DISEASES OF THE LIVER AND BILE DUCTS

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DISEASES OF THE LIVER AND BILE DUCTS

***A PRACTICAL GUIDE
TO DIAGNOSIS AND TREATMENT***

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To my parents, my wife, Catherine, and children, Jonathan, David, and Victoria, for their patience...and to my mentors and friends: Irwin M. Arias, and Rudi Schmid for their unflinching support and guidance through the years.

George Y. Wu, MD, PhD

To my wife, Karen, and daughters, Jenna and Rebecca, and the memory of my mother, Lola Israel which continues to provide me with inspiration in all my endeavors.

Jonathan Israel, MD

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FOREWORD

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The practicing physician needs to know (and wants to know) more than ever about diseases of the liver and the biliary tract. There is surely enough emerging important information to fully warrant a well-constructed practice manual. Fortunately there is much to present, as the courses of a variety of liver diseases can now be favorably influenced. The opportunities for therapeutic intervention are exciting advancements for clinicians interested in hepatology, who heretofore were often observers with little ability to alter the natural course of acute and chronic liver diseases.

Hepatology has amply shared in the remarkable ongoing expansion of the scientific and clinical basis of medical practice. Within a quarter century, we have been given increasingly precise diagnostic tools with which to assess the liver. Developments in clinical chemistry, serology, imaging, endoscopy, and the widespread use of liver biopsy have all contributed the required tools. The ability to make secure diagnoses has been augmented. The development of liver transplantation as a successful approach to therapy has increased interest in more precise diagnosis and assessment of where the patient is in the natural history of a specific disease. The precision is of great importance in that timing for the transplantation is critical to the likelihood of success.

In this practice manual, efforts are made to provide the clinician with an understanding of the utility and limitations of the ways in which the liver is evaluated. The descriptions of tests and techniques are interwoven with outlines of the principal manifestations and the natural history of the most frequently encountered diseases of the liver. In many situations an algorithmic approach accurately presents the state of knowledge in graphic form. An algorithm based on sound observations supported by science and created by an experienced clinician is of great benefit in guiding clinical practice.

The hepatologist of today must consider a vast array of diseases. The most frequent major issues include the detection and treatment of chronic viral hepatitis B and C, assessment of drug-induced injury to the liver, diagnosis and management of the cholestatic disorders, including primary biliary cirrhosis and primary sclerosing cholangitis, evaluation of an asymptomatic or minimally symptomatic patient who is found to have an abnormality in a biochemical test or on an imaging study, and for those who have advanced disease, determining candidacy and timing for liver transplantation. The universe of recognized liver diseases continues to expand. Recent additions include nonalcoholic steatohepatitis, which is established to be a definite and quite common entity, and appreciation of the many liver diseases found in patients who are immunodeficient.

As is the case in all of medicine, our targets are ever moving. The astounding expansion of what one might know increases the focus on providing a solid base of information that one must know. Advances in virology allow precise identification of the agents that cause hepatitis A through E. Of interest has been the discovery of hepatitis G, although the importance of this virus as a cause of hepatitis remains uncertain. There has been a cascade of new information and opportunities following the discovery of the hepatitis viruses. Chronic hepatitis C and chronic hepatitis B are established major worldwide

diseases affecting astounding numbers of individuals. The search for effective ways to assess the presence and extent of hepatic injury from these viruses, coupled with efforts to prevent the spread of disease, and treat those already affected, is the major activity of hepatologists. Surely the development of effective vaccines to prevent hepatitis A and B ranks among the major accomplishments of 20th century medicine. All physicians need to know when to recommend these vaccines, which thus far have been considerably underused. It may well be possible to someday add hepatitis B to the list of diseases that have been eradicated. The prevention of chronic hepatitis B is of even more importance. Patients who are long-term hepatitis B carriers have a high risk of developing chronic ongoing liver disease, cirrhosis, and hepatocellular carcinoma. The whole chain of events can be prevented through appropriate vaccination strategies. Likewise, many individuals needlessly develop hepatitis A when the use of the effective vaccine could have prevented the illness.

There is a base of knowledge about the liver and its diseases which every clinician needs to know. A few of the important issues include:

- The natural history of chronic hepatitis B and chronic hepatitis C and the potential favorable therapeutic roles of interferon and other emerging therapies.
- How to suspect, recognize, and establish the diagnosis of autoimmune disease in order to successfully intervene with immunosuppressive therapy.
- The approach to detect and treat hemochromatosis in its early stages and a plan that will achieve the most benefit from venesection for the patient and affected family members.
- When to consider Wilson's disease, recognizing that this disorder often presents with hepatic manifestations in the absence of neurological manifestations. Efforts expended in the diagnosis of Wilson's disease are amply rewarded by the often spectacular results from D-penicillamine therapy.
- When to use beta-blockers and other pharmacologic agents in patients who have bled from esophagogastric varices in order to prevent recurrent bleeding.
- The frequency with which spontaneous septicemia and bacterial peritonitis is a complication of cirrhosis and appreciation of the importance of prophylactic antibiotics in preventing recurrence of infection in a patient who has survived an initial episode.
- Appreciation of the many guises under which hepatic encephalopathy may present and how appropriate changes in diet and the use of lactulose may serve to enhance performance in these patients.
- Recognition of the opportunities afforded by the clinical development of liver transplantation and the important decisions that determine candidacy and timing.

The above list includes just a few of the important areas a clinician needs to know in caring for patients with liver diseases. This practice manual provides the clinician major blocks of sound advice in an easy-to-assimilate format. An important section of each chapter relates to interactions between the primary care physician and the specialist. Specialists often serve as educators, guides, and coaches. The primary care clinician has a vital role and needs to be fully conversant with diagnostic tests for identifying the cause of acute and chronic viral hepatitis as well as the need to promote the use of vaccines for hepatitis A and hepatitis B. When the findings are confusing, the diagnosis uncertain, and when emergency treatment or liver transplantation may be needed, the team approach is imperative. These days in hepatology there is much to do and, in fact, much more than can be done.

PREFACE

Diseases of the liver and biliary tract comprise a vast array of conditions that are often complex and bewildering. Furthermore, many recent fundamental discoveries and rapid advances in technology have led to new knowledge in the field. In this volume, we have prepared a practice manual that explains the advantages and limitations of new tests and provides algorithms for evaluation of patients and treatment of liver problems commonly encountered by the primary care physician. The first section introduces the evaluation of the patient with liver disease, aspects of the history and physical examination that can be invaluable in considering the patient with hepatobiliary disease. Nuances of serological tests for detection of viral infections of the liver are described, and radiological tests both invasive and non-invasive are presented with their application for specific circumstances. Another section covers commonly encountered specific diseases of the liver and biliary system. Treatable genetic disorders are emphasized even though many are rare because the impact of timely diagnosis and treatment is potentially great. Finally, common complications are presented with practical information on how to recognize the problems and deal with them effectively. Many experts in their fields have collaborated to produce a text that is concise, easy to understand, and definitive.

George Y. Wu, MD, PhD
Jonathan Israel, MD

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George Y. Wu, MD, PhD

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