Recent Progress in Blood Coagulation and Thrombosis Research

Selected Symposia of the 4th Meeting of the European and African Division of the International Society of Haematology, Istanbul, September 5-9, 1977 (Part I)

Recent Progress in Blood Coagulation and Thrombosis Research

Editor: O.N. Ulutin, Istanbul
70 figures and 33 tables, 1978

S. Karger Basel Munich Paris London New York Sydney

[Bibliotheca Haematologica, No. 44

Series Editor: A. Hssig, Bern

No. 43: Comparative Leukemia Research 1975
7th International Symposium on Comparative Leukemia Research, Copenhagen 1975
Editors: J. Clemmesen, Copenhagen, and D.S. Yohn, Columbus, Ohio

National Library of Medicine Cataloging in Publication
International Society of Hematology. European and African Division
Recent progress in blood coagulation and thrombosis research: selected symposia of the 4th meeting of the European and African Division of the International Society of Haematology, Istanbul, September, 5-9, 1977 (part 1)
(Bibliotheca haematologica; no. 44)
I. Ulutin, Orhan N., ed. II. Title: Symposia on recent progress in blood coagulation and thrombosis research III. Title IV. Series
W1 BI412 no.44WH 310 I568r 1977
ISBN 3-8055-2896-5

All rights reserved.
No part of this publication may be translated into other languages, reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying, recording, microcopying, or by any information storage and retrieval system,
Contents Part I

Recent Progress in Blood Coagulation and Thrombosis Research

Selected Symposia of the 4th Meeting of the European and African Division of the International Society of Haematology, Istanbul 1977 (Part I).

For the contributions published as Part II in Bibliotheca Haematologica, No. 45, see table of contents on page VII of this volume.

Preface IX

Symposium on Vitamin K-Dependent Proteins

Chairman: W.H Seegers, Detroit, Mich.

Owen, CA., jr. (Rochester, Minn.): Vitamin K-Dependent Proteins: Historical Development 1

Walz, D.A. (Detroit, Mich.): Comparative Aspects of Prothrombin Activation 8


Hassouna, H.I. and Leach, R.E. (Detroit, Mich.): Immunological Characterization and Quantitation of Bovine Vitamin K-Dependent Proteins 28

Downing, M.R.; Elion, J.; Butkowski, R.J., and Mann, K.G. (Rochester, Minn.): Thrombin: Structural Features Related to Specificity 39

Vermeer, C; Hemker, HC, and Soute, B.A.M. (Maastricht): The Synthesis of Prothrombin from Its Precursor Protein 54


Esnouf, M.P. (Oxford): Current Perspectives of Factor X 75

Penner, J.A. (Ann Arbor, Mich.): Prothrombin Complex Concentrates 81


Hewett-Emmett, D. (Bristol): Amino Acid Sequence Homology and the Vitamin K-Dependent Proteins 94

Contents VI
Symposium on Fibrinogen and Disfibrinogenemia
Chairmen: B. Blombck and D. Menache, Stockholm
Blombck, B. (Stockholm): Introduction 105
Henschen, A.; Lottspeich, F.; Tpfers-Petersen, E., and Warbinek, R. (Martinsried): On the Primary Structure of Fibrinogen 106
Hessel, B.; Kudryk, B., and Blombck, B. (Stockholm): Domains in Fibrinogen of Importance for the Fibrinogen-Fibrin Formation 117
Sixma, J.J.; Akkerman, J.W.; Oost, B. van, and Gorter, G. (Utrecht): Intracellular Localization of Fibrinogen in Human Blood Platelets 129
Seghatchian, M.J. (Edgware, Middx.): Interaction between FVIII and Fibrinogen 139
Solum, N.O.; Fyrand, O., and Kierulf, P. (Oslo): Cold-Insoluble Globulin and Its Interaction with Fibrinogen 145
Godal, H.C.; Brosstad, F, and Kierulf, P. (Oslo): The Ethanol Gelation Test and Thrombosis 156
Heene, D.L. and Matthias, F.R. (Giessen): Detection of Thrombin-Induced Fibrinogen Derivatives in Thrombotic States 161
Owen, CA., fr. and Bowie, E.J.W. (Rochester, Minn.): Induced Chronic Intravascular Coagulation in Dogs 169
Symposium on Antiplatelet Therapy: Rationale and Results
Chairmen: P. Didisheim, Rochester, Minn., and K. Breddin, Frankfurt a.M.
Didisheim, P. (Rochester, Minn.): Pathophysiology of Platelet-Vessel Interactions... 174
Hardisty, R.M. (London): Anti-Platelet Drugs: Rationale for Use 181
Genton, E. (Hamilton, Ont.): Cardiac Thromboembolism: Evidence for Role of Platelets and Value of Platelet Suppressant Therapy 188
Breddin, K. (Frankfurt a.M.): Use of Platelet Inhibitor Drugs in Peripheral and Cerebral Vascular Disorders 197
Author Index 206
Subject Index 207

Contents PartII VIII

Recent Progress in Cell Biology:
Leukocytes and Platelets
Selected Symposia of the 4th Meeting of the European and African Division of the International Society of Haematology, Istanbul 1977 (Part II).
Published in Bibliotheca Haematologica, No. 45.

Preface IX

Symposium on the Biochemistry of Platelets
Chairman: E.F. Luscher, Berne

Feinstein, M.B. (Farmington, Conn.): Role of Ca2+-Ions in the Regulation of Platelet Function 1
Hornstra, G and Haddeman, E. (Vlaardingen): Diet-Induced Changes in Arterial Thrombosis not Primarily Mediated by Arachidonate Peroxidation 9
Jenkins, C.S.P. and Clemetson, K.J. (Amsterdam): Membrane Glycoproteins in Normal and Pathological Platelets 14
Solum, N.O. and Hagen, I. (Oslo): Membrane Receptors in Platelet Adhesion and Secretion 22

Luscher, E.F. (Berne): Acquired Properties of the Activated Platelet Membrane 28

Symposium on Actual Questions of the Clinical Morphology of the Bone Marrow
Chairmen: R. Burkhardt, Munich, and M. Block, Denver, Colo.

Burkhardt, R. (Munich): Introduction 34
Burkhardt, R.; Zettl, K., and Bartl, R. (Munich): Significance of Non-Specific Changes of the Bone Marrow Tissues. From the Bioptic Viewpoint 38
Block, M. (Denver, Colo.): Significance of Nonspecific Changes in the Marrow 50
Burkhardt, R.; Bartl, B.; Sandel, P., and Binsack, T. (Munich): Generalized Reaction of Bone Marrow in Neoplastic Disorders 55
Mahmood, T.; Block, M., and MacMaster, M. (Denver, Colo.): Significance of Bone Marrow Involvement in Non-Hodgkin's Lymphoma 65
Duhamel, G.; Najman, A.; Gorin, N.C., and Stachowiak, J. (Paris): Lymphomas of the Spleen and Bone Marrow Lymphoid Nodules 71
Bartl, R.; Burkhardt, R.; Gierster, P.; Sandel, P., and Fateh-Moghadam, A. (Munich): Significance of Bone Marrow Biopsy in the Multiple Myeloma 81

Contents VIII

Duhamel, G.; Muratore, R.; Bryon, P., and Horschowski, N. (Paris): Histological Prognosis in Aplastic Anaemia 87
Velde, J. te and Haak, H.L. (Leiden): Aplastic Anaemia in Adults. Further Evidence Concerning the Significance of the Inflammatory Infiltrate in Methacrylate-Embedded Bone Marrow Biopsy Specimens 96
Meusers, P.; Knig, E., and Brittinger, G. (Essen): Aplastic Anaemia: Clinical Course and Histologic Picture 103
Demmler, K. and Burkhardt, R. (Munich): Relations between Fatty Tissue, Cancellous Bone and Vascular Pattern of the Iliac Bone in Aplastic Anaemia 109
Symposium on Membrane Markers and Antigen of Human Lymphocytes and Leukemic Cells  Chairmen: M. Seligmann and A. Muftioglu, Istanbul
Muftioglu, A. (Istanbul): Membrane Markers of Normal Human Lymphocyte Subpopulations 118
Berkel, A.I. (Ankara): Membrane Markers in Acute Lymphoblastic Leukemia 131
Janossy, G; Greaves, M.F.; Roberts, M.; Goldstone, A., and Hoffbrand, A. V. (London): Application of Anti-ALL Serum and Other Cell Markers for Leukaemia Diagnosis and Analysis of Human Stem Cells 136
Symposium on the Cell Biology of Acute Leukemia  Chairman: G Astaldi, Amsterdam, and A. O. avdar, Ankara
zger Topuz, ; avdar, A.O., and Astaldi, G. (Ankara): Human Serum Thymic Factor in Detecting Acute T Cell Leukemia 152
Janossy, G. and Greaves, M.F. (London): Diagnostic Use of an Antiserum Made against Acute Lymphoid Leukaemia Associated Antigen 156
Hotowiecki, J.; Hotowiecka, B.S., and Japa, J. (Katowice): Monitoring of Cell Surface Marker Characteristics in Acute Leukemia during Cyclic Chemotherapy 161
Masera, P. and Gavosto, F. (Torino): Kinetically Oriented Manipulation of Drug Management in Acute Leukemia 168
Author Index 173
Subject Index 174
Preface
In September 1977, Istanbul hosted a meeting of the European and African Division of the International Society of Haematology The meeting was attended by numerous well-known investigators, who contribute; their concepts and original data to provide an up-date of knowledge on blood coagulation, thrombosis research, leukocytes and platelets. The symposia covered topics of high current interest, and papers ranged in focus from pathological and clinical aspects to therapeutic applications.
Fifty-seven papers from these symposia have been collected for publication as Nos. 44 and 45 in the 'Bibliotheca Haematologica' series.
In selecting and organizing the papers for No. 44, we have attempted to
provide a record of the most important progress in blood coagulation and thrombosis research. Much original data has been included, particularly on the subject of vitamin K-dependent proteins. Other papers offer a view of new work on the biochemical and physicochemical characteristics of the fibrinogen molecule and the thrombus formation. Particularly exciting is the report of an experimental investigation on DIC. We have also included papers from a symposium on antiplatelet therapy, where the rationale of this therapy was summarized along with a survey of recent clinical results.

No. 45 concentrates on cell biology with an emphasis on studies of leukocytes and platelets. Papers have been selected to represent four symposia. The first covers recent advances in the area of platelet biochemistry. In the second, the clinical morphology of bone marrow is discussed through papers which consider current questions and problems. Human lymphocytes and leukemic cells are the topic of the third symposium, which presents work on membrane markers and antigens. A final section on cell biology covers the immunology of lymphocytes and leukocytes and discusses their changes during acute leukemia.

Workers in the field will recognize many of the names listed in the table of contents. We hope that the presentation of their work has preserved the excitement which accompanied the meeting of the International Society of Haematology.

As editor, I would like to extend my sincere appreciation to the organizers of these symposia, to the authors who have submitted these valuable papers, and to the publishers S. Karger for their great help in producing these two volumes.

Orhan N. Ulutin