

Contents

Foreword vii
Preface xi
List of Contributors xii

Section I Developmental Hematology

1 **A Historical Review** 1
Howard A. Pearson

2 **Hematopoiesis** 10
Amber M. D’Souza, Pedro A. de Alarcón, and Mervin C. Yoder

3 **The Development of the Human Immune System** 25
Amy E. O’Connell, Angela E. Rivers, and William B. Slayton

Section II Bone Marrow Failure and Immune Disorders

4 **Bone Marrow Failure Syndromes** 43
Amy E. Geddis, Meera Srikanthan, and Katie Bergstrom

5 **Immunodeficiency Diseases of the Neonate** 62
Julie J. Kim-Chang, James L. Wynn, Matthew A. Saxonhouse, and John W. Sleasman

Section III Erythrocyte Disorders

6 **Newborn Genetic Screening for Blood Disorders** 93
Parul Rai, Ewelina K. Mamcarz, and Jane S. Hankins

7 **A Guide to Identifying the Cause of Anemia in a Neonate** 113
Robert D. Christensen

8 **Anemia of Prematurity and Indications for Erythropoietin Therapy** 120
Pamela J. Kling

9 **Hemolytic Disease of the Fetus and Newborn**
Maternal Antibody Mediated Hemolysis 133
Mary Elizabeth Ross, Stephen P. Emery, Pedro A. de Alarcón, and Jon F. Watchko

10 **Neonatal Hemolysis** 155
Bertil Glader and Aditi Kamdar

11 **Polycythemia and Hyperviscosity in the Newborn** 185
Ted S. Rosenkrantz and William Oh

Section IV Platelet Disorders

12 **Approach to the Thrombocytopenic Neonate** 201
Emöke Deschmann and Martha C. Sola-Visner

13 **Acquired Thrombocytopenias** 210
Patricia E. Davenport and Martha C. Sola-Visner

14 **Fetal and Neonatal Alloimmune Thrombocytopenia** 223
W. Beau Mitchell and James B. Bussel

15 **Congenital Thrombocytopenias and Thrombocytopathies** 243
Amy E. Geddis

Section V Leucocyte Disorders

16 **Eosinophils and Neutrophils** 261
Kurt R. Schibler and Robert D. Christensen

Contents

17 **Functional Phagocyte Disorders in the Neonate** 279
Thomas F. Michniacki and Kelly Walkovich

Section VI Hemostatic Disorders

18 **Bleeding Disorders** 293
Manuela Albisetti and Paul Monagle

19 **Neonatal Thrombosis** 312
Gary Woods and Matthew A. Saxonhouse

Section VII Neonatal Transfusion Medicine

20 **Transfusion Practices** 329
Cyril Jacquot, Yunchuan D. Mo, and Naomi L. C. Luban

Section VIII Neonatal Oncology

21 **Neonatal Leukemia** 367
Erin M. Guest, Catherine Garnett, Irene Roberts, and Alan S. Gamis

22 **Neonatal and Perinatal Solid Tumors** 382
Kevin F. Ginn, Jaszianne A. Tolbert, Glenison Samuel, J. Allyson Hays, and Alan S. Gamis

Section IX Miscellaneous

23 **Disorders of the Fetomaternal Unit** 401
Eric J. Werner, Nancy C. Chescheir, and Randall G. Fisher

24 **Reference Intervals in Neonatal Hematology** 440
Robert D. Christensen

Index 470

Color plates are to be found between pages 242 and 243.