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Questions and Answers

1. A 66-year-old white male whose only medical condition is a diet-controlled hypertension. He was also told in the remote past that he was a hepatitis B carrier. His examination is normal and his liver function tests are normal. His hepatitis B surface antigen is positive, and HBV DNA is 1,500 IU/mL. Hepatitis E Antigen is negative but E antibody is positive.

What will be appropriate recommendations for his Hepatitis B?

- A. He is an HBV carrier and hence no follow-up is needed
- B. Patient needs HCC surveillance with ultrasound every 6 months
- C. Patient needs treatment for his HBV due to his age
- D. Patient needs measurement of alpha protein once a year

Answer: B

The serology pattern described above indicates that he is in an inactive phase of chronic HBV (see Fig. 38.4). HBV treatment is not indicated in the inactive carrier state. However, he is at risk for HCC and needs surveillance.

2. A 65-year-old white male who recently returned from a trip to Mexico complains of fatigue and dark urine. He has no other chronic medical conditions. He was prescribed an antibiotic about 2 months ago for a sinus infection. He does not recall the name of the antibiotic. He is fully alert and oriented and in no apparent discomfort. His physical examination is unremarkable except for mild right upper quadrant tenderness. The laboratory data is as follows: AST 1,800 IU/L, ALT 2,100 IU/L, bilirubin 7.8 mg/dL, and INR 1.6. His platelet count is 170,000, and white cell count and hemoglobin are normal. Hepatitis B surface antigen is negative. Hepatitis A IgM and IgG are positive.

Which one of the following is most appropriate?

- A. Order Hepatitis A RNA levels
- B. Obtain HEV RNA

- C. Obtain liver biopsy to rule out drug-induced liver disease
- D. Transfer to a liver transplant facility
- E. Rest and follow-up of liver function tests

Answer: E

The liver function tests described above are typically seen in acute viral hepatitis. Because of recent history of travel to an endemic area, hepatitis A is the first consideration. IgM HAV antibody is also positive confirming recent exposure. IgG HAV antibody can overlap with IgM antibody during late phases of acute HAV infection. There is no indication that this patient will progress to fulminant hepatic failure. HEV infection can present similarly but is very rare and testing is not indicated in patient with a positive IgM HAV antibody. HEV RNA is not widely available and not a standardized test. HAV RNA levels are also not used in clinical practice. This patient will most likely recover uneventfully. However, periodic monitoring of liver function tests is indicated.

3. Seventy-year-old white farmer is referred to you for jaundice. He had previous episodes of jaundice on two occasions in the last 6 weeks. He had a viral illness about 8–10 weeks ago when he had right upper quadrant pain, mild fever, and deep yellow discoloration of urine. Since then he lives in a rural area with a large animal farm, and did not seek any medical attention. After a week or so his symptoms got better. He has no other medical illness except for prior laparoscopic cholecystectomy.

Now the blood tests reveal serum bilirubin of 12.3 (direct is 6.9), AST 200, ALT 240, and ALP 161; PT is normal. Ultrasound shows a bile duct of 7 mm. While further workup is pending which of the following is most likely?

- A. Hepatitis E
- B. Hepatitis B
- C. Biliary infections by parasites
- D. Schistosomiasis
- E. Sphincter of oddi dysfunction

Answer: A

Relapsing cholestatic pattern is seen in patients with hepatitis A and E. While hepatitis E is rare in the USA, it can occur as a zoonotic disease and is the likely etiology here. Biliary tract disease is in the differential diagnosis, but normal bile ducts and near-normal alkaline phosphatase make it a less likely possibility. Schistosomiasis presents with portal hypertension not acute relapsing cholestasis.

4. Seventy-five-year-old white male is referred to you for HBV. He was found to have HBV while being considered for chemotherapy for a recently diagnosed B cell lymphoma. The chemotherapy is planned for 6 months. He has no liver-related symptoms. His liver function tests are normal. CT scan shows normal liver. HBs Antigen is positive, HBV DNA is undetectable, HB core antibody is positive, and HCV antibody is negative. He has no knowledge of any risk factors but he is a Vietnam War veteran.

What is the single best approach?

- A. No further treatment for HBV
- B. Plan for treatment for a period of 1 year with lamivudine
- C. Check HBV DNA every 3 months and start treatment with Entecavir if it is positive
- D. Liver biopsy and treat with interferon if needed

Answer: B

This patient is at risk of flare for his HBV with chemotherapy, so prophylaxis against reactivation is recommended in such patients during the period of immunosuppression and 6 months after the immunosuppression. Based on the HBV serologies and LFTs, this patient is an inactive carrier and does not need treatment for HBV at present. Liver biopsy is useful but unlikely to influence the immediate management. Interferon is contraindicated in patients with lymphoma.

5. Seventy-one-year-old white male is referred for HCV. He found about HCV when his primary care doctor ordered liver function studies after starting atorvastatin. He admits to IVDA when he was 20 years old. He is otherwise in good health and plays golf regularly. Both his parents lived until late 90s. He does not recall having any blood work for liver condition. Blood tests confirm the serum bilirubin to be 0.3 mg/dL (direct is 0.1), AST 100 IU/L, ALT 120 IU/L, and ALP 121 IU/L; and normal PT, complete blood count, and renal function. Ultrasound shows a bile duct of 8 mm. HCV PCR is 1.2 million IU/ml, Genotype 2a, IL 28B genotype is TT. His liver biopsy showed grade 3 inflammation and stage III but cirrhosis cannot be excluded.

Which will be the most reasonable approach?

- A. Offer pegylated interferon and ribavirin
- B. Offer the triple therapy including protease inhibitors interferon and ribavirin
- C. Recommend no treatment because he has IL 28B TT genotype and the treatment is not effective and await for more potent therapy
- D. His age is a contraindication for therapy

Answer: A

If his HCV is cured, the patient will have a reasonable life expectancy well beyond 10 years. He has genotype 2 infection and it is likely that he will have a good chance of response. So the benefit of treatment outweighs the risk. Protease inhibitors are not approved for genotype 2 infection at present. Age alone should not be considered a contraindication for treatment. IL 28B genotype is not well studied in patients with genotype 2 infection and treatment decision should not be made based on IL 28B genotype.