Case-Based Textbook of Echocardiography and Cardiac MRI

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Case-Based Textbook of Echocardiography and Cardiac MRI

Second Edition

Springer

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ISBN 978-3-032-02268-4 ISBN 978-3-032-02269-1 (eBook)
https://doi.org/10.1007/978-3-032-02269-1

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Preface

Echocardiographic Imaging is embedded in our daily cardiology practice as an essential diagnostic and prognostic tool. Cardiac magnetic resonance (CMR) is a complementary modern imaging modality that provides unparalleled insights into the morphology and function of the heart with the unique capability of providing myocardial tissue characterization. Both CMR and echocardiography can provide critical information about the cardiovascular system's anatomy, function, and hemodynamics. However, fundamental differences exist in their image acquisition physics, techniques, and clinical applications.

Many excellent cardiovascular imaging educational materials are available generally looking at cardiovascular diagnosis with a single imaging modality. Few cardiovascular textbooks provide the detailed review of both echocardiography and CMR, and the wealth of comparative strengths and limitations of each imaging modality in a variety of cardiovascular diseases.

This second edition of the "Case-Based Textbook of Echocardiography," entitled *Case-Based Textbook of Echocardiography and Cardiac MRI*, contains 62 chapters, categorized into 12 parts, with expanded scope to include the CMR field. An additional 14 chapters including a dedicated CMR and imaging in adult congenital heart disease. We provide a unique platform for readers to familiarize themselves with and compare these imaging modalities' strengths and clinical utility.

This textbook is designed to cater to a wide range of readers, from beginners to advanced cardiac imagers and sonographers. Each disease-based chapter presents a case, followed by an overview of the subject and diagnostic imaging criteria. The chapter then concludes with the case resolution and self-assessment questions. We include high-quality images and diagrams, along with a structured, bulleted text, to enhance the learning experience.

As with the first edition, we are honored to have expert national and international contributors. Their selfless dedication to the cardiology worldwide has made the completion of this textbook possible. We are pleased to have Dr. Anita M. Kelsey, an experienced Duke Cardiologist and Echocardiographer, as a new editor of this textbook.

We hope this book provides insight into the diagnostic imaging features of a broad range of cardiovascular diseases to all cardiovascular imaging professionals and cardiologists, considering the differences and similarities between Echocardiography and CMR.

Acknowledgments: We are deeply grateful to all contributors for their invaluable insights. Special thanks go to the editorial Springer Nature publishing team, our patients and organizations (MedStar Health, Duke Health, Duke Cardiac MR lab, Rajaie Cardiovascular Medical & Research Center), and Ariana Rohanifar, who contributed to the chapters' figures with her artistic background. We invite you to join us on this journey and explore the fascinating role of cardiac imaging of the cardiac patient.

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