Pediatric Endocrinology

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The fields of endocrinology and diabetes are growing at a fast pace. Although most of the new drug discoveries are in the field of diabetes, the field of endocrinology has made steady progress in our understanding of the pathophysiology and management of many other disorders. Optimal outcomes in pediatric endocrinology disorders, however, hinge on timely diagnosis. Primary care physicians, including general pediatricians, family physicians, and pediatric nurse practitioners, are the first to evaluate and are best positioned to identify the child that is deviating from normal growth and development. Strong understanding of the differential diagnosis of these common conditions and knowledge of the required screening tests, including the nuances of performing and interpreting tests by pediatric assays, can significantly increase the confidence and comfort of pediatric clinicians. Based on this information, the primary care physician can decide whether to reassure the parent and child for a benign physiologic variant or make a timely referral to a subspecialist if warranted.

Premature adrenarche is an increasingly common occurrence and one of the main reasons for referral to pediatric endocrine offices. Differentiating premature adrenarche from true precocious puberty is the first step in evaluating these patients. The article, “Premature Adrenarche,” by Drs. Laura Novello and Phyllis W. Speiser is a detailed yet simple outline of the differential diagnosis and investigations needed to parse the benign from the more harmful etiologies.

Although early breast development may be the first sign of true precocious puberty in a girl, it may also represent a benign process. The article, “Premature Thelarche,” by Drs. Aditi Khokhar and Angela Mojica reviews the pathophysiology and currently available tools to differentiate the two conditions. Distinguishing the two disorders allows the primary care physician to reassure the family when a patient has premature thelarche and investigate and timely refer to an endocrinologist when precocious puberty is suspected.

On the other end of the spectrum are patients with delayed puberty. Pubertal examination should be an important part of a child’s routine examination. Long gaps between pubertal examinations may lead to a missed opportunity for diagnosing delayed puberty in a teenager. Drs. Alyssa M. Dye, Grace B. Nelson, and Alicia Diaz-Thomas in their article, “Delayed Puberty,” discuss the differential diagnosis and their clinical and laboratory findings. They have also included a section on updates about our understanding of puberty and have summarized their approach to evaluating delayed puberty in user-friendly and comprehensive flowcharts.

Irregular menstrual cycle is one of the most common presenting complaints for teenage girls in a pediatric endocrine practice. The differential diagnosis is broad and they are often managed by a wide variety of providers including pediatricians, adolescent medicine specialists, pediatric gynecologists, and endocrinologists. Polycystic ovary syndrome in young girls is a common cause of irregular menstrual cycles and an area of active research for its pathophysiology and optimal treatment. The article, “Menstrual Irregularities,” by Drs. Christy Foster and Hiba Al-Zubeidi overviews the various causes, definitions, diagnostic criteria, pathophysiology, and treatment options.

Growth is a vital part of a child’s development pattern and offers a window into his or her overall health or potentially indicates an underlying disorder. Regular growth monitoring using accurate measurements allows the pediatrician to track a child’s growth.
Guest Editorial

and be alerted about an abnormality in a timely fashion. The article, “The Short Child,” by Dr. Armin Valdes, Jorge Cervantes, Yezika Delgado, Marisol Valdes, and Hector Granados offers a comprehensive discussion on normal and abnormal growth patterns. They also detail how the pattern of abnormality on the growth chart can be a clue toward the differential diagnoses.

The topics in this issue will hopefully serve as a reference for pediatric clinicians as they manage growth and pubertal disorders in their patients. Using the guidelines provided in these articles will ensure timely identification and evaluation of a child who is not following the expected growth or pubertal progression.

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About the Guest Editors

Amit Lahoti, MD, received his Bachelor of Medicine and Bachelor of Surgery (MBBS) degree (equivalent to medical school degree in United States) from the Delhi University, India. He then moved to US and received his pediatrics training from Wayne State University, Children’s Hospital of Michigan. Dr. Lahoti then specialized in pediatric endocrinology at North Shore Long Island Jewish Hospital in New York. He is board certified in pediatrics and pediatric endocrinology from the American Academy of Pediatrics. He joined the University of Tennessee Health Science Center/Le Bonheur Children’s Hospital in Memphis, TN, as an Assistant Professor in the Department of Pediatrics in 2014.

Dr. Lahoti’s clinical and research interests include acute and chronic complications of diabetes mellitus, pediatric thyroid disorders, and endocrine dysfunction in patients with hematologic disorders. He is also interested in quality improvement initiatives to reduce health care costs.

He is a member of the Pediatric Endocrine Society’s National Drugs and Therapeutics Committee. He is also the Assistant Program Director for the Pediatric Endocrine Fellowship at the University of Tennessee Health Science Center since 2014. He serves as a peer reviewer for Pediatrics in Review, Frontiers in Pediatrics, and several other journals. He also has a passion for education and is actively involved with mentoring medical students, residents, and fellows.

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Deepak Kamat, MD, PhD, is a Professor of Pediatrics, the Vice Chair of Education in the Department of Pediatrics at Wayne State University and the Designated Institutional Official for the Children’s Hospital of Michigan.

Dr. Kamat received his medical and doctorate degrees from the University of Bombay in India and then completed his residency in pediatrics and fellowship training in immunology at the University of Minnesota. He is board certified in pediatrics and in clinical and laboratory immunology.

Dr. Kamat served as the Director of the combined Medicine/Pediatrics Residency program at the University of Minnesota and as the Director of the Pediatric Residency Program at the Children’s Hospital of Michigan. He developed an international pathway for residents at the University of Minnesota and at the Children’s Hospital of Michigan. He has been honored with “Teacher of the Year” awards by medical students and residents on multiple occasions. In 2009, he received the Wayne State University Board of Governor’s Faculty Recognition Award, in 2010 he received the “National AAP Education Award,” and in 2012 he received the Excellence in Teaching Award from the President of Wayne State University.

Dr. Kamat is active in multiple national and international medical societies. He has authored and co-authored over 200 peer-reviewed manuscripts, review articles, book chapters, and case reports. He serves on the editorial board of five journals and as an ad hoc manuscript reviewer for many journals. He is one of the editors of the American Academy of Pediatrics’ first textbook of pediatrics, Textbook of Pediatric Care, and editor-in-chief for Pediatric Care Online of AAP, and Quick Reference Guide to Pediatric Care. He is co-editor of the Textbook of Global Child Health and editor for The Challenging Cases in Pediatric Diagnosis.

Dr. Kamat was a member of the Pediatric Review Committee of ACGME (Accreditation Council for Graduate Medical Education) from July 2011 through June 2017.

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