Autopsy Self-Assessment
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**GENERAL – CAUSE OF DEATH**

1. Which of the following is the most common cause of sudden death in an adult?
   - A. Intracerebral hemorrhage
   - B. Hypertrophic cardiomyopathy
   - C. Coronary artery disease
   - D. Drug overdose
   - E. Pulmonary thromboembolism

2. An autopsy shows that death resulted from hemopericardium secondary to a ruptured myocardial infarct following thrombosis of an atherosclerotic plaque in the coronary artery. The underlying cause of death is:
   - A. Coronary artery atherosclerosis
   - B. Pericardial tamponade
   - C. Hemopericardium
   - D. Ruptured myocardial infarction
   - E. Asystole

3. A 47-year old with alcohol abuse, withdrawal seizures, and bleeding varices in the past was admitted with asterixis and hepatic encephalopathy. He lapsed into coma and developed respiratory arrest, then cardiac arrest, and then died. The immediate cause of death is:
   - A. Cardiac arrest
   - B. Chronic alcoholism
   - C. Cirrhosis
   - D. Hepatic encephalopathy
   - E. Respiratory arrest

**GENERAL – LEGAL/REGULATORY**

1. You are asked by an attorney to perform an autopsy in another state, for a fee, on behalf of the family of the deceased. Which one is true?
   - A. Whether you must be licensed in that state depends on the laws of that state.
   - B. Whether you must have a license in that state depends on which state your primary practice is based.
   - C. You must only be licensed to practice medicine in the state you graduated from medical school.
   - D. You need not be licensed to practice medicine in that state because you are acting in a private capacity on behalf of the attorney.

2. Which one of the following agencies has the authority to enforce federal regulations regarding autopsy room safety precautions?
   - A. CAP
   - B. CDC
   - C. NIOSH
   - D. OSHA
   - E. None of the above
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3. During a hospital autopsy you discover an unsuspected subdural hemorrhage and a full thickness scalp contusion. Your first step should be to:

   A. Determine if the medical examiner/coroner needs to be notified
   B. Do a head x-ray
   C. Draw blood for alcohol concentration
   D. Strip the dura
   E. Wash the brain with peroxide

4. According to CAP, provisional anatomical diagnoses should be completed and available within:

   A. One working day
   B. Five working days
   C. One week
   D. "A reasonable time"
   E. One month

5. A Phase II deficiency in a CAP inspection:

   A. Involves recommended but not required changes
   B. Must be corrected within 6 months of citation
   C. Requires correction before accreditation can be granted
   D. Always requires an on-site follow up re-inspection within 3 months

6. Peer review of autopsy reports for content, completeness, and accuracy should involve review of what proportion of cases at a minimum?

   A. < 1%
   B. 10%
   C. 15%
   D. 20%
   E. 25%

7. CAP recommends that paraffin blocks on non-forensic autopsy cases are stored for at least:

   A. 1 year
   B. 2 years
   C. 5 years
   D. 10 years
   E. 20 years

8. According to the CAP Laboratory Accreditation Program (Anatomic Pathology checklist ANP.33100), final anatomical diagnoses for routine autopsies should be available for at least 90% of the cases within:

   A. 30 days
   B. 30 working days
   C. 60 days
   D. 60 working days
   E. “A reasonable time”
9. CAP recommends glass slides on non-forensic autopsy cases are stored for at least:
   A. 1 year
   B. 2 years
   C. 5 years
   D. 10 years
   E. 20 years

GENERAL – MECHANISM OF DEATH

1. Which of the following is a mechanism of death?
   A. Bronchopneumonia
   B. Myocardial infarct
   C. Mitral valve prolapse
   D. Ventricular fibrillation
   E. Fatty acid oxidation disorder

2. Homicide, suicide, accident, natural, and undetermined are:
   A. Causes of death
   B. Codes of law
   C. Manners of death
   D. Mechanisms of death
   E. Modes of death

GENERAL – DONATION

1. A 25-year-old man is pronounced dead after a fatal motor vehicle crash. Which of the following can be procured for transplantation before the autopsy?
   A. Heart valves
   B. Lung
   C. Liver
   D. Kidney
   E. Pancreas

2. The most common malignancy with an elevated risk of developing after organ transplantation is:
   A. Non-Hodgkin lymphoma
   B. Kaposi sarcoma
   C. Hepatocellular carcinoma
   D. Multiple myeloma
   E. Renal cell carcinoma

GENERAL – HISTORICAL

1. The birth of anatomic pathology and the first major published series of cases to correlate clinical histories with autopsy findings is attributed to:
   A. Francis Bacon
   B. William Harvey
   C. Hippocrates
   D. Giovanni Morgagni
   E. Rudolf Virchow
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2. Who introduced the concept of the "posthumous analysis", an approach that treats autopsies like large surgical specimens and focuses on selective tissue sampling and rapid turnaround time?

A. Ackerman  
B. Anderson  
C. Haber  
D. Rosai

3. Who developed the first complete and systematic method of postmortem examination, and personally performed more than 30,000 autopsies?

A. William Hunter  
B. Giovani Morgagni  
C. William Osler  
D. Karl Rokitansky  
E. Rudolf Virchow

GENERAL – POSTMORTEM FINDINGS

1. "Tache noire" is a(n):

A. Incidental gross finding in some livers  
B. Premortem injury  
C. Cardiopulmonary resuscitation injury  
D. Result of poisoning  
E. Postmortem drying of the corneas

2. Apoptosis is associated with:

A. Hyperthyroidism  
B. Bacterial infection  
C. Loss of cell membrane integrity  
D. Local inflammation  
E. Activation of caspases enzymes

3. Apoptosis is associated microscopically with:

A. Cellular swelling  
B. Local plasma cell infiltration  
C. Associated capillary thrombosis  
D. Nuclear chromatin condensation  
E. Mallory bodies when seen in the liver

4. Algor mortis:

A. Is dependent on body position  
B. Is accelerated by premortem seizures  
C. Can be minimal or absent if there has been severe blood loss before death  
D. Is dependent on body habitus and air movement around the body  
E. Results from the postmortem conversion of ATP to ADP
5. Lipofuscin:
   A. Commonly seen in adipose tissue
   B. Accumulates in lysosomes
   C. Induces cell death
   D. Is acid-fast positive
   E. Is iron stain positive

**GENERAL – TECHNICAL/SAFETY**

1. Which autopsy method involves removal of organs one by one?
   A. The en bloc technique
   B. The en masse technique
   C. The Rokitansky technique
   D. The Virchow technique

2. Which of the following organs is most susceptible to autolysis?
   A. Heart
   B. Liver
   C. Lung
   D. Pancreas

3. Implanted defibrillators:
   A. Are usually inactivated by a radio-controlled device.
   B. Are usually inactivated by cutting the leads.
   C. Can usually be inactivated with a magnet device.
   D. Usually inactivate themselves when death occurs.
   E. Usually must be inactivated by the manufacturer

4. An enterotome is:
   A. An instrument for curetting bone
   B. An instrument for obtaining bone cores
   C. A modified long-bladed knife
   D. A modified scalpel
   E. A modified scissors

5. When making the saw cut for removing the calvarium:
   A. It should encircle the calvarium like a hat band.
   B. An obtuse angle is created on the calvarium.
   C. OSHA requires the use of a vacuum saw.
   D. V-shaped notches should be made bilaterally.
   E. None of the above.

6. When opening the bowel, the bowel should be cut longitudinally:
   A. Adjacent to the mesenteric attachment
   B. Half way between the mesenteric attachment and antimesenteric border
   C. Opposite the direction of food transit
   D. Opposite the mesenteric attachment
Autopsy Self-Assessment

7. Which substance should be involved in processing of tissues from Creutzfeldt-Jakob cases?
   A. B-5 fixative
   B. Ethanol
   C. Formic acid
   D. Glutaraldehyde
   E. Phenol

8. The fixative of choice for electron microscopy is:
   A. Bouin’s
   B. Formalin
   C. Glutaraldehyde
   D. Phenol
   E. Zenker’s

9. Histologic sections from paraffin embedded tissue are usually cut how thick?
   A. 2 um
   B. 4 um
   C. 8 um
   D. 10 um
   E. 12 um

10. When assessing the presence of fat within the vasculature of the lung (fat emboli) which type of specimen is best?
    A. Clorox digestion, iron stained
    B. Frozen section, Oil Red O stained
    C. Paraffin embedded, H&E stained
    D. Paraffin embedded, Oil Red O stained
    E. Paraffin embedded, Sudan Black stained

11. Studies show that the risk of HIV infection from a needle contaminated with HIV infected blood is about:
    A. 0.3%
    B. 1%
    C. 5%
    D. 10%
    E. 20%

12. Double gloving is recommended because:
    A. Gloves tear less frequently when two pairs are worn
    B. The inoculum is smaller if a needle puncture occurs compared with single gloving
    C. It is easier to see when a puncture occurs
    D. It mainly makes the prosector feel more secure

13. Latex allergy can manifest as:
    A. Type 1 hypersensitivity only
    B. Type 4 hypersensitivity only
    C. Type 1 or Type 4 hypersensitivity
    D. Type 2 hypersensitivity
Autopsy Self-Assessment

14. Which of the following possesses the greatest infectivity via accidental needle stick?
   A. Hepatitis A  
   B. Hepatitis B  
   C. Hepatitis C  
   D. HIV  
   E. TB

15. High risk or potentially high-risk autopsies include all of the following EXCEPT:
   A. Acute respiratory distress syndrome  
   B. Acquired immune deficiency syndrome  
   C. Jakob-Creutzfeldt disease  
   D. Tuberculosis, active  
   E. Viral hepatitis

16. All of the following are true regarding completion of the autopsy EXCEPT:
   A. The body should be cleaned with mild detergent  
   B. Fluid should be returned to the body  
   C. The head should be covered with a plastic bag  
   D. The incisions should be closed  
   E. Organs may be placed in a heavy plastic bag and placed in the body cavity

17. Nitro-blue tetrazolium or triphenyltetrazolium chloride may be helpful for gross detection of:
   A. Alcoholic cardiomyopathy  
   B. Hypertrophic cardiomyopathy  
   C. Infective endocarditis  
   D. Myocardial infarct  
   E. Viral myocarditis

18. Organs and trimmed tissues that are used to prepare blocks in Creutzfeldt-Jakob cases should be:
   A. Completely incinerated  
   B. Placed in formalin  
   C. Steam autoclaved and placed in formalin  
   D. Washed with sodium hydroxide and placed in formalin

19. The fixative of choice for demonstrating sodium urate monohydrate deposits in gout patients is:
   A. Alcohol  
   B. Bouin’s  
   C. Formalin  
   D. Glutaraldehyde  
   E. Zenker's
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**20.** In cases of suspected Creutzfeldt-Jakob disease, the College of American Pathologists recommends:

A. Autopsy limited to head  
B. Autopsy limited to head and spinal cord  
C. Autopsy not be performed  
D. Cerebrospinal fluid removal only  
E. Trephine biopsy of the brain

**BONE**

1. An 84-year-old man died of high output cardiac failure. His cranium was prominent and the skull was irregularly thickened and nodular, consisting of very dense pumice-like bone. The most likely diagnosis is:

A. Albright syndrome  
B. Fibrous dysplasia  
C. Metastatic carcinoma  
D. Osteogenic sarcoma  
E. Paget disease

2. At autopsy it is not unusual to find defects in the central portions of one or more of the vertebral bodies in individuals of all ages, without clinical findings. These empty spaces, which are generally round or slightly oval, and halfway between the upper and lower borders of the vertebral bodies, are most likely:

A. Metastatic carcinoma  
B. Myeloma  
C. Normal anatomic variant  
D. Schmorl nodules  
E. Secondary to disc degeneration

3. Schmorl nodules are:

A. Bony exostoses  
B. Calcified granulomas  
C. Esophageal diverticula  
D. Herniated nucleus pulposus  
E. Skin tumors

**BREAST**

1. A woman in her fifties was treated for node positive HER2 positive breast cancer six years ago. She developed pneumonia and was hospitalized. An echocardiogram showed systolic heart failure and left ventricular dilatation. She succumbed to sepsis and an autopsy was performed. No metastatic carcinoma was found. Microscopically the heart showed moderate vacuolation of the myocytes. Her heart disease was most likely related to:

A. Amyloidosis  
B. Arrhythmogenic cardiomyopathy  
C. Coronary artery disease  
D. Tamoxifen therapy toxicity  
E. Trastuzumab and anthracycline toxicity
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2. A 61-year-old woman died from complications following an above-knee amputation. She had poorly controlled diabetes for many decades. On external examination, a 4 cm firm lump is palpated in the left breast. During autopsy (while reflecting back the skin and soft tissue from the chest wall), the lump is incised from behind. Microscopically it showed dense hyalinized stroma with lymphocytic infiltrates surrounding lobules, ducts, and blood vessels. There was apparent loss of lobules and the duct basement membranes were thickened. Some stromal fibroblasts and myofibroblasts had large hyperchromatic nuclei. There are no palpable axillary lymph nodes. The most likely diagnosis is:

A. Diabetic mastopathy
B. Fibroadenoma
C. Infiltrating lobular carcinoma
D. Pseudoangiomatous stromal hyperplasia
E. Radial scar

3. A 57-year-old woman with a history of breast cancer treated with chemotherapy and radiation (after surgery) 20 years ago develops a painful indurated skin lesion over her mastectomy site with purple papules. She is hospitalized for apparent pneumonia and subsequently dies. The autopsy permission includes sampling of the skin lesion, which shows pleomorphic spindle cells as part of a network of inter-anastomosing vascular channels. The lungs show bilateral hemorrhagic nodular lesions with similar histology. The most likely diagnosis is:

A. Epithelioid hemangioendothelioma
B. Kaposi sarcoma
C. Metastatic carcinoma
D. Post irradiation cutaneous angiosarcoma
E. Paget disease of the nipple

CARDIOVASCULAR

1. A 62-year-old man, with a long history of smoking, complained of upper back pain for approximately three months. Chest x-ray demonstrated an expansile mediastinal mass, thought to be a large aneurysm of the descending thoracic aorta, with erosive changes of the anterior portion of the vertebral bodies. He died suddenly and autopsy confirmed the clinical findings. The most likely etiology of the aneurysm is:

A. Atherosclerosis
B. Infection
C. Marfan syndrome
D. Syphilis
E. Trauma

2. A 28-year-old woman had systemic lupus erythematosus for nine years. She presented with joint and skin manifestations, with marked elevation of anti-nuclear antibody titers, but was well controlled with steroids and Plaquenil. There was no evidence of renal or neurologic disease. She developed increasing congestive heart failure and marked cardiomegaly on chest x-ray. No murmurs were heard. An endomyocardial biopsy showed vacuolated myocytes with lamellar bodies. Blood cultures were sterile. She died of intractable cardiac failure with tachyarrhythmia approximately six weeks after the heart biopsy. At autopsy, the heart weighed 670 g. There was four chamber dilatation, without grossly obvious necrosis or fibrosis. The valves were unremarkable. The most likely diagnosis is:
Autopsy Self-Assessment

3. A 51-year-old previously healthy, slightly obese man, who had lived all of his life in New Jersey, died suddenly of myocardial infarction, confirmed at autopsy. His spleen weighed 250 g. The splenomegaly is most likely due to:

A. Amyloidosis
B. Chronic lymphocytic leukemia
C. Congestive heart failure
D. Gaucher disease
E. Malaria

4. A 59-year-old woman died suddenly. A native of the Philippines, she had a 10-year history of an ascending thoracic aorta aneurysm for which she refused treatment. She was hypertensive and hypercholesterolemic. At autopsy, there was hemopericardium and a site of leakage from the 10 cm saccular aneurysm, which extended from the ring of the aortic valve to a point 2 cm proximal to the origin of the right subclavian artery. The heart and valves, including the sinus of Valsalva, were unremarkable. The entire aorta, including the aneurysm, was remarkable for the minimal degree of atherosclerotic change, even less than anticipated for her age. There were no thrombi in the aneurysm sac. The wall of the aneurysm was thin and translucent, and the aneurysm intima had only a few small yellow atherosclerotic plaques. There was no dissection. The most likely etiology is:

A. Mycotic
B. Rheumatic
C. Syphilitic
D. Traumatic
E. None of the above

5. The location of the sinoatrial node can be identified grossly because:

A. it is at the juncture of the left anterior descending and circumflex arteries
B. it is fed by the septal perforating artery
C. it is on the right atrial appendage
D. it is red
E. it surrounds the sinoatrial artery

6. A 55-year-old man died following an episode of chest pain. His serum troponin I was increased. At autopsy, there was a 3 x 4 cm transmural area of dark mottled myocardium involving the anterior left ventricle. What is the most likely estimate of the length of time for this lesion to develop?

A. less than 1 hour
B. 2-4 hours
C. 12-24 hours
D. 24-48 hours
E. 3-5 days
7. A 60-year-old woman with a history of uncontrolled diabetes mellitus suffered an acute myocardial infarction complicated by congestive heart failure. While in the intensive care unit, she had a sudden worsening of her cardiac function. A pericardiocentesis yielded liquid blood, and she died soon after. What is the most likely interval of time from her initial cardiac event until her death?

A. 2-6 hours  
B. 6-18 hours  
C. 1-3 days  
D. 4-7 days  
E. 1-2 weeks

8. At autopsy, sectioning of the heart reveals a 3 x 5 cm white firm scar in the left lateral ventricular wall. How long ago did this patient most likely have a coronary artery occlusion?

A. 1 week  
B. 2 weeks  
C. 3 weeks  
D. 1-2 months  
E. >2 months

9. A 49-year-old man developed sudden severe chest pain and died. At autopsy, a left anterior descending artery thrombosis was seen along with severe atherosclerosis of all three major coronary arteries. Which of the following histologic findings is most likely to be seen?

A. Edema  
B. Fibroblastic proliferation  
C. Lymphocyte infiltration  
D. Macrophage infiltration  
E. Neutrophil infiltration

10. A 33-year-old woman died suddenly and unexpectedly. There was a 1-week history of fever and malaise prior to death. At autopsy, the heart was enlarged and the myocardium was flabby. Histologically, there was inflammation with myocardial fiber necrosis. What is the most likely infectious agent that can produce these findings?

A. *Aspergillus fumigatus*  
B. Coxsackie B virus  
C. *Neisseria meningitides*  
D. *Staphylococcus aureus*  
E. *Streptococcus pyogenes*

11. Which of the following statements about arrhythmogenic right ventricular dysplasia/cardiomyopathy is true?

A. ARVD/C exclusively involves the right ventricle.  
B. Fatty infiltration of the right ventricle is sufficient enough to make a diagnosis of ARVD/C.  
C. Fatty replacement equally involves both compact and trabecular myocardium.  
D. Patients can present with congestive heart failure or sudden cardiac death.  
E. The right ventricular wall thickness is invariably decreased.

12. The earliest change in an acute myocardial infarct after reperfusion is:

A. Contraction band necrosis  
B. Loss of nuclear staining  
C. Macrophage infiltration
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D. Neutrophil infiltration
E. Waviness of fibers

13. Of the following congenital heart diseases, which one is most likely to present with cyanosis within the first week of life?

A. Anomalous left coronary artery from the pulmonary artery
B. Atrial septal defect
C. Patent ductus arteriosus
D. Total anomalous pulmonary venous connection
E. Ventricular septal defect

14. The first gross changes of acute myocardial infarct become apparent at:

A. 1-2 hours
B. 4-6 hours
C. 12-24 hours
D. 25-36 hours
E. >36 hours

15. The average adult female’s heart weighs:

A. 200-250 g
B. 250-300 g
C. 300-350 g
D. 350-400 g
E. >450 g

16. The most common disease associated with acute aortic dissection is:

A. Bicuspid aortic valve
B. Erdheim’s disease
C. Giant cell aortitis
D. Hypertension
E. Marfan’s syndrome

CHEMISTRY/TOXICOLOGY

1. Which of the following imparts a brown color to lividity?

A. Hypothermia
B. Carbon monoxide
C. Methemoglobin
D. Propranolol
E. Cyanide

2. A postmortem vitreous fluid potassium concentration of 9.5 mEq/L is indicative of:

A. Chronic renal failure
B. Antemortem hyperkalemia
C. Premortem potassium injection
D. Acute adrenal insufficiency
E. Nothing
Autopsy Self-Assessment

3. The best location to draw blood for postmortem toxicology is the:
   A. Aorta
   B. Femoral vein
   C. Pulmonary artery
   D. Right ventricle
   E. Inferior vena cava

4. Which of the following postmortem vitreous fluid analyte shows the best correlation with its antemortem blood concentration?
   A. Potassium
   B. Glucose
   C. Creatinine
   D. Lactate dehydrogenase
   E. Phosphorus

GENITOURINARY

1. Bladder trabeculation in postmenopausal women is most likely due to
   A. Large ovarian tumor
   B. Cervical carcinoma
   C. Scleroderma
   D. Severe uterine prolapse
   E. Vesicorectal fistula

2. A premature neonate who died of sepsis had a history of urine leakage from the umbilicus. The most likely anomaly to be found on autopsy is
   A. Bladder exstrophy
   B. Patent urachus
   C. Urachal cyst
   D. Urachal diverticulum
   E. Urachal sinus

3. Cryptorchidism is
   A. A marker of fragile X syndrome.
   B. Associated with congenital adrenal hyperplasia.
   C. Bilateral in most cases.
   D. Often an isolated finding.
   E. Usually due to testicular agenesis or atrophy.

HEMATOPATHOLOGY

1. Waxy spleen is caused by
   A. amyloid
   B. lymphoma
   C. previous infarction
   D. sickle cell disease
   E. talc particles
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2. The inflammatory infiltrate in acute organ rejection is predominantly composed of cells that are:
   A. CD3+
   B. CD10+
   C. CD15+
   D. CD20+
   E. CD30+

NEUROLOGY

1. What is second impact syndrome?
   A. Blunt trauma secondary to impact injuries from ejection from motor vehicle following primary collision
   B. Brain swelling and herniation following a second head injury
   C. Hitting a second object after falling from a height
   D. It is synonymous with contrecoup brain contusion
   E. Myocardial rupture associated with an acute myocardial infarction

2. A 30-year-old woman had sudden onset of a severe headache. Within an hour, she lost consciousness and died. At autopsy extensive subarachnoid hemorrhage was present. Upon removing this blood from the base of the brain, where are you most likely to find the source of bleeding?
   A. At the origin of the anterior communicating artery from the anterior cerebral artery
   B. Vertebral artery at the entrance to the cranial cavity
   C. At the origin of the posterior cerebral artery from the basilar artery
   D. Superior internal carotid artery just above the cavernous sinus
   E. At the convergence of the vertebral arteries to the basilar artery

3. A 50-year-old man had sudden loss of consciousness. A CT scan of the head revealed massive intraparenchymal hemorrhage that was centered in the region of the left basal ganglia. Which of the following is the most common likely cause?
   A. AV malformation
   B. Clotting abnormalities
   C. Glioma
   D. Hypertension
   E. Metastatic carcinoma

4. Following a blow to the head, a 20-year-old man lost consciousness for a few minutes. He was taken to the emergency department of a local hospital where a CT scan of the head showed a lens-shaped collection of blood compressing the right parietal region of the brain. This blood did not appear to cross a suture line and did not interdigitate with the underlying gyri. Which vessel(s) were most likely to have been injured in this case?
   A. Bridging veins
   B. Superior sagittal sinus
   C. Small intraparenchymal arteries
   D. Middle meningeal artery
   E. Anterior cerebral artery

5. Diagnosis of diffuse axonal injury is facilitated by with which special stain?
   A. Beta amyloid precursor protein
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6. A reliable stain for demonstrating intracerebral amyloid is:
   A. Abeta
   B. Cytokeratin
   C. GMS
   D. Mucicarmine
   E. PAS

PEDIATRICS

1. A three-month-old infant who had been thriving was found dead in his crib. Parents reported a runny nose and nasal congestion for six days preceding death. What is the most likely diagnosis, based on epidemiological data?
   A. Child abuse
   B. Hemophilus influenzae bronchopneumonia
   C. Metabolic crisis
   D. Respiratory syncytial virus bronchiolitis
   E. Sudden, unexplained infant death

2. A 4-month-old infant, the product of a normal term birth, was found dead one evening when his mother went to check on him. He had been feeding normally an hour prior to this. The baby had no prior medical problems. What findings would be expected at autopsy in this infant?
   A. Laryngeal edema
   B. No findings at autopsy
   C. Small thymus
   D. Subarachnoid hemorrhage
   E. Visceral petechiae

3. Which of the following factors are associated with the highest incidence of sudden, unexplained infant death?
   A. Female sex, African-American, age 2-4 months, supine sleeping position
   B. Female sex, African-American, age 4-8 months, prone sleeping position
   C. Female sex, white, age 2-4 months, supine sleeping position
   D. Male sex, African-American, age 2-4 months, prone sleeping position
   E. Male sex, white, age 2-4 months, prone sleeping position

4. Sudden Unexplained Infant Death (SUID) is:
   A. Caused by the infant sleeping prone
   B. Considered an accidental death
   C. A diagnosis that requires autopsy
   D. Most commonly seen in white males
   E. The sudden unexplained death of a child under 6 months of age

PULMONARY
Autopsy Self-Assessment

1. A 57-year-old man died following acute increase in shortness of breath ultimately requiring mechanical ventilation. He had noted slowly increasing shortness of breath since a few months. At autopsy his lungs were rather small and firm. The surface of both lower lobes showed a cobblestone pattern. The cut surface revealed firm areas in a peripheral and lower lobe predominant distribution. Many small cysts were identified underneath the pleura arranged in multiple rows. In addition, ill-defined areas of consolidation were identified. Microscopic evaluation most likely showed:

A. Acute bronchopneumonia in a background of bronchiolocentric stellate scars and scattered intraalveolar clusters of smoker’s macrophages.
B. CMV pneumonia in a background of chronic lymphocytic leukemia/small lymphocytic lymphoma.
C. Diffuse alveolar damage in a background of fibrosis with temporal and regional heterogeneity
D. Intraalveolar clusters of smoker’s macrophages expanding alveolar spaces and focal mild interstitial fibrosis.
E. Organizing pneumonia in a background of homogeneous interstitial fibrosis and cellular interstitial pneumonia

2. The classic Ghon complex consists of:

A. Apical fibrosis and granulomas adjacent to the transverse fissure
B. Apical fibrosis and multiple parenchymal granulomas
C. Granulomas adjacent to the transverse fissure and at the apex
D. Granulomas adjacent to the transverse fissure and in hilar lymph nodes
E. Granulomas in hilar lymph nodes and apical fibrosis

3. A 66-year-old patient who lived at home with his wife became febrile and ultimately died of sepsis with respiratory insufficiency. At autopsy, the right lung weighed more than 855 g. The cut surface of the right lung revealed consolidation of the lower lobe. There was also patchy consolidation within other lobes. Of the following organisms, the most likely to be the causative agent is:

A. Aspergillus sp.
B. Pneumocystis carinii
C. Pseudomonas aeruginosa
D. Staphylococcus aureus
E. Streptococcus pneumoniae

4. The only significant gross findings at autopsy of a 24-year-old woman, who was found dead at home were overinflated lungs that could not be deflated after entry into the chest and alternating areas within the lungs of hyperinflation and collapse. Mucus plugs were identified in the small and medium bronchi. What is the most likely cause of death?

A. Asthma
B. Bronchitis
C. Bronchopneumonia
D. Emphysema (Panlobular emphysema)
E. Pulmonary emboli (Bronchiectasis)

RENAL

1. Kidneys with petechial hemorrhages, fibrinoid necrosis and “onion-skinning” of the arterioles are characteristic of:

A. Amyloidosis
Autopsy Self-Assessment

2. The most likely diagnosis of a renal cortex showing thyroid-like morphology histologically is:
   A. Acute tubular necrosis
   B. Chronic pyelonephritis
   C. Adult polycystic kidney disease
   D. Light-chain cast nephropathy ("myeloma kidney")
   E. Diffuse cortical necrosis

3. Nodular glomerulosclerosis (Kimmelstiel-Wilson disease) and optically clear hepatic nuclei are seen in:
   A. Diabetes mellitus
   B. Hepatitis C infection
   C. Malignant hypertension
   D. Polycystic kidney and liver disease
   E. Systemic lupus erythematosus

SOFT TISSUE

1. A 79-year-old woman recovering from a hip fracture in an extended care facility developed what was thought to be a decubitus bed sore. It progressively became more nodular and more exophytic. She developed fatal sepsis. Autopsy included permission to sample the sacral lesion (prior to cremation). This showed a loose myxoid background with zonation from fibrin necrosis to granulation tissue to atypical enlarged fibroblasts with hyperchromatic nuclei, and prominent nucleoli (similar to the ganglion-like cells in proliferative fasciitis). The most likely diagnosis is:
   A. Atypical fibroxanthoma
   B. Fibrosarcoma
   C. Ischemic fasciitis
   D. Pyogenic granuloma
   E. Well differentiated liposarcoma
   F. Paget disease

2. A 34-year-old man died of a drug overdose. His past medical history was significant for colectomy at age 14. At autopsy an 8 cm well circumscribed fibrous mass was found attached to the small bowel mesentery. Microscopically, the mass was comprised of myofibroblast fascicles, dense collagenous bands, and gaping thin walled vessels. There were also numerous gastric polyps. He most likely has:
   A. Albright syndrome
   B. Gardner syndrome
   C. Maffucci syndrome
   D. Marfan syndrome
   E. Osler-Weber-Rendu syndrome

3. A 73-year-old obese man with prior coronary bypass surgery died at home from a cardiac arrhythmia. At autopsy, a 22 cm fatty mass was discovered overlying the left kidney in the retroperitoneum. A focal area of the mass is more fleshy-appearing and microscopically shows a pleomorphic spindle cell morphology with high mitotic activity. Sections from the rest
Autopsy Self-Assessment

of the lesion show occasional enlarged hyperchromatic adipocytes. The most likely diagnosis is:

A. Dedifferentiated liposarcoma
B. Fibrosarcoma
C. Myelolipoma
D. Pleomorphic high grade sarcoma
E. Rhabdomyosarcoma