



VISUAL GUIDE TO
**NEONATAL
CARDIOLOGY**

EDITED BY
Ernerio T. Alboliras, Ziyad M. Hijazi,
Leo Lopez, and Donald J. Hagler

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Visual Guide to Neonatal Cardiology

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We would like to dedicate this book to our spouses, families, colleagues, trainees both past and present, sonographers, and friends. We would also like to thank the international group of notable authors of this book for their exceptional scholarly contributions to the understanding of the complexity of neonatal heart disease.

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Preface

Majority of cardiac defects manifest themselves in the neonate. The uniqueness of their cardiovascular issues and the complexities of the spectra of cardiac defects in this age group necessitate that this teaching medium be made available. This book is the product of the cumulative efforts of 103 pediatric cardiologists, cardiac surgeons, pathologists, radiologists, sonographers, scientists, and others who are authorities in the care of newborns with heart disease.

This book discusses all aspects of neonatal heart disease in a comprehensive, clear, and succinct way. Each section will be valuable, not only for its textual content but also for the use of figures, charts, plates, graphs, illustrations, and tables. The use of these visual aids will make it easier for the reader to understand the corresponding topic. In many sections, the written text may be juxtaposed with illustrations, photographs of a patient, chest roentgenograms, electrocardiograms, echocardiograms, angiograms, computed tomography, magnetic resonance imaging, pathologic specimens, and other relevant visual aids.

The 71 chapters have been grouped into seven major parts. The first part, **Prenatal and Perinatal Issues**, includes new principles in cardiac embryogenesis and embryopathy and topics on the fetal heart and how they manifest in the neonatal heart. The second part, **General Neonatal Issues**, includes epidemiology, transitional circulation, approach to history-taking and physical examination of the newborn suspected to have cardiac disease, and discussions on the common

manifestations – cyanosis, tachypnea, hypoperfusion, and dysmorphism. The third part, **Diagnostic Procedures**, has seven chapters that discuss the various tools for an accurate and comprehensive diagnosis of neonatal heart disease. The fourth part, **Specific Morphologic Conditions**, comprises 41 chapters that provide comprehensive discussions on the various cardiac defects that are made easy to understand through generous use of figures and tables. The fifth part, **Rhythm Disturbances in the Newborn**, provides a four-chapter discussion of neonatal rhythm disturbances, their presentation, evaluation, and management. The sixth part, **Special Issues in the Newborn**, includes important topics presented generously with visual aids. These are balloon atrial septostomy, interventional therapeutic procedures, the Hybrid procedure, neonatal cardiac surgical procedures, extracorporeal membrane oxygenation, ventricular assist device, cardiac transplantation, and postoperative care. The seventh and last part, **Neonatal Formulary**, details the various cardiac medications used in the neonatal age group as well as provides guidance for nutritional care.

This book will hopefully be a major resource for pediatric cardiologists, neonatologists, residents, fellows, sonographers, nurses, and other allied professionals who take care of newborns with heart disease.

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