Drug Dosage. The authors and the publisher have exerted every effort to ensure that drug selection and dosage set forth in this text are in accord with current recommendations and practice at the time of publication. However, in view of ongoing research, changes in government regulations, and the constant flow of information relating to drug therapy and drug reactions, the reader is urged to check the package insert for each drug for any change in indications and dosage and for added warnings and precautions. This is particularly important when the recommended agent is a new and/or infrequently employed drug.

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, without permission in writing from the publisher.

© Copyright 1994 by S. Karger AG, P.O. Box, CH-4009 Basel (Switzerland)
Printed on acid-free paper.
ISBN 3-8055-5862-7

Contents

Preface VII

Introduction: Leukocyte-Reduced Blood Components 1
Lane, T.A. (La Jolla, Calif.)
Leukocyte Depletion of Red Cells 6
Sirchia, G.; Rebulla, P.; Parravicini, A. (Milano)
Preparation and Clinical Utility of Leukocyte-Reduced Platelets 18
Anderson, K.C. (Boston, Mass.)
Prevention of HLA Alloimmunization by Using Leukocyte-Depleted Components 29
Andreu, G.; Dewailly, J. (Paris)
Prevention of Cytomegalovirus Infection by Using Leukocyte-Depleted Components 41
Sayers, M. (Seattle, Wash.)
Impact of Leukodepletion on Infections Other than Cytomegalovirus 53
Dodd, R.Y. (Rockville, Md.)
Immunosuppression and Leukocytes 64
In the past few years there has been a remarkable increase in our understanding of the effects caused by donor (passenger) leukocytes in transfused cellular blood components, and in their prevention by leukocyte depletion technology. The swiftness of the growth of knowledge in this field has brought about equally rapid changes in standards of practice and in the practical technology of leukocyte depletion. In addition, the apparent ease with which new filtration technology has prevented some established adverse effects of leukocytes has led some individuals to advocate universal prestorage leukocyte depletion of cellular blood components, a position clearly unjustified by our current knowledge base. These events and the associated controversies have made it increasingly difficult for health care professionals who are not devoted to this field to distinguish well-established knowledge from speculation, and to distinguish scientifically based, accepted practice in this field from practice recommendations based on little or not evidence.

Fortunately, there have been a number of occasions in which the leading researchers and clinicians who are active in the field of leukocyte-associated adverse effects in their prevention, have gathered to share their research and opinions. Following one of the most widely attended international conferences on leukocyte depletion, several of the participants resolved to contribute their recent research efforts to a comprehensive, up-to-date, definitive reference work on this topic. The current volume is the product of the work of the leading investigators in the field of leukocyte depletion. This volume is intended to be rewarding, if not essential reading for a wide variety of health care professionals.
whose responsibility and interest involves blood transfusion. It is intended to give the reader an extensively detailed, contemporary summary of the research on leukocyte depletion, as well as a historical perspective on the way in which the field of leukocyte depletion has developed. This will permit a reader who is unfamiliar with this field to understand the scientific basis of current practices, the major controversies regarding leukocyte depletion, and the directions of current research. Equally important, it will permit the reader to soundly evaluate new research results and to be discriminating when presented with rational but scientifically unfounded claims. For the more experienced reader, this volume will serve as a landmark with respect to the current state of knowledge of leukocyte depletion, it will provide a summary of the views and opinions held by their contemporaries, and it will serve as a useful resource for the primary literature related to this field.

Thomas A. Lane, La Jolla, Calif.

Preface VIII