

DETERMINATION OF THE IMMUNE RESPONSE (LOW, MEAN, HIGH) IN RECIPIENTS OF RENAL GRAFTS ACCORDING TO THEIR PROLIFERATIVE ACTIVITY

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Reaction blast-transformation (RBT) of peripheral blood lymphocytes is the most often studied reaction for determination of any stage of the immune response in patients with various diseases, allergic conditions, immunizations, etc. The recent successes of transplantation all over the world and the functioning of many transplantation centers in many countries put forward the necessity of thorough investigation of both, donor and recipient, before and after operation. As for the renal transplantations, being the most often operation nowadays, it must be pointed out that the considerable successes of kidney graft vitality are a result of precise and proper investigations: tissue typing, HLA-antigens and antibodies, blood group compatibility, etc. One very important step in this aspect is RBT of lymphocytes of recipients before and after transplantation, showing their momentary proliferative activity. Presuming that there are certain complications after transplantation, such as rejection crisis, additional and secondary infections, low functional activity of the graft, etc., we decided to study the level of the immune response by using RBT, thus determining low, mean or high immune response, which undoubtedly has its significance for the renal graft vitality and its functions after operation.

Our study covers 42 patients with transplanted kidneys, 27 recipients from the "waiting list" and 13 healthy donors. RBT was done after the standard method, on PHA, with H^3 -thymidin-marking and the results were read by using the beta-isotope-counter (Berthold, West Germany).

Analysing the results we found out that there was no statistical difference between the mean values of RBT of the patients from both groups (with grafts and waiting grafts) and the healthy donors. The mean RBT-level of patients with kidney grafts was 16754 ± 456 , that of the patients waiting renal grafts was 15872 ± 398 and that of the healthy donors — 16084 ± 507 . Of course, this is not connected with any pathological disorders, because the dynamics of RBT determines the changes of the immune status of the investigated objects. Therefore, the dynamic changes of RBT indicate the status of the patients, no matter if he has or has not a renal graft. Presuming all that we divided the 3 groups of objects from our study to 3 subgroups each: low, mean and high immune response concerning the level of RBT and its dynamic changes before and after transplantation.

From 42 patients with transplanted kidneys 13 shew a low level of RBT, 16 — a mean one and 12 — high (1 patient was just between high and mean RBT-values). Based on our previous work we pointed the following levels: low — up to 9034 impulses, mean — from 9034 to 17869, high — over 17869. Thus, the average value of RBT for the first group was 8476 ± 379 , for the second group — 13998 ± 460 , for the third one — 21034 ± 507 .

From 27 recipients from the waiting list, 8 shew a low, 12 — mean and 7 — high type of immune response. The respective values of RBT for these subgroups were: 8702 ± 299 ; 15211 ± 477 and 20096 ± 631 .

From 13 healthy donors, 4 shew a low, 4 — mean and 5 — high type of immune response, concerning the three groups of RBT-activity. Their values were: 7991 ± 277 ; 12980 ± 410 and 22109 ± 602 .

The determination of the three types of immuneresponse has its undoubtful significance not only because the level of RBT-activity indicates the immune status of the patient. When studied in dynamics RBT has incomparative importance for the prediction of any rejection crisis, diagnosing of additional complications and infections, necessity, of decreases or increase of the doses immunosuppressors, etc. In relation to the rest parts of immunological monitoring: enzymatic technique, MLC, CML and NK, the determination of RBT-activity and its 3 types is one obligatory investigation in the study of transplantation immunity.

ОПРЕДЕЛЕНИЕ ИММУНОГО ОТВЕТА НИЗКОГО, СРЕДНЕГО И ВЫСОКОГО ТИПОВ У РЕЦИПИЕНТОВ С ПЕРЕСАЖЕННОЙ ПОЧКОЙ НА БАЗЕ ИХ ПРОЛИФЕРАТИВНОЙ АКТИВНОСТИ

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Р Е З Ю М Е

Исследованы три группы реципиентов и доноров. К первой группе относятся реципиенты с пересаженной почкой, ко второй группе — реципиенты из «листа ожидания» и к третьей группе — здоровые доноры. При помощи бласт-трансформационной реакции, являющейся показателем пролиферативной активности лимфоцитов, определяются три группы иммунного ответа при пересадке почки, вторичных осложнениях и инфекциях.