Modern Pathology (2004) 17, 885

www.modernpathology.org

Book Review

Hoyer JD, Kroft SH, editors: Color Atlas of Hemoglobin Disorders: A Compendium Based on Proficiency Testing
332 pp, Northfield, Illinois, College of American Pathologists, 2003 ($150.00: CAP members: $125.00).

Modern Pathology (2004) **17,** 885. doi:10.1038/modpathol.3800097

The best attribute of this textbook is that it does not try to do too much. This is a superb textbook that fills a void for a quick reference manual for the laboratory diagnosis of hemoglobinopathies and thalassemias. More comprehensive textbooks are available for the hematologist or other physician who may be more interested in the pathophysiology and treatment of these disorders.

The atlas consists of four sections. The first section is a brief introduction to the laboratory techniques that are used for the evaluation of hemoglobin disorders. The second and third sections are composed of 69 different 'case studies' or 'dry lab challenges' compiled from College of American Pathologists (CAP) hemoglobinopathy laboratory surveys. Each case or lab challenge covers a specific hemoglobin (Hb) disorder, starting with the more common single gene disorders and ending with complex diagnostic challenges, such as various combinations of hemoglobin disorders presenting in the same patient. The final appendix section includes a list of more comprehensive textbooks, a listing of the cases used in the CAP Survey by year, and the index. I found the table of contents at the front of the atlas to be a handy quick index, as it lists the case studies and dry lab challenges by diagnosis.

Sections two and three use essentially the same format for each case or dry challenge. Each case begins with a one page introduction composed of a brief history with blood count data and other relevant laboratory values, as well as representative images of alkaline and acid hemoglobin electrophoresis. In some cases, photomicrographs showing the peripheral blood smear are also shown. Images are generally of good quality. This is followed by a discussion on the next page. Each discussion again shows the electrophoretic patterns, along with an interpretation and diagnosis, a brief discussion of the particular hemoglobin disorder, and relevant literature citations. The discussions are focused on diagnostic considerations and clinical presentation. When relevant, additional images showing the results of further diagnostic or confirmatory testing, such as high-performance liquid chromatography and/or isolectric focusing are shown. The discussions include a number of diagnostic 'pearls' such as remembering to add both the Hb A_2 fraction and the clinically insignificant variant, hemoglobin A_2', to get the total hemoglobin A_2 fraction. Such pearls are often lost in the details of more comprehensive texts.

This textbook is well suited as a training manual for pathology residents and serves as a handy bench reference for pathologists and laboratory technologists involved in diagnostic testing and interpretation of hemoglobin disorders.

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