**PATHOLOGY AND CLINICAL MEDICINE FQE 2014 PAPER 1**

1. The following are predisposing factors to tumors. Which one is a chemical factor?
2. **Cigarette smoking.**
3. Excessive solar radiations.
4. Ionizing radiations.
5. Chronic trauma.

1. A 73-year-old man suffers “stroke." On physical examination he cannot move his right arm. A cerebral angiogram demonstrates occlusion of the left middle cerebral artery. An echocardiogram reveals a thrombus within a dilated left atrium. Which of the following is the most likely pathologic alteration from this event that has occurred in his brain?
2. **Cerebral softening from liquefactive necrosis**
3. Pale infarction with coagulative necrosis
4. Predominantly the loss of glial cells
5. Recovery of damaged neurons if the vascular supply is reestablished
6. Mrs Wafula has been diagnosed with a malignant tumor on her breast. What is the most appropriate means of management?
7. Surgery.
8. Home based care.
9. **Radiotherapy and chemotherapy.**
10. Surgery and chemotherapy.
11. A 55-year-old man has a 30-year history of poorly controlled diabetes mellitus. He has had extensive black discoloration of skin and soft tissue of his right foot, with areas of yellowish exudate, for the past 2 months. *Staphylococcus aureus* is cultured from this exudate. A below knee amputation is performed. The amputation specimen received in the surgical pathology laboratory is most likely to demonstrate which of the following pathologic abnormalities?
12. Neoplasia
13. **Gangrene**
14. Vasculitis
15. Caseation
16. The type of surgery required in management of tumors is determined by
17. **Tumor type and anatomical site.**
18. Tumor size and color.
19. Genetic factors.
20. Immune and physical factors.
21. A 39-year-old man incurs a burn injury to his hands and arms while working on a propane furnace. Over the next 3 weeks, the burned skin heals without the need for skin grafting. Which of the following is the most critical factor in determining whether the skin in the region of the burn will regenerate?
22. **Persistence of skin appendages**
23. Maintenance of underlying connective tissue
24. Diminished edema and erythema
25. Granulation tissue formation
26. Radiotherapy of tumors has a potential advantage in certain sites of being able to
27. Totally eliminate the tumor.
28. **To preserve the structure and function.**
29. Partially eliminate the mass.
30. Minimize the extent of surgery.
31. A clinical study is performed of patients with pharyngeal infections. The most typical clinical course averages 3 days from the time of onset until the patient sees the physician. Most of these patients experience fever and chills. On physical examination, the most common findings include swelling, erythema, and pharyngeal purulent exudate. Which of the following types of inflammation did these patients most likely have?
32. Granulomatous
33. **Acute**
34. Resolving
35. Chronic
36. Typhoid is usually caused by a bacteria called
37. **Salmonella.**
38. Vibrio cholerae.
39. Tuberculosis bacilli.
40. Streptococcus.
41. ----------------is a skin disease which is highly common in children and presents with exudative areas, with a typical honey colored crust on the surface.
42. impetigo
43. **ecthyma**
44. cellulitis
45. leprosy.
46. After two weeks in the hospital following a fall in which she incurred a fracture of her left femoral trochanter, a 76-year-old woman now has a left leg that is swollen, particularly her lower leg below the knee. She experiences pain on movement of this leg, and there is tenderness to palpation. Which of the following complications is most likely to occur next after these events?
47. Gangrenous necrosis of the foot
48. Hematoma of the thigh
49. Disseminated intravascular coagulation
50. **Pulmonary thromboembolism**
51. A patient presents with red hot swelling with blisters on the lower right limb with a history of being pierced by a thorn four days ago. What is the most likely diagnosis?
52. Myalgia.
53. **Cellulitis.**
54. Skin disease.
55. Herpes zoster.
56. Mwala a 55 years old businessman came to the outpatient physiotherapy department at Makindu District Hospital with a swollen knee. He had no history of trauma. X-ray taken revealed narrowing of the cartilage and spikes on the joint margins. What could have been the most appropriate diagnosis?
    1. **Osteoarthritis.**
    2. Pyogenic arthritis.
    3. Hemophilic arthritis.
    4. Osteomyelitis.
57. Congenital hip dislocation occuring either before or during birth or shortly afterward may not be the result of the following:
58. Hormonal joint laxity.
59. Genetically determined dysplasia of the hip.
60. Child in breech position.
61. **osteoporotic bones.**
62. A 43-year-old woman has had a chronic cough with fever and weight loss for the past month. A chest radiograph reveals multiple nodules from 1 to 4 cm in size, some of which demonstrate cavitation in the upper lobes. A sputum sample reveals the presence of acid fast bacilli. Which of the following cells is the most important in the development her lung lesions?
