

Pediatric Allergy

A Case-Based Collection
with MCQs, Volume 1

Nima Rezaei
Editor

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Preface

Immunology has found its way well into the practice of pediatrics. Years after publication of the first pediatric text books, footprints of immunology can be found in diagnosis and practice of almost all pediatric disorders. Delivering a magnificent contribution is the advent of novel diagnostic methods of molecular genetics in pediatric practice. Genetic diagnosis is now an indispensable part of the routine practice of primary immunodeficiency diseases, inborn metabolic errors, and monogenic malformations, making its way into diagnostic criteria of some as well. It won't go far wrong to state that the science of pediatrics has entered an era of interdisciplinary practice with genetics and immunology. The rapid flow of discovery of biological drugs during the last decade, availability of whole exome (and genome) sequencing methods, and the outstanding boost in the rate of success of hematopoietic and solid organ transplantation are all affirmative to this notion. Thanks to molecular genetic methods, an increasing number of the newly introduced monogenic diseases are being characterized, donors and recipients are being cross-matched using intricate genotype:phenotype cross matching, and immunotherapy for allergy benefits from state-of-the-art characterization of culprit epitopes in peptide scale. This book series tries to strike a balance between cutting-edge science of immunology and clinical practice of pediatrics, through a series of meticulously chosen case discussions, presented by pediatric practitioners and immunology experts.

This three-volume book series is a collection of well-presented case discussions in the field of pediatric immunology and allergy. Volume I, *Pediatric Allergy*, is focused on diagnosis and practice of allergy, asthma, atopy, and relevant disorders. Volume II, *Pediatric Immunology*, thoroughly addresses primary immunodeficiency disorders, and finally, Volume III, *Pediatric Autoimmunity and Transplantation*, is a constellation of cases in autoimmune and rheumatologic disorders of childhood, secondary immunodeficiency conditions, and real cases with hematopoietic and solid organ transplantation.

Volume I of this series is dedicated to represent some of the many faces of hypersensitivity disorders, from food and drug allergy to allergic rhinitis, atopic dermatitis, to asthma, and finally anaphylaxis as a fatal outcome of all hypersensitivity

reactions. Starting by Chapters 2–12, with allergic rhinitis as the prototype of allergic disorders, we move onto Chapters 13–25, focused on case discussions on food allergy, and Chapters 26–36 presenting case discussions on urticaria and atopic dermatitis. Completing the picture of atopy triad, Chapters 37–44 give a glimpse over state-of-the art guidelines for asthma diagnosis and management. In Chapters 45–53, the reader is introduced to drug hypersensitivity reactions, as second most common cause of allergic reactions in the pediatric population. The final chapters of this volume, from Chapters 54–60, are dedicated to anaphylaxis, a potentially lethal systemic hypersensitivity reaction, and a must-know for every physician practicing in pediatric care.

The *Pediatric Immunology and Allergy Series* is the result of a multinational collaboration of more than 350 scientists from more than 100 well-known universities/institutes worldwide. I would like to hereby acknowledge the expertise of all contributors and their generous devotion of time and effort in preparing each of the 290 chapters of the series. I would like to extend my gratitude to the Springer publication for providing me the opportunity to publish the book.

Hopeful I remain that this book provides an exemplary touch to the fast-growing intersection of pediatric medicine and basic immunology, and a useful guide for pediatric practitioners worldwide.

Tehran, Iran

Nima Rezaei

Acknowledgment

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Nima Rezaei

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