

HOSPITAL PHYSICIAN®

GASTROENTEROLOGY BOARD REVIEW MANUAL

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The *Hospital Physician Gastroenterology Board Review Manual* is a peer-reviewed study guide for fellows and practicing physicians preparing for board examinations in gastroenterology. Each manual reviews a topic essential to the current practice of gastroenterology.

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Treatment of Chronic Hepatitis B and Hepatitis C

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Treatment of Chronic Hepatitis B and Hepatitis C

Walid S. Ayoub, MD

INTRODUCTION

Viral hepatitis is a major public health problem worldwide. Chronic hepatitis B virus (HBV) infection affects 350 to 400 million persons in the world, including 1.25 million individuals in the United States.¹ However, the cited US prevalence rate is an underestimate of the actual rate because it does not account for the constant flow of immigrants with chronic HBV infection from endemic areas like Asia, the Middle East, and Africa. Sherman and colleagues² recently found a 23% seroprevalence of hepatitis B surface antigen (HBsAg) in an Asian-American population in New York City.

Chronic hepatitis C virus (HCV) infection affects over 170 million persons worldwide and 4 million persons in the United States, where it is the most common cause of chronic liver disease and the leading indication for liver transplantation.³ The reported prevalence of chronic HCV also is an underestimate of the actual rate because it does not account for the prison and homeless populations. Advances in the treatment of chronic hepatitis C have altered the natural history of the disease in its early stages. Once advanced liver damage has developed, therapy may delay but will not prevent decompensation of cirrhosis, development of hepatocellular carcinoma (HCC), or death.

It is estimated that HBV complications account for up to 5000 deaths per year in the United States,³ while HCV complications account for 10,000 deaths annually.⁴ Targeting hepatitis B and hepatitis C in the early stages can improve the natural history of these diseases and alleviate their associated socioeconomic burdens.

CHRONIC HEPATITIS B

CASE PRESENTATION I

Presentation and History

A 42-year-old Chinese man presents to a gastroenterologist for evaluation of vague abdominal pain and

progressive onset of jaundice over the past month. He describes the abdominal discomfort as a dull pressure located in the right upper quadrant; the pain does not radiate and is not associated with ingestion of food. He reports that his bowel habits are regular, and he has not noted blood in his stools. He attempted changing his diet, but this did not improve the abdominal pain. His weight is stable, and he has had no changes in mental status.

Past medical history is significant for a history of asthma and a laparoscopic cholecystectomy 10 years ago. One month ago, he finished a 4-week regimen of prednisone to control an asthma attack. He uses albuterol inhaler on as-needed basis and does not take any herbal preparations. He emigrated from Taiwan 10 years ago. He is married with 2 children, and he works as a software engineer. He does not smoke or consume alcoholic beverages. He has never experimented with recreational drugs. His mother died of liver cancer at age 55 years. His 3 siblings are healthy.

Physical Examination

The patient's height is 5 ft 8 in (176 cm) and his weight is 167.5 lb (76 kg), with a body mass index of 24.5 kg/m². Assessment of vital signs reveals a temperature of 98.7°F (37.1°C), blood pressure of 120/80 mm Hg, and heart rate of 80 bpm. Physical examination is significant for the presence of jaundice, icteric sclera, palpable spleen, and spider angiomas over the torso; ascites, asterix, and lower extremity edema are absent.

Laboratory Evaluation

Laboratory testing performed 1 year ago by his primary care physician revealed the following: white blood cell count (WBC), $4.6 \times 10^3/\mu\text{L}$; hemoglobin, 14.2 g/dL; platelet count, $154 \times 10^3/\mu\text{L}$; aspartate aminotransferase (AST), 60 U/L; alanine aminotransferase (ALT), 65 U/L; total bilirubin, 1.3 mg/dL; alkaline phosphatase, 96 U/L; albumin, 3.5 g/dL; and creatinine, 0.9 mg/dL.

- What are the possible explanations for the patient's jaundice and abdominal pain?