63. **Macrophage**
64. Fibroblast
65. Neutrophil
66. Platelet
67. In comparison to healing by first intention, one would expect healing by second intention to involve
68. A good apposition of wound edges.
69. **A longer time for the process to be completed.**
70. Less scaring.
71. Take seven days to be completed.
72. General inflammation occurs when pathogenic microorganisms gain entry into the …................ and …............... systems and give rise to general septicemia.
73. Tissue fluid and nervous system.
74. Blood stream and nervous system.
75. **Blood stream and lymphatic system.**
76. Bone tissue and bone marrow.
77. The following are stages in bone healing, arrange them in order of occurrence from the first to the last.
78. Hematoma formation
79. Callus formation.
80. Sub-periosteum and endosteal cellular proliferation.
81. Consolidation /ossification.
82. Remodeling
83. **1, 3,2,4,5.**
84. 1, 2, 3, 4, 5.
85. 2, 1, 3, 5, 4.
86. 5, 4,3,2,1
87. Deep skin burns is treated with
88. **Split thickness graft**
89. Full thickness graft
90. Amniotic membrane
91. Synthetic skin derivatives
92. Odongo presented in out-patient clinic complaining of pain at the calcaneal region. He had no history of trauma but had a history of offloading sacks of rice from a lorry a week ago. X-ray taken revealed a fracture on the calcaneus. What type of fracture could this be?
93. Pathological fracture.
94. **Stress fracture.**
95. Compound fracture.
96. Comminuted fracture
97. Mr Mugendi sustained a fracture of mid-shaft femur and was admitted in Tala district hospital and put on skeletal traction .The same night he became restless and dyspnoeic and died .What could have been the cause of his death?
98. **Fat embolism**
99. Shock
100. Compartment syndrome
101. Fracture
102. A 37-year-old man has had nausea and vomiting for 5 weeks. He experienced an episode of hematemesis yesterday. On physical examination he has no abnormal findings. Upper Gastrointestinal endoscopy is performed, and there is a 1.5 cm diameter lesion in the gastric antrum with loss of the epithelial surface. These findings are most typical for which of the following pathologic processes?
103. Abscess
104. Granuloma
105. Gangrene
106. **Ulcer**
107. In burns heat loss is due to;
108. Dilatation of veins
109. Shock
110. **Exposed area by evaporation**
111. None of the above
112. .Which of the following is the most common cause of quadriceps contracture?
113. Ischaemic myositis
114. Following femoral shaft fracture
115. Following operations on thigh
116. **Post injection fibrosis.**
117. A 60-year-old woman has noted a dark red-black appearance to her great toe and second and third toes of her left foot for the past month. On physical examination, the toes are cold and have lost sensation to touch. The dorsalis pedis and posterior tibial pulses are not palpable on the left. A transmetatarsal amputation is performed. These findings are most typical for a patient with which of the following?
118. **Diabetes mellitus**
119. Gout
120. Blunt force trauma
121. Rheumatoid arthritis
122. What is the earliest indication of Volkmann's ischaemia?
123. **Pain**
124. Pallor and poor capillary filling
125. Paraesthesia in median nerve distribution
126. Contracture of fingers
127. Which of the following is not true about dislocation of sternoclavicular joint?
128. Anterior dislocation occurs due to indirect injury and is a common type of dislocation
129. Posterior dislocation is rare and occurs due to direct injury over medial end of clavicle
130. **Sternoclavicular dislocation is common compared to acromioclavicular dislocation**
131. Trachea can be compressed in posterior dislocation
132. A 62-year-old man has experienced substernal chest pain upon exertion with increasing frequency over the past 6 months. An electrocardiogram shows features consistent with ischemic heart disease. He has total serum cholesterol of 262 mg/dL. By angiography, there is 75% narrowing of coronary arteries. In which of the following locations is a mural thrombus most likely to occur in this man?
133. Left atrium
134. **Left ventricle**
135. Right atrium
136. Right ventricle
137. The cold water treatment of burns has the disadvantage that it increase the chances of
138. Pain
139. Exudation
140. **Infection**
141. None of the above
142. A 15-year-old girl has had episodes of sneezing with watery eyes and runny nose for the past 2 weeks. On physical examination she has red, swollen nasal mucosal surfaces. She has had similar episodes each rainy season and dry season when the amount of pollen in the air is high. Her symptoms are most likely to be mediated by the release of which of the following chemical mediators?
143. Complement C3b
144. Platelet activating factor
145. **Histamine**
146. Immunoglobulin G
147. What is the first treatment priority in a patient with multiple injuries?
148. **Airway maintenance**
149. Bleeding control
150. Circulatory volume restoration
151. Splinting of fractures
152. A 45-year-old man has been working hard all day long carrying loads of bricks to build a wall. He takes a non-steroidal anti-inflammatory drug (ibuprofen). Which of the following processes is this drug most likely to diminish in his arms?
153. Thrombosis
154. **Pain**
155. Necrosis
156. Fibrinolysis
157. Which of the following fractures does not usually need open reduction and internal fixation?
158. **Fracture of mid shaft of femur**
159. Pathological fractures
160. Trochanteric fracture in elderly
161. Displaced fracture of both bones of forearm in adults.
162. A 44-year-old woman has a family history of heart disease. Her father and mother both developed myocardial infarction and congestive heart failure as a result of occlusive coronary atherosclerosis. A dietary modification to include consumption of which of the following is most likely to reduce her risk for ischemic heart disease?
163. Increased saturated fat
164. Foods with cholesterol
165. **Cold water fish oil**
166. Fat found in beef products
167. In which of the following situations is internal fixation contraindicated?
168. **Active infection**
169. When bone gap is present
170. In epiphyseal injuries
171. In pathological fracturе.
172. Most often open reduction of fracture is required in
173. Closed fracture with nerve injury
174. Compound fracture
175. Fracture in children
176. **Unsatisfactory closed reduction**
177. Within minutes following a bee sting, a 37-year-old man develops marked respiratory stridor with dyspnea and wheezing. He also develops swelling and erythema seen in his arms and legs. An injection of epinephrine helps to reverse these events and he recovers within minutes. Which of the following chemical mediators is most important in the pathogenesis of this man's condition?
178. Bradykinin
179. Complement C5a
180. Nitric oxide
181. **Histamine**
182. Which of the following is the common material used to make Orthopedic implants?
183. Titanium
184. **Stainless steel**
185. Methyl-methacrylate
186. Carbon.
187. An autopsy study reveals that evidence for atheroma formation can begin even in children. The gross appearances of the aortas are recorded and compared with microscopic findings of atheroma formation. Which of the following is most likely to be the first visible gross evidence for the formation of an atheroma?
188. **Fatty streak**
189. Calcification
190. Hemorrhage
191. Exudate
192. The most common complication while using external fixator is
193. **Pin tract infection**
194. Compartment syndrome
195. Loosening of pins
196. Joint stiffness
197. Undue restlessness in a patient during the immediate post burn period is often a manifestitation of
198. Hypoxia
199. Hypovolemia
200. Hyperkalemia
201. **Anxiety**
202. A 38-year-old man incurs a traumatic blow to his upper left arm. He continues to have pain and tenderness even after 3 months have passed. A plain film radiograph reveals a 4 cm circumscribed mass in the soft tissue adjacent to the humerus. The mass contains peripheral areas of brightness on the x-ray. Over the next year this mass gradually resolves. Which of the following terms best describes the changes described?
203. Dysplasia
204. Hyperplasia
205. **Metaplasia**
206. Neoplasia
207. Which of the following fracture is slowest to heal and often develops non-union?
208. **Intracapsular fracture of neck of femur**
209. Scaphoid
210. Lower third of tibia
211. Proximal humerus
212. Which of the following is the most successful method of treatment of fracture non-union?
213. Compression plating
214. Compression by external fixator
215. **Bone grafting**
216. Electrical stimulation
217. A 63-year-old man has had increasing exercise intolerance for the past 6 years so that he now becomes short of breath upon climbing a single flight of stairs. Laboratory studies have shown fasting blood glucose measurements from 145 to 210 mg/dL for the past 25 years, but he has not sought medical treatment. If he dies suddenly, which of the following is most likely to be the immediate cause of death?
218. **Myocardial infarction**
219. Nodular glomerulosclerosis
220. Cerebral hemorrhage
221. Hyperosmolar coma