comparison group: 27 people. (20 men/women 7, age 40 (26;53), ISS 25 (20;29), ±T=+12.3(9.3;13.8)). Sodium deoxyribonucleate is a low molecular weight fragments of native DNA. Randomization: patients with a random even number were injected with the contents of vials of one series (even), with odd - of an odd series. 75 mg of sodium deoxyribonucleate (5 ml) or placebo (5 ml) was administered intramuscularly daily for 10 days, starting from the day after the injury. Before the injection of the drug, on the 8th, 15th days after the injury, the blood was examined: white blood cells (·109/l), red blood cells (·1012/l), blood IL-6 (pg/ml), CRP (mg/l); CD117+ and CD34+mononuclear cells, CD14+monocytes and CD14+granulocytes, HLA-DR+mononuclear cells (·109/l), defensin+granulocytes (HNP1-3) (%). Hemoglobin (Hb,g/l) and total protein (TP,g/l) in the blood were examined during the entire hospital stay. On the 8th day after the injury in patients of the main group compared with the comparison group increased: the number of lymphocytes (2.36±0.19/1.83±0.18; p=0.048), monocytes (0.89±0.007/0.69± 0.007; p=0.049), CD117+ (0.81±0.07/0.44±0.07; p=0.000) and CD34+ (0.83±0.07/0.65±0,05; p=0.042). On the 15th day, the achieved increase in the number of monocytes (0.65±0.07/0.46±0.05; p=0.033) remained in the patients of the main group and CD14+monocytes (0.38±0.03/0.24 ±0.02; p=0.041), HLA-DR+ (1.34±0.12/1.04±0.08; p=0.044) and defensin+granulocytes (42.0±2.4/34.3±3.7; p=0.044) increased in comparison with the comparison group. In patients of both groups, a similar decrease serum IL-6 and CRP was observed. Length of hospitalization in the main group - 32.8 days, in the comparison group - 39.6, the number of complications in the main group 21, in the comparison group 39. In both groups, subgroups of patients with complications were identified (13 people in the main group and 14 in comparison). In the subgroup of the main group, the average number of complications in one patient was 1.8 times less than in the compared subgroup. Complicated patients differed in the duration of anemia (Hb<90 g/l) and hypoproteinemia (TP<60 g/l). Sodium deoxyribonucleate contributed to increased hematopoietic precursor migration (CD117+ and CD34+) from the bone marrow into the bloodstream, increase the anti-infective properties, reduce the duration of anemia and hypoproteinemia, the number of complications and the duration of hospitalization.

 *Key words: polytrauma, anti-infection protection, hematopoiesis, hypoproteinemia, complications, sodium deoxyribonucleate.*