

CHAPTER ONE: INTRODUCTION TO TRAUMA CARE

1. ——— are the leading cause of injury-related death.
 A Firearm-related injuries B Motor vehicle crashes C Falls D Homicides
2. Most of the deaths in this context occur:
 A in hours B in weeks C in minutes D in days
3. ——— is an important part of reducing disability and improving an injured patient’s long-term outcome.
 A Post-hospital care B Acute care facilities C Prehospital care D Injury prevention
4. A Glasgow coma score (GCS) of ——— or less is usually indicative of severe brain injury.
 A 10 B 8 C 0 D 13
5. Penetrating Abdominal ——— Index (PATI) is a scoring system designed to quantify the effects of penetrating abdominal injury.
 A Traction B Turn C Tension D Trauma

CHAPTER TWO: PHYSIOLOGIC RESPONSE TO INJURY

6. ——— is a complex process which attempts to maintain integrity of the vascular system.
 A Coagulation B Homeostasis C Dilution D Volume shifting
7. What is the first phase of volume shift after trauma?
 A Diuresis B Shock C Fluid sequestration D Fluid mobilization
8. What event attenuates bleeding as a local response?
 A Inflammation B Vasoconstriction C Homeostasis D Diuresis
9. At a systemic level after trauma or infection the organism is at a heightened state reflected by a complex of symptoms called:
 A SARS B RISS C CARS D SIRS
10. The immune response can be divided into:
 A Adaptive B Interactive C Shared D Complete
11. The primary function of ——— is wound healing.
 A cytokines B eicosanoids C neutrophils D macrophages
12. ——— is produced early in the inflammatory reaction and only detectable for a short period of time after the injury:
 A IL-1 β B IL -6 C IL-1 α D IL – 6 α
13. ——— is produced from the onset of the inflammatory process on, however, peaks hours after the event.
 A IL-1 β B IL -10 C IL-6 D IL – 8
14. Where is the oxygen processed to deliver fuel for intracellular processes?
 A Nucleolo B Nucleus C Mitochondria D Cell membrane

CHAPTER THREE: AIRWAY MANAGEMENT AND ANESTHESIA

15. ——— is important for the airway management.
 A Oxygen B Endotracheal intubation C Advance airway interventions D Basic airway interventions
16. Resuscitation of the major trauma patient begins in the field and ——— continues it.
 A a paramedic B the emergency department C the ICU D rescuers

17. If oxygen saturation cannot be maintained >95% use:
- A Advanced airway intervention B CO2 C endotracheal intubation D BVM ventilation
18. ——— is the most common and the preferred method of ETI in trauma patients:
- A Orotracheal intubation B Nasotracheal intubation C Bag-valve-mask D BVM ventilation
19. Use a no. ———. endotracheal tube on average-sized adult females:
- A 7.0 B 6.0 C 6.5 D 8.0
20. Oral intubation requires at least ——— rescuers.
- A four B three C two D five
21. ——— should oxygenate the patient.
- A Rescuer 1 B Rescuer 2 C Rescuer 3 D Rescuer 4
22. ——— maintains manual cervical immobilization.
- A Rescuer 1 B Rescuer 2 C Rescuer 3 D Rescuer 4
23. The endotracheal tube should place to a depth of ——— for adult women.
- A 19 cm B 23 cm C 20 cm D 22 cm
24. After inserting the endotracheal tube, you must:
- A secure the tube B release cricoid pressure C confirm correct placement D Re-insert tube
25. This isn't an anatomic feature associated with ETI difficulty:
- A Malnutrition B Obesity C Small mouth D Airway trauma
26. Most trauma patients need drugs to:
- A induce hypovolemia B decrease blood pressure C sedate them D decrease intracranial pressure
27. While there are many potential drug regimens, ——— is recommend as drug combination.
- A ketamine + fentanyl B etomidate + succinylcholine C etomidate + propofol D ketamine + succinylcholine
28. ——— are required when basic interventions and ETI efforts are not likely to succeed or have failed.
- A Laryngeal mask airway B Surgical Airways C Digital ETI D Nasotracheal intubation
29. ——— is the preferred technique and most clinicians are more familiar with.
- A Tracheostomy B Needle cric C Closed cric D Cricothyroidotomy
30. Percutaneous translaryngeal catheter insufflation is also known as "needle cric" or "——— ventilation".
- A jet B hose C tube D puff
31. ——— isn't a form of vascular access during trauma.
- A Central venous catheters B Arterial catheters C Central arterial catheter D Peripheral venous catheters
32. Patients who are bleeding should receive ——— transfusions as soon as possible.
- A saline B platelets C plasma D red blood cells
- CHAPTER FOUR: INITIAL ASSESSMENT AND RESUSCITATION**
33. Regarding trauma resuscitation, the definition of unstable will include patients who are considered metastable (the ———).
- A state of extreme vital signs B condition of low blood pressure C capacity to change at any time D state of remaining the same

34. Hypotensive patients who sustain normotensive response to the first 1 to 2 L of fluid are considered:
 A unstable B stable C metastable D transient responders
35. Injury must be suspected from interpretation of key phrases, when a patient says "Let me sit up" we should suspect:
 A ventilatory dysfunction B airway dysfunction C blood loss D hemoperitoneum
36. Radiological studies are indicated by the mechanism of injury and physical examination, nevertheless ——— is usually routine.
 A pelvis x-ray B C-spine x-ray C chest x-ray D lumbar x-ray
37. When assessing circulation, if signs of hypovolemia persist, we must check urgently for:
 A pelvis fracture B C-spine fracture C lung legion D occult blood loss
38. With the unstable blunt trauma patient, a(n) ——— of the cervical spine is usually ordered to rule out gross deformity only.
 A lateral B odontoid view C AP D RAO
39. In general, a target BP of ——— should not be exceeded until definitive control of the injury in the operating room.
 A 120 mm Hg B 80 mm Hg C 90 mm Hg D 100 mm Hg
40. The hemodynamically unstable patient with a penetrating wound to the neck, abdomen, or extremity requires control of hemorrhage in:
 A the ambulance B the ED C the field D the OR
41. The ——— presents with anatomic or physiologic findings that will result in death within minutes if not immediately corrected:
 A stable patient B patient in extremis C unstable patient D unstable with blunt trauma
42. ——— is the first priority when there are multiple injuries:
 A Thoracic hemorrhage B Abdominal hemorrhage C Pelvic hemorrhage D Extremity hemorrhage
43. ——— is the last priority when there are multiple injuries:
 A Pelvic hemorrhage B Spinal cord injury C Intracranial injury D Thoracic hemorrhage
44. When several trauma victims arrive in the resuscitation area simultaneously, priority should be given to the ——— trauma patients.
 A non resuscitable B metastable C stable D unstable
- CHAPTER FIVE: SHOCK**
45. ——— shock is the most common cause of shock in the injured patient due to hemorrhage.
 A Traumatic B Cardiogenic C Hypovolemic D Neurogenic
46. Vasogenic ——— occurs when vascular resistance is lowered sufficiently to reduce perfusion pressure in peripheral tissue beds.
 A reverse flow B disintegration C shock D degeneration
47. Epinephrine and norepinephrine are released from ——— to produce vasomotor effects.
 A renal cortex B heart C adrenal medulla D adrenal cortex
48. Regarding the manifestations of shock, the "lethal triad" consists of ———, acidosis, and coagulopathy.
 A rapid breathing B hypoxia C heat exhaustion D hypothermia
- CHAPTER SIX: DAMAGE CONTROL SURGERY**
49. Acidosis is defined as a pH below 7.2 or base deficit exceeding:
 A 8 B 7 C 6.5 D 6
50. Hypothermia is a temperature below:
 A 30 B 35 C 35.5 D 36

51. Initial volume evacuation or ongoing drainage from tube thoracostomy more than ——— indicates the need for thoracotomy.

- A 1300 B 1500 C 1000 D 2000

52. The operation should not end if:

- A fracture is stable B temperature is > 35 C BP is > 90 mm Hg D Bleeding is present

53. Coagulopathy and hypoperfusion cannot be adequately corrected until a patient reaches:

- A Normothermia B Hyperthermia C Hypothermia D Athermia

54. The inability to warm the patient suggest continued:

- A brain damage B hypothermia C hemorrhage D spine damage

55. ——— should be proven before the start of enteral feeding.

- A Aperistalsis B Urination C Normal temperature D Normal gut perfusion

56. In patients undergoing fascial closure, a ——— of the abdomen is recommended at time of closure to look for retained packing or instruments.

- A MRI B CT scan C radiography D fluoroscopy

57. Damage control techniques have survival rates around ——— overall and some series report higher survivals with penetrating injuries.

- A 80% B 60% C 10% D 40%

CHAPTER SEVEN: BLOOD AND TRANSFUSION

58. Approximately ——— million units of blood are transfused every year in the United States.

- A 15 B 30 C 40 D 55

59. Hemorrhage as a cause of death usually occurs within the first ——— of admission.

- A 6 hours B 12 hours C day D hour

60. ——— aims to maintain intravascular volume, oxygen carrying capacity, and normal coagulation.

- A Hemostatic resuscitation B Saline C Red blood cell transfusion D Platelet transfusion

61. Enzymatic inhibition of the coagulation cascade generally begins at temperatures less than ——— degrees.

- A 36 B 35 C 33 D 34

62. ——— is/are used primarily for the hemoglobin concentration (to assess oxygen carrying capacity).

- A Iron B Platelets C Ferritine D CBC

63. A typical pRCB unit has a volume of 225 ml and should raise the hemoglobin by ——— after transfusion.

- A 5 g/dL B 1 g/dL C 2 g/dL D 3 g/dL

64. Patients with severe hypotension (BP < ——— mm Hg) attributable to hemorrhage should receive blood immediately.

- A 70 to 80 B 80 to 90 C 100 D 40 to 50

CHAPTER EIGHT: NUTRITIONAL INTERVENTION

65. Mobilization of lipid stores (——) occurs after trauma.

- A lipogenesis B gluconeogenesis C lipolysis D glycolysis

66. The advent of total ——— nutrition (TPN) allowed the provision of complete nutritional support delivered by a central venous catheter.

- A parenteral B primary C pediatric D percentile

CHAPTER NINE: PREHOSPITAL AND AIR MEDICAL CARE

67. Mass casualty triage involves prioritizing patients when needs exceed:

- A a greater than 25 patient wait B federally set resource limits C available resources D predetermined resources

68. Under-triage (——) occurs when a patient who may benefit from trauma center is transported to a setting with fewer resources.

- A upside-down triage B sufficient reverse C negative transport D false

CHAPTER TEN: TEAM ACTIVATION AND ORGANIZATION

69. Any trauma patient with severe respiratory distress should be evaluated immediately for:

- A hydrothorax B tension pneumothorax C abdominal bleeding D hip fracture

70. A —— provides initial evaluation and assessment of injured patients; typically located in small hospitals or clinics in remote areas.

- A Level I trauma center B Level II trauma center C Level III trauma center D Level IV trauma center

71. It is not uncommon for radiographic studies to be performed concomitant with the trauma resuscitation.

- A True B False

CHAPTER ELEVEN: IMAGING OF TRAUMA PATIENTS

72. Standard two-dimensional angiography has been largely replaced by CT angiography in the diagnosis of vascular traumatic injury.

- A True B False

73. —— has largely replaced the diagnostic peritoneal lavage (DPL) in unstable patients.

- A Paracentesis B Drainage abdomen C Focus Abdominal Ultrasound D Abdominal CT

74. Ideally, an erect chest film is obtained because the anatomic alterations caused by the supine position can simulate:

- A S/C joint separation B disease C a different body habitus D A/C joint separation

75. The diagnosis of a diaphragmatic rupture is easy to make in plain film due to the air from colon seen projected in the chest.

- A True B False

76. —— is essential in the evaluation of urethral injuries.

- A Pielogram B Retrograde urethrography C Focus abdominal ultrasound D Excretory phase CT

CHAPTER TWELVE: INTERVENTIONAL RADIOLOGY

77. Prompt uncomplicated access, usually ——, is a key initial step to angiographic intervention.

- A in the brachial artery B transfemoral C in the radial artery D in the posterior tibial artery

78. Detectable extravasation must occur at ——, although CT may detect pooling contrast material being leaked at a much slower rate.

- A about 2.5 mL/min B about 1.5 mL/min C about 0.5 mL/min D about 3 mL/min

79. History of seafood or shellfish allergy is not predictive of anaphylactic reaction to contrast material.

- A True B False

CHAPTER THIRTEEN: SEPSIS IN TRAUMA

80. Sepsis is a broad term including severe sepsis (infection complicated by acute organ dysfunction) and septic shock (——).

- A infection leading to shock B infection leading to paralysis C hypothermia leading to shock D infection leading to death

81. The most common healthcare associated fungal infection is due to —— species.

- A klebsiella B influenza C escherichia coli D candida

82. Aim to keep blood glucose <150 mg/dL (8.3 mmol/L) using a validated protocol for insulin dose adjustment.

- A True B False

CHAPTER FOURTEEN: INFECTIONS, ANTIBIOTIC PREVENTION, AND ANTIOTIOTIC...

83. The incidence of infection following injury approaches:

- A 25% B 15% C 45% D 5%

84. ——— is/are the single most effective means to reduce the spread of infection.
- A Hand hygiene B Proper use of surgical drapes C Vaccinations D Food safety
85. The alcohol gel that is used increasingly for hand disinfection is active against spores of *C. difficile*.
- A True B False

CHAPTER FIFTEEN: TRAUMA PAIN MANAGEMENT

86. ——— are the cornerstone of acute severe pain management.
- A Muscle relaxants B Opioids C NSAIDs D Corticosteroids
87. ——— causes the least hemodynamic effects and is the agent of choice for pain relief during resuscitation.
- A Morphine B Hydromorphone C Propofol D Fentanyl
88. 30 mg IM of Ketorolac is more effective than 600mg P.O ibuprofen.
- A True B False

CHAPTER SIXTEEN: VENOUS THROMBOEMBOLISM

89. This element isn't part of Virchow triad:
- A Stasis B Injury to vessel wall C Hyperthermia D Hypercoagulