

HOSPITAL PHYSICIAN®

PEDIATRIC MEDICINE BOARD REVIEW MANUAL

Table of Contents

Part 3:

The Challenge of Attention-Deficit/ Hyperactivity Disorder

Contributor: Mark L. Wolraich, MD

CMRI/Shawn Walters Professor of Pediatrics, Director, Child Study Center, University of Oklahoma Health Sciences Center, Oklahoma City, OK

Introduction	1
Etiology	1
Epidemiology	2
Assessment and Diagnosis	2
Treatment	5
References	10

Part 4:

Childhood Asthma

Contributor: Leonard B. Bacharier, MD

Assistant Professor, Department of Pediatrics, Division of Allergy and Pulmonary Medicine, Washington University School of Medicine and St. Louis Children's Hospital, St. Louis, MO

Introduction	12
Evaluation of a Child with Asthma Symptoms	12
Severity-Specific Approach to Treatment	15
References	21

Cover Illustration by Ditto Nowakoski, ditto@portraitsbyditto.com

PEDIATRIC MEDICINE BOARD REVIEW MANUAL

STATEMENT OF EDITORIAL PURPOSE

The *Hospital Physician Pediatric Medicine Board Review Manual* is a study guide for residents and practicing physicians preparing for board examinations in pediatrics. Each quarterly manual reviews a topic essential to the current practice of pediatric medicine.

PUBLISHING STAFF

PRESIDENT, GROUP PUBLISHER

Bruce M. White

EDITORIAL DIRECTOR

Debra Dreger

EDITOR

Robert Litchkofski

ASSISTANT EDITOR

Tricia Faggioli

EXECUTIVE VICE PRESIDENT

Barbara T. White

EXECUTIVE DIRECTOR OF OPERATIONS

Jean M. Gaul

PRODUCTION DIRECTOR

Suzanne S. Banish

PRODUCTION ASSISTANT

Kathryn K. Johnson

ADVERTISING/PROJECT MANAGER

Patricia Payne Castle

SALES & MARKETING MANAGER

Deborah D. Chavis

NOTE FROM THE PUBLISHER:

This publication has been developed without involvement of or review by the American Board of Pediatrics.



Endorsed by the
Association for Hospital
Medical Education

Copyright 2004, Turner White Communications, Inc., 125 Strafford Avenue, Suite 220, Wayne, PA 19087-3391, www.turner-white.com. All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, mechanical, electronic, photocopying, recording, or otherwise, without the prior written permission of Turner White Communications, Inc. The editors are solely responsible for selecting content. Although the editors take great care to ensure accuracy, Turner White Communications, Inc., will not be liable for any errors of omission or inaccuracies in this publication. Opinions expressed are those of the authors and do not necessarily reflect those of Turner White Communications, Inc.

next page ↓

Childhood Asthma

Leonard B. Bacharier, MD

INTRODUCTION

Asthma is the most common chronic disease of childhood, affecting nearly 9 million children under age 18 years. Its burden on society is tremendous. In 1998, asthma accounted for nearly 6 million outpatient visits, more than 850,000 emergency department visits, more than 174,000 hospitalizations (more than any other condition in children), and 246 deaths¹ and resulted in health care costs in excess of \$12 billion.² Furthermore, asthma causes children to miss over 10 million school days each year. The prevalence of asthma in children has increased by 55% in the past 20 years, peaking at 8.2% of children aged 5 to 14 years in 1995. Recent data suggest that the current prevalence is approximately 7%.¹

Over the past decade, it has become firmly established that asthma is an inflammatory condition involving the airways.³ The recognition of chronic airway inflammation as the pathophysiologic process underlying asthma has led to increased use of anti-inflammatory therapies and a consequent improvement in asthma control and quality of life for many patients. This manual reviews the diagnostic evaluation of children with asthma symptoms and discusses a guideline-based approach to therapy.

EVALUATION OF A CHILD WITH ASTHMA SYMPTOMS

CASE PRESENTATION

An 8-year-old boy presents for evaluation of recurrent episodes of wheezing and a chronic cough. He was born at term following an uncomplicated pregnancy, labor, delivery, and neonatal course. He remained well until 5 months of age when he developed a coryzal illness that progressed to cough, wheeze, and respiratory distress. He was hospitalized for 3 days due to increased work of breathing and hypoxemia. Nasopharyngeal swab was positive for respiratory syncytial virus. He was treated with inhaled albuterol and supplemental oxygen. Symptoms resolved entirely over the ensuing

month. He remained well until 9 months of age when he developed wheezing during a viral respiratory tract infection. Albuterol by inhalation provided relief of symptoms. For the next few years, he would develop wheezing during most respiratory tract infections and would routinely improve with albuterol and occasional administration of oral corticosteroids. Over the past 2 years, he has experienced coughing 3 days per week on average. He becomes short of breath during soccer practice, occasionally with coughing. Symptoms resolve with rest and/or albuterol by inhalation. He awakens at night with cough and wheezing 3 nights per month and occasionally receives albuterol for these symptoms.

Review of systems is positive for constant nasal congestion and frequent coryza without seasonal variation. The patient sneezes frequently. He had eczema as an infant, which has resolved over time. There have been no witnessed choking episodes. He denies symptoms of gastroesophageal reflux. His growth and development have been normal and appropriate. He has had infrequent episodes of otitis media and sinusitis. He had pneumonia at 4 years of age.

Family history reveals that the patient's mother has asthma and allergies and his father has hay fever. There is no family history of cystic fibrosis, immunodeficiency, or early infant death. The home environment is notable for wall-to-wall carpeting throughout the home.

- What diagnostic possibilities guide the evaluation of the child presenting with symptoms of frequent cough and wheeze?
- What evaluations comprise an asthma workup?

DIFFERENTIAL DIAGNOSIS

The most common presentation of asthma is wheezing, with or without cough. Cough-only presentations exist, often referred to as cough-variant asthma, but are seen less frequently. Other common presenting complaints include shortness of breath (with or without exertion), chest tightness, and air hunger. Given the nonspecific nature of the common symptoms of asthma—cough and wheeze—and the high frequencies with which they appear in children, clinicians must consider causes other than asthma when a patient presents