
Preface

This textbook came about as a result of my association with some very talented pediatric pulmonologists. Much of what I have learned about pediatric pulmonary diseases is the result of serving as the radiologist for the New England Pediatric Pulmonary Consortium for the past 30 years. There have been many conversations with both pediatric pulmonologists and pediatric radiologists and trainees about what is needed as a general reference source of pediatric pulmonary imaging. This book is an attempt to address those needs. Radiologists may find a new approach in the organization of the text. Clinicians hopefully will find a clinically “user-friendly” imaging resource.

The first section of the textbook is a series of algorithms for the most common clinical scenarios presenting to pediatric pulmonologists or pediatricians. The branch points in the algorithms serve as references to diseases discussed elsewhere in the book. There are also several chapters dedicated to specific topics, such as lung transplantation and fetal imaging.

Rather than assuming a priori knowledge or suspicion of the diagnosis, this text can lead the reader to a differential diagnosis based on clinical parameters and thus direct reading to the relevant diagnoses. If the readers know their topic of interest, the chapters are organized for easy access to a broad range of abnormalities.

There is an emphasis on plain film imaging as well as high technology imaging in this textbook. There are several reasons for this. Even in the current era of widespread use of CT, MR, SPECT, fusion imaging, etc., approximately 70% of the images acquired in pediatric centers are plain films. We also find ourselves in an era where reliance on ancillary data, such as imaging, is perceived to have caused deterioration in clinical skills [1, 2]. This has led to an increased reliance on imaging in patient care. For most pediatric pulmonary issues, this begins with a plain film. In addition, with the heightened concern about radiation exposure, especially from CT, there is need to garner as much information with as little radiation exposure as possible. Even imaging within ALARA guidelines [3, 4], the best case is to avoid additional imaging, especially CT, if the answer is available elsewhere.

Finally, just as our colleagues have recognized deterioration in their clinical skills [1, 2], many radiologists who are trained in the pre-high-tech era are seeing a similar deterioration in plain film interpretive skills. This book will hopefully help us all to sharpen those skills and solidify our confidence in our use of those skills. There are many situations, however, in which the only avenue to the correct diagnosis is with advanced imaging or combinations of different imaging approaches. This is also covered in depth.

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<http://www.springer.com/978-1-4419-5871-6>

Imaging in Pediatric Pulmonology

Cleveland, R.H. (Ed.)

2012, XIV, 390 p., Hardcover

ISBN: 978-1-4419-5871-6