Essential Mednotes—Comprehensive Medical Reference & Review for USMLE II and MCCQE I

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The book entitled “Essential Mednotes—Comprehensive Medical Reference & Review for USMLE II and MCCQE I” by editors Jieun Kim and Ilya Mukovozov, production managers Tina Binesh Marvasti and Sydney McQueen, ThiemeType & Graphics Inc., 33rd edition 2017 (ISBN 978–1-927363–30–0) is reviewed herein.

Every year medical students face the challenge of organizing and absorbing an ever-growing body of knowledge from every discipline of medicine. A comprehensive, broad, and in-depth resource, Essential Mednotes is written for medical students to use for review for the USMLE step 2 and MCCQE 1 examinations. The book includes 31 content chapters, a small 33-page handbook titled Stat Notes, a larger 300-page Clinical Handbook, and 2 reference cards for emergency resuscitation, electrocardiograms, and common infections. Within the pediatrics chapter there is a seven-page section dedicated to genetics, dysmorphology, and metabolism.

The section on the basics of genetics describes the most common mechanisms of inheritance, methods of genetic testing, and the usefulness of whole-genome sequencing as a first-line test in some cases. To provide a framework for the understanding of the basics of dysmorphology, definitions of terminology for describing malformations are given as well as an approach to evaluating a dysmorphic child and a diagram for the physical examination. There is a useful review table that includes extensive details on several common genetic syndromes such as the three viable autosomal trisomies, Fragile X, and DiGeorge syndromes, as well as sections dedicated to Duchenne muscular dystrophy, phenylketonuria, and galactosemia. The section on metabolic disease includes a general approach to evaluating inborn errors of metabolism, a small box with an essential caveat regarding newborn screening, and a brief table

describing the broad categories of metabolic disorders including organic and amino acid disorders, carbohydrate disorders, fatty acid disorders, and “organelle” disorders (mucopolysaccharoidoses, congenital disorders of glycosylation, and lysosomal storage disorders). Throughout the rest of the text, within appropriate chapters, information about specific genetic diseases is reviewed. In neurology, for example, amyotrophic lateral sclerosis, neurofibromatosis, and differential diagnoses for ataxias, myopathies, and hypotonia reviews are included. Prenatal screening is covered with an appropriate amount of depth.

In comparison to other resources the genetics content that Essential Mednotes presents has several strengths. The overview of mechanisms of inheritance, genetic testing methods, and types of anomalies is excellent. The inclusion of the approach to the evaluation of a dysmorphic child is another strength, especially for a text billed as a USMLE review. These sections are so well done that they would be useful for genetics fellows to review on their first day of training. The overview of metabolic disorders and the helpful section on initial metabolic investigations, while brief, is broader than other texts.

One critique of Essential Mednotes' genetics content is that it is not organized for rote memorization or an essential-information-only approach to learning. While there is no bolding or indication of the key distinguishing features of many conditions, plenty of space is available for students' notes and highlighting. As genetics is a discipline that, due to the variety of diagnoses that can be made based on one or a few key features, lends itself to question-making, Essential Mednotes includes some clinical pearls in the sidebars. The table on the groups of metabolic disorders chooses breadth over depth while including several important details.

In sum, Essential Mednotes genetics content is exceptional as a resource not only for passing the USMLE examination but for its utility to its readers' future clinical practice.