

**CHARACTERISTICS OF DIVERSIONS OF IMMUNOLOGIC
INDEXES IN LUNG CANCER PATIENTS UNDERGOING
COMPLEX TREATMENT**

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It's well known that during the process of tumor promotion, tumor specific and non-specific immune response is suppressed which is determined to a great extent by the ability of cancer cells to produce a number of biologically active substances, changing the immune reactivity. In this sense we can discuss some immunomodulating influence of the tumor which results in changing the indexes of immune status of the organism since cancer develops. Some of the authors (1,3) presume that the information, obtained by following up the indicators of the tumor defending system has no diagnostic value, but it can be helpful while controlling the effect of treatment and prognosing the survival of lung cancer patients. We followed for 1-year period 19 male patients, all of them smokers, in the average age of $56,3 \pm 2,4$ with squamous cell carcinoma, stage IIIa. The diagnosis was confirmed by bronchoscopy with brush biopsy in all cases, 14 of the patients had peripheral and the rest 5 - central cancer. Nine of the patients had passed radical surgical treatment and the rest 10 underwent explorative thoracotomy. As a second level of treatment 6 cycles of chemotherapy with Methotrexate t.d. 300 mg, Cyclophosphamide t. d. 7,2 g, Farmorubicin t.d. 600 mg, Dacarbazin t.d. 8,4 g was chosen. In these patients we followed a number of immunologic indexes before and after surgery, during and after finishing the chemotherapy. These indicators, typical of the different lines of the immune response are: phagocytic activity of PMNL, total complement (TC), serum immunoglobulins (SI), circulating immune complexes (CIC), E-rosette forming cells (RFC), early and late ones. In order to estimate the cell-mediated immune deficiency, before the operation and before the start of chemotherapy, an intradermal testing with PPD, D5, D7, TA was performed. The patients were closely followed during the whole period of chemotherapy, which proceeded average 6 months.

We found a suppression of the cell mediated immunity (CMI) in all the patients before starting the cytostatic treatment, while the changes of the humoral immune response were many faced. Signifi-

cantly high levels of CIC were found while the levels of SI were normal. On the other hand the cell-related components of the non-specific resistancy was activated while the TC remained unchanged. The changes in the initial levels of the treated immunologic indexes, respectively the suppression of the CMI that were established might find their explanation in the existing deficiency of T-lymphocytes and/or with possible presence of some serum or cell-originating factors, impairing the ability of latest to form E-rosettes (2,3). According to the results of the intradermal testing, we divided the patients into two major groups: I group of 17 patients (64,48%) with data showed pre- and post operative cell-mediated immune deficiency, established on the negative results from the skin testing against all allergenes; II group of 6 patients (35,57%) with pre- and postoperative negative skin reactivity against TA and preserved reactivity against PPD, D5, D7. The data obtained by the close following of the immunologic indexes of patients in the I group during and after finishing the chemotherapy helped us to determine a further suppression of the CMI, judged by the E-rosettes forming test and high levels of CI. Their preservation postoperatively and during the chemotherapy was valued as a poor prognostic index. The strongly expressed suppression of the CMI was corellating with a poor therapeutic effect - 2 of the patients died in 9 of them distant hematologic metastases were found by ultrasound, x-ray and scintigraphic work up. In the patients from the II group who had preserved postoperatively their skin reactivity against PPD, D5, D7 no further suppression of the CMI after the operation and after the chemotherapy was found according to the E-RFT. The levels of CIC in serum were significantly low. The clinical follow up during chemotherapy revealed that they kept their functional activity and no data, suggesting distant metastases were obtained.

We presume that the evaluation of the pre- and postoperative skin reactivity against the noted allergens in lung cancer patients has some diagnostic value, concerning the resectability, the efficiency of the complex treatment and the total survival of the patients. The strongly expressed suppression of the CMI corellating to a certain extent with the suppression of the humoral immunity may be helpful as an additional criterion in the complex evaluations of the results of chemotherapy of lung cancer patients.

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