

B. G. Solheim
S. Ferrone
E. Möller

The HLA system in clinical transplantation. Basic concepts and importance

Berlin, Heidelberg, New York, London, Paris, Tokyo, Hong Kong: Springer 1993. 429 pp., 48 figs. (ISBN 3-540-55456-4) DM 242.00

This most recent comprehensive, but basic, up-to-date edition on the HLA system and its biological and clinical role provides most useful information, both theoretical and practical. It is of interest to young graduate students and clinicians, laboratory personnel, and other specialists involved in transplantation and related fields. The book contains 429 pages, including 48 figures and 31 tables, and has a nomenclature and subject index at the end.

The introduction opens the fascinating area of discovery of the HLA system like a "Manhattan Project", including the evolution of the system and the key to its diversity. The genetics, chemistry, and expression of histocompatibility antigen are presented in a chapter in which the reader can find both basic and the most recent information on the formal genetic background of the MHC molecules, intracellular transport, peptide-binding features, and regulation of expression by promoter genes. The discussion on the minor transplantation antigens and the importance of endogenous peptides and self or viral "super antigens" may help one to understand the clinical role of this histocompatibility system. The biological function of the MHC molecules can be seen in interaction with the T-cell receptor and other accessory membrane-bound structures, together with their role in signal transduction and the significance of the thymic selection.

In addition to the largely theoretical parts of the book, many practical points can be found that help the reader understand the importance of the basic immunobiological structures and their function. These include: the results HLA matching in clinical transplantation, the pathogenesis of autoimmune diseases, the role of HLA antigen expression in controlling the growth and metastatic properties of tumor cells, allosensitization and the cell-mediated and humoral consequences of it, viral infections influencing graft rejection, and bone marrow transplantation and xenografting.

A separate chapter deals with immunosuppressive therapy, including the most recent achievements concerning therapeutic use of monoclonal antibodies and various manipulations of bone marrow for the prevention of graft-versus-host disease. Immunologists and clinicians can find chapters on allorecognition of HLA molecules, HLA matching, and rejection, together with a description of laboratory techniques for the detection of the polymorphic structure of HLA molecules and those involved in the determination of rejection phenomena or mismatching in the minor histocompatibility system. The most recent techniques introduced in the field – the CTLp and HTLp methods, crossmatch analysis using various techniques, fine needle aspiration, and genotyping at the DNA level – are reviewed and their clinical importance emphasized.

One of the biggest advantages of the book is its well-balanced mixture of theoretical basic knowledge and important biological and clinical consequences for the major and minor histocompatibility systems. A clear interpretation of this new and rather difficult subject is guaranteed by the collective efforts of the best experts in the world.

Among those who contributed to the book are Noble Laureates J. Dausset, F. T. Rapaport, and B. Benacerraf, as well as J. Klein, J. Trowsdale, H. L. Ploegh, B. Mach, E. Simpson, T. W. Mak, M. Feldmann, J. Bodmer, A. Ting, J. Claas, J. F. Bach, H. O. McDewitt, and many more. They and the very competent editors have provided us not only with a very attractive book but one of the rare kind that is almost impossible to find fault with.

G. Petrányi, Budapest

G. Gubernatis

Acute rejection of liver grafts

Austin, Georgetown: R. G. Landes 1993. 95 pp., 42 figs. (ISBN 1-879702-64-9) US \$ 89.95

This book is a useful addition to the library of any surgeon or physician involved in liver transplantation. It is divided into three sections. The first one sums up the experimental and clinical experience gathered at the Medizinische Hochschule in

Hannover, Germany, one of the leading centers in this field. The second part is a critical evaluation of transplant aspiration cytology, a technique that the German authors largely contributed to developing and validating. Finally, the third chapter, written by the Pittsburgh team, relates to accelerated rejection of liver grafts, with particular attention to FK 506.

The experimental study was performed on rhesus monkeys and provides the reader with well-designed protocols and a description of the natural history of acute rejection in a model close to the human setting. In brief, animals without immunosuppression develop early histological vascular alterations and die of rejection within 3 months. Those initially receiving cyclosporin-based immunosuppression develop irreversible rejection more slowly when the drug is discontinued, but permanent tolerance cannot be obtained. These experimental data are useful in understanding and assessing the clinical observations following 98 liver transplantations. Acute rejection in these patients was graded according to a histological severity scale devised by the authors, the Hannover classification. The main findings of this study are that cirrhotics tend to reject more often than non-cirrhotics; that damaged grafts are more susceptible to rejection; that 60% of patients require treatment for acute rejection, often between postoperative days 5 and 8; that steroid treatment of acute rejection fails in 14% of cases; and that steroid-resistant rejections treated with poly- or monoclonal antibodies carry a 50% failure rate. Another important practical conclusion is that 80% of patients show early histological signs of acute rejection on routine biopsies, and that only those with simultaneous clinical signs require treatment, a fact also recently stressed by the Birmingham group.

The discussion of transplant aspiration cytology by Schlitt and Nasham in chapter 2 is comprehensive. The safety of this technique is established with no adverse effect in more than 3000 examinations. Its sensitivity is virtually 100%, although its specificity is only in the order of 50%. In 30 minutes it provides the clinician with a semiquantitative scoring of the aspirate for immune activation within the graft, hepatocyte morphology, and extent of cholestasis. Routine cytologic monitoring therefore allows a very fine tuning of immunosuppressive therapy, and it is hoped that more pathologists will acquire the necessary skills for this technique in the future.

The final chapter, dealing with accelerated rejection of liver grafts, reminds the

reader of the pathophysiology of antibody-mediated rejection. It draws attention to the fact that antidonor lymphocytotoxic antibodies adversely affect the survival of primary transplantation during the 1st postoperative year. Taking into consideration the aforementioned points, the authors offer us a very stimulating glimpse into the future and suggest strategies that might

allow the antibody barrier in allo- and xenotransplantation to be routinely overcome.

In conclusion, the editor is to be congratulated for having summarized a very large amount of data in a short, compact book. It is, however, regrettable that the illustrations are not of a standard one would expect in a book of such scientific value, and that some figures are difficult to read with-

out a magnifying glass. Similarly, it would have been better to have invited the American authors who wrote the last chapter in a very lively manner to review the style of the first two sections.

F. Mosimann, Lausanne

ANNOUNCEMENTS

Sandoz ESOT Study Grants: Transplantation Call for Applications

Sandoz Pharma Ltd. offers annual study grants totaling SFr. 40000.- to individuals involved in the clinical or experimental fields of transplantation. Each study has to be performed in a country situated in Europe that is not the country in which the applicant is currently working. There will have to be a specific purpose with a clear study goal. The period for which an applicant may apply for financial support can vary from one to several weeks or months. Congress visits will be excluded from any study grant. The Council of the European Society for Organ Transplantation (E.S.O.T.) will administer the Sandoz ESOT Study Grants. The selection and final decision will be made by the Council. Applications must be in English, should

specify the purpose of the study, and should be supported with relevant documentation, including a full curriculum vitae. The application must be signed by the head of the department/program where the study will take place. Neither the heads of the departments nor the applicant necessarily has to be a member of E.S.O.T.

Applications should be sent to:
Professor C. Hammer, Institut für Chirurgische Forschung der Universität München, Klinikum Grosshadern, Marchioninstrasse 15, D-81377 München, Germany.

**Envelopes should be clearly marked
"Sandoz ESOT Study Grant."**

Fifth Annual Rush Symposium on Transplantation 21 May 1994, Chicago, Illinois, USA

"Leflunomide: A New Direction in Immunosuppression" will be the topic of the Fifth Annual Rush Symposium on Transplantation. The symposium will take place at Rush-Presbyterian-St. Luke's Medical Center in Chicago on Saturday, 21 May 1994, from 9:00 a. m. to 5:45 p. m. A series of lectures describing the action of leflunomide in rodents and in dogs in various transplant models, and its mechanism of action and the early experience in human use will be presented in this day-long symposium.

For further information, please contact:
Patricia Michaels, M.P.H., Physician Relations Coordinator, Rush Transplant Programs, 1653 West Congress Parkway, Room 201 Jones, Chicago, IL 60612-3833, USA; Tel.: (312) 942 6242; Fax: (312) 942 7114.

Fourth International Congress of the Middle East Society for Organ Transplantation, 30 October–2 November 1994, Isfahan, Iran

The 4th International Congress of the Middle East Society for Organ Transplantation (MESOT) will take place from 30 October to 2 November 1994 in Isfahan, Iran. The program will include "state of the art" lectures, symposia, oral presentations, and posters. Abstracts are to be submitted before 1 March 1994.

For further information, please contact:
Dr. I. Fazel, The Academy of Medical Sciences of Iran, P. O. Box 19395/4655, Pasdaran Avenue, Teheran, Iran; Tel.: (98-21) 2520389; Fax: (98-21) 8006967.