

## CHAPTER 24. VIRAL HEPATITIS, SELF-ASSESSMENT QUESTIONS

1. A 31-year-old Latino woman presents with complaints of fatigue. She returned from a business trip to Mexico 10 days ago. She visits her primary care physician who orders laboratory tests. The results indicate the ALT level is mildly elevated and hepatitis serologies are anti-HAV IgM(+), anti-HAV IgG (-), HBsAg(-), anti-HBc IgG(-), anti-HBc IgM (-) and anti-HCV (-). Which vaccine should be recommended?

- A. Immune globulin (IG)
- B. Hepatitis A vaccine only
- C. Hepatitis B vaccine only
- D. Hepatitis A and Immune globulin
- E. Hepatitis B and Immune globulin

2. A 43-year-old black woman has HBeAg-negative chronic hepatitis B. Her risk factors include using intravenous drugs at the age of 15. Her past medical history is significant for hypertension, diabetes and severe rheumatoid arthritis. Her renal function is normal, and ALT levels are three times the upper limits of normal. Which one of the following is the best treatment option for her hepatitis B?

- A. Adefovir dipivoxil
- B. Sofosbuvir
- C. Simeprevir
- D. Pegylated interferon
- E. Entecavir

3. A 53-year-old black man presents with hepatitis C, genotype 2 disease, and a baseline HCV RNA level of 64,145 IU/mL (64,145 kIU/L). He acquired the infection via a blood transfusion in the 1970s. He is presently on week 4 of pegylated interferon, ribavirin and simeprevir therapy. He states that he is doing well and has minimal complaints that include minimal fatigue and flulike symptoms the day after he gets his injection. Laboratory test results are within the reference range except for the hemoglobin level 10.3g/dL (103 g/L; 6.39 mmol/L) and ANC  $0.4 \times 10^3/\text{mm}^3$  ( $0.4 \times 10^9/\text{L}$ ). When these laboratory tests were repeated 2 days later, the hemoglobin was 10.4 g/dL(104 g/L; 6.46 mmol/L) and ANC was  $0.4 \times 10^3/\text{mm}^3$  ( $0.4 \times 10^9/\text{L}$ ). Which of the following treatment plans should be recommended because of adverse drug effects?

- A. Reduce the dose of pegylated interferon and ribavirin by half
- B. Add erythropoietin therapy
- C. Reduce the dose of pegylated interferon by a quarter
- D. Add granulocyte colony-stimulating factor
- E. Add granulocyte colony-stimulating factor and erythropoietin therapy

4. A 27-year-old Asian woman is due to give birth to a baby boy in 1 month. Prior to becoming pregnant, she drank alcohol occasionally and did not smoke. She never used IV drugs or had a blood transfusion. The HBsAg test is negative. Which vaccination regimen should be recommended for her newborn baby?

- A. Hepatitis A vaccine at birth
- B. Hepatitis A and B vaccine at 6 months
- C. Immune globulin within 24 hours of birth
- D. Immune globulin and hepatitis B vaccine within 12 hours of birth

E. Hepatitis B vaccine only at discharge

5. A 34-year-old man will be starting treatment for hepatitis C. He has genotype 2a disease and a baseline HCV RNA level of 309,021 IU/mL (309,021 kIU/L) with all other baseline laboratory test results normal. He has no past medical history. His mode of viral transmission was a tattoo done unprofessionally. His doctor wants to initiate hepatitis C therapy. What hepatitis C regimen should be prescribed?

A. Pegylated interferon and ribavirin

B. Sofosbuvir and ledipasvir

C. Simeprevir and ribavirin

D. Sofosbuvir and ribavirin

E. Ombitasvir, paritaprevir, ritonavir, and dasabuvir

6. A 37-year-old Asian man presents to the clinic with hepatitis B that is being treated with lamivudine. Today is week 12 of therapy. What laboratory test(s) should be obtained to determine if therapy is effective?

A. ALT

B. HBV DNA

C. Anti-HBe

D. ALT and Anti-HBe

E. ALT and HBV DNA

7. A 57-year-old African American man is undergoing HCV treatment with ledipasvir and sofosbuvir. He has genotype 1a disease and had bridging fibrosis on a liver biopsy performed 1 year ago. His baseline

HCV RNA level is 1,113,531 IU/mL (1,113,531 kIU/L), and at week 6 the HCV RNA level was 321,521 IU/mL (321,521 kIU/L). What treatment strategy should be recommended now?

- A. Discontinue ledipasvir and sofosbuvir now
- B. Add pegylated interferon and ribavirin and treat up to 24 weeks
- C. Add simeprevir and treat up to 48 weeks
- D. Continue ledipasvir and sofosbuvir and treat up to 24 weeks
- E. Discontinue ledipasvir/sofosbuvir FDC and initiate sofosbuvir and simeprevir for 24 weeks

8. A 59-year-old white woman presents with complaints of fatigue, pale-colored stools, and itching. She had returned from vacation in Africa one week ago. She had a blood transfusion in 1969 and had one tattoo placed on her left arm that was not done professionally. She denies IV drug use but does drink alcohol excessively (at least a six-pack of beer daily). Her husband died 2 years ago due to liver cancer. Her primary care physician made the diagnosis of acute viral hepatitis. Which one of the following is the most likely mode of transmission for the patient's acute viral hepatitis?

- A. Excessive alcohol intake
- B. Unprofessionally performed tattoo
- C. Recent travel to Africa
- D. Sexual transmission from her husband
- E. Blood transfusion in 1969

9. A 42-year-old man has hepatitis C and hypertension that is well controlled with medications. He admits to having anger management issues and is followed monthly by psychiatry. He contracted the HCV via IV drug use and had a blood transfusion in 2004. He has genotype 3a disease with a baseline HCV RNA

level of 631,471 IU/mL (631,471 kIU/L). His weight is 72 kg (158.4 lb) and he is 5'8" (173 cm) tall.

Which one of the following is the best option to treat his hepatitis C?

- A. Pegylated interferon and ribavirin
- B. Pegylated interferon and simeprevir and ribavirin
- C. Ribavirin and sofosbuvir
- D. Ombitasvir, paritaprevir, ritonavir, and dasabuvir
- E. Ledipasvir and sofosbuvir

10. A 27-year-old woman presents with chronic hepatitis B infection that has not been treated. Her 1-year-old son has received all the recommended vaccines to date including 2 doses of the hepatitis B vaccine. Today she is in clinic with her son for a follow-up visit and immunizations. Which of the following vaccines should her son receive today?

- A. Hepatitis A vaccine
- B. Hepatitis B vaccine
- C. Hepatitis A vaccine and hepatitis B vaccine
- D. Hepatitis A vaccine and immune globulin
- E. Hepatitis B vaccine and immune globulin

11. A 49-year-old woman presents with hepatitis C, genotype 1a disease, with no known risk factors. Her liver biopsy demonstrates cirrhosis. She has no past medical or surgical history. Which treatment is recommended for her hepatitis C?

- A. Pegylated interferon, ribavirin, and sofosbuvir

B. Simeprevir, Sofosbuvir, and pegylated interferon

C. Ledipasvir, sofosbuvir, and pegylated interferon

D. Ribavirin, ombitasvir, paritaprevir, ritonavir and dasabuvir

E. Pegylated interferon, ribavirin, and simeprevir

12. A 32-year-old Korean man with HBeAg-positive chronic hepatitis B was treated initially with lamivudine and developed resistance. Lamivudine was discontinued and entecavir 1 mg daily was initiated when the HBV DNA level was greater than 450,000 IU/mL (450,000 kIU/L). His viral count remained undetectable for 1 year with entecavir but then rebounded back to baseline 9 months later. Which treatment option is the best to manage this patient's hepatitis B?

A. Discontinue entecavir and change to pegylated interferon

B. Continue entecavir and add pegylated interferon

C. Continue entecavir and add adefovir

D. Continue entecavir and add tenofovir

E. Continue entecavir and add telbivudine

13. A 44-year-old man will be traveling to Africa on a medical mission in 2 weeks. His hepatitis serologies are as follows: anti-HAV IgM (-), anti-HAV IgG (+), anti-HBs (-), HBsAg (+), HBeAg (-), anti-HBcIgG (+), anti-HBcIgM (-), and anti-HBe (-). Which one of the following prophylaxis regimens should be recommended prior to his departure to Africa?

A. No vaccine

B. Immune globulin

C. Immune globulin and VAQTA

D. Twinrix

E. Engerix-B

14. A 35-year-old woman has hepatitis C genotype 2a disease that was treated with pegylated interferon 180 mcg and ribavirin 400 mg twice daily for 14 weeks 3 years ago. She had discontinued treatment early because she lost insurance coverage. She had a sustained viral response (SVR) at 6 months after treatment, but at 1 year the HCV RNA level was detectable. Today she returns to clinic to be evaluated for retreatment of hepatitis C infection. She weighs 190 pounds (86.4 kg) and is 5'6" (168 cm). Which treatment option is the best to manage this patient's hepatitis C?

A. Pegylated interferon 180 mcg weekly and ribavirin 400 mg twice daily for 48 weeks

B. Pegylated interferon 180 mcg weekly and ribavirin 600 mg twice daily for 24 weeks

C. Pegylated interferon 180 mcg weekly, ribavirin 600 mg twice daily, and sofosbuvir 150 mg daily for 12 weeks

D. Ribavirin 600 mg twice daily and sofosbuvir 150 mg daily for 12 weeks

E. Ribavirin 600 mg twice daily and sofosbuvir 150 mg daily for 24 weeks

15. A 33-year-old white woman developed acute viral hepatitis 5 days ago. Her hepatitis serologies are as follows: anti-HAV IgM(+), anti-HAV IgG (-), anti-HCV (-), HBsAg (-), and anti-HBs (+). Which one of the following options is best to treat her acute viral hepatitis?

A. No treatment is needed at this time except for supportive care

B. Administer immune globulin

C. Administer the hepatitis A vaccine

D. Administer the hepatitis A and B vaccine immediately

E. Administer the hepatitis A vaccine and immune globulin immediately

## ANSWERS

1. B

2. E

3. D

4. E

5. D

6. E

7. A

8. C

9. C

10. C

11. D

12. D

13. A

14. D

15. C