ANSWERS: CHAPTER 25

MATCHING

1. c  4. b  7. a  
2. h  5. i  8. f  
3. g  6. e  9. d

IMAGE LABELING

1A. Rib  
1B. Muscle  
1C. Parietal pleura  
1D. Visceral pleura

MULTIPLE CHOICE

1. c  4. a  7. c  10. c  
2. d  5. c  8. a  
3. b  6. b  9. b

FILL-IN-THE-BLANK

1. Pericardium; thorax; abdomen; pelvic  
2. Fluid; blood; pericardium; pleural; intraperitoneal; retroperitoneum  
3. Four chamber; base; apex  
4. Parietal; visceral; 10  
5. Superior to the right ventricle  
6. Centrally; left; paradoxical septal movement  
7. Visceral; parietal; echogenic  
8. Gliding; sliding; pneumothorax; superior  
9. Seashore; parallel horizontal; barcode; stratosphere  
10. Lung point; triangular; diaphragm  
11. Blunt; penetrating; free fluid  
12. Supine; Trendelenburg  
13. Hepatorenal space; Morrison’s pouch  
14. Pelvis  
15. Common femoral; saphenous; deep; superficial femoral; popliteal

SHORT ANSWER

1. They are noninvasive and may be performed portably at the bedside or in the field. They do not expose the patient to ionizing radiation or require nephrotoxic contrast agents. The examinations can be performed quickly and do not require transport to the radiology department, which is a benefit in hemodynamically unstable patients.

2. Hypovolemia, PVD, tamponade, and tension pneumothorax

3. The first method involves evaluating the pleural layers in real time. Back-and-forth movement of the pleural layers is visualized causing a gliding or sliding sign. Also, a comet-tail artifact may be seen at the pleural interface. Absence of the sliding movement indicates a pneumothorax. Multiple areas should be evaluated bilaterally. The second technique uses M-mode to detect the motion of the lung.

4. Morrison’s pouch, right and left pleural spaces, right and left paracolic gutters, space between left kidney and spleen, pelvis

IMAGE EVALUATION/PATHOLOGY

1. Right pleural space and hepatorenal space or Morrison’s pouch.

2. Pericardial effusion, which may lead to cardiac tamponade.

3. The M-mode cursor is placed in the chest cavity. The parallel lines seen at the top of the M-mode image represent the motionless tissues of the chest wall. The granular pattern seen below represents the constant motion of the underlying lung. This is normal. In the case of pneumothorax, the granular pattern would not be seen and parallel lines would be visualized in this area as well, representing the absence of normal movement or sliding.

4. In the image on the left, echogenic material is seen within the lumen of the vein. A compression technique is used in the image on the right. The vein is compressed with transducer pressure. The vein does not collapse completely due to clot within the vein. This is positive for deep venous thrombosis.

CASE STUDY

1. A large, anechoic fluid collection, presumably blood, is seen superior to the diaphragm in the right pleural space. No fluid is seen in the abdominal cavity in this image. The diagnosis is most likely hemothorax.