changes in immune system indicators of patients with uterine carcinoma in dependence of the disease stage

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Aim: The purpose of the study was to analyze the status of the immune system of patients with uterine carcinoma in dependence on the disease stage.

Methods: Clinical immunological examination of 145 patients aged 46-72 years was performed. 45 (31%) patients (mean age 57.89 ± 1.01 years) had stage I of the disease, 67 (46%) patients (mean age 61.21 ± 1.55) had stage II, 33 (23%) patients (mean age 63.20 ± 0.44) had stage III. All the women were postmenopausal for 5-15 years. Data of immune status of 55 practically healthy women were used as controls.

Results: In stage I uterine carcinoma a decrease in quantity and activity of monocyte-macrophages was detected in 21% of the patients, mean macrophage monocyte transformation index was 44.8 ± 2.7% and 0.12 ± 0.02 x 10^9 which is authentically lower (p > 0.05) than that in healthy women, in 23.4% of the patients increased level of circulating immune complexes (34.1 ± 4.1 while the norm was 25.0 ± 3.2 RVUs) was detected. In stage II uterine carcinoma proliferative activity of T-lymphocytes decreased on average to 38.7 ± 2.6% (p < 0.05) under the influence of phytohemagglutinin. B-lymphocyte ability for proliferation in blasts in blast-transformation reaction to lipopolysaccharide was decreased and amounted to 42.2 ± 3.1 which was lower than the norm. Level of serum circulating immune complexes varied from 18 RVUs to 70 RVUs and amounted to 45.3 ± 3.6 RVUs. In patients with stage III T-lymphocyte proliferation in blasts on phytohemagglutinin authentically decreased to 34.7 ± 2.4% in comparison with stage I and the norm. B-lymphocyte functional activity to lipopolysaccharide authentically decreased in comparison with the norm. The ratio of immunoregulatory T-lymphocytes changed. Their ratio index decreased to 1.2 ± 0.04% in stage III uterine carcinoma. Coefficient of variation level decreased to 46%. Serum circulating immune complexes level was 44.4 ± 4.0 RVUs, coefficient of variation – 68%.

Conclusions: Thus, we detected some immune status abnormalities. Relative quantity of T-general lymphocytes remains the same regardless endometrial cancer stage, but high concentration of immune complexes probably blockades the activity of immunocompetent cells, regulatory lymphocytes first of all, that demands further correction.

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