

IV. IMMUNOLOGY, IMMUNOGENETICS, TRANSPLANTATION

IMMUNOLOGIC MONITORING AND ITS ROLE FOR TRANSPLANTATION AND INFECTIOUS IMMUNITY

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The immunologic control, or as it was named IM, for the recent period of 5—6 years has been applied in the scientific and clinical work in almost every modern center of transplantation and clinical immunology. The IM can be either pretransplantation or posttransplantation. The former answers the question of any influence upon the fate of the transplant after previous operations, also haemotransfusions, haemodialysis, etc., whereas the latter plays a very important role for controlling the status of the recipients after transplantation and taking proper therapeutic decisions. In posttransplantation IM majority of authors use complex methods from the clinical immunology (Ting A. et al., 1978; Zaretskaya Y., 1979; Toledo-Pereyra L., 1981; Metodiev Kr., 1982). Such methods are for example: blasttransformation of lymphocytes, rosette-tests, level of complement and its components, test inhibition of leucocyte migration, cytochemical and phagocytic activity of leucocytes, methods of cell-mediated cytotoxicity, determination of anti-HLA-antibodies, tests MLC, etc.

It must be pointed out that it is impossible to carry out parallelly all tests and methods in one complex of study in any modern laboratory. Therefore, different groups of immunologists, transplantologists and microbiologists prefer various variants of IM. At the end of 1980, when the international system "Intertransplant" was organized for the mutual attempts of all socialistic countries, began the collaboration in IM of the laboratories-pioneers in this field: laboratory of immunogenetics at the Institute of transplantation and artificial organs (Moscow, USSR), laboratory of immunology at the Institute of clinical and experimental medicine (Prague, Czechoslovakia) and laboratory of immunology at the Department of Microbiology and Virology (Varna, Bulgaria). Y. Zaretskaya (1979), V. Haskova (1980), Kr. Metodiev (1982) work over methods or their modifications and complexes of such methods for studying the rejection crisis after transplantation and the developing complications in postoperative periods. One of the new variants of IM for controlling the posttransplantation status, suggested by Zaretskaya Y. and Metodiev Kr. (1981) is the correlative method, based on the reaction blasttransformation on phytohaemagglutinin and the activity of mitochondrial enzymes in peripheral blood lymphocytes. Both parts of the correlative method of IM, studied simultaneously, and directed to the investigation of the recipient's status after operation, give an undoubtedly valuable test for prediction and estimation of the forthcoming rejection crisis and other complications. To prognose and diagnose such processes in the organism of the recipient

is very important for the possibility of quick adaptation in the therapeutic behaviour of the clinicians.

As for the role of IM for studying the development and state of the infectious diseases, though not so well investigated, we suggest that it has its importance for a controlling system there too. Recently, Kr. Metodiev and G. Kaprelyan (1976, 1980) studied the diagnostic role of the quantity of lysozyme, immunoglobulins and other tests (micromethod of immunoelectrosmophoresis, liver indexes, etc.) for the development of definite infectious infections (influenza, hepatitis, bacterial infections, etc.). Further, Kr. Metodiev (1982) suggested a new modification of the IM between the activity of mitochondrial enzymes of peripheral lymphocytes and the level of serum lysozyme as a method of studying the posttransplantation status of recipients with renal grafis. All aforementioned complexes of methods directed at the quicker, proper and undoubtful diagnosis of various conditions in the state of the patient are included in the new field of modern medicine: immunologic monitoring. The IM has a very perspective future in pathology for its precise prognose and diagnosis. Therefore, we hope that the laboratories-pioneers in this field will soon be followed by many others in Bulgaria.

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**ИММУНОЛОГИЧЕСКИЙ МОНИТОРИНГ И ЕГО ЗНАЧЕНИЕ ДЛЯ
ТРАНСПЛАНТАЦИОННОГО И ИНФЕКЦИОННОГО ИММУНИТЕТОВ**

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Р Е З Ю М Е

Проведен анализ опыта авторов в разработке новейшего направления иммунологии — иммунологического мониторинга (ИМ). Иммунологический мониторинг как система контроля и исследования иммунного статуса пациентов несомненно имеет решающее значение для диагностики, прогнозирования и оценки ряда патологических состояний. Преимущества иммунологического мониторинга выдвигают как наиболее перспективную область современной иммунологии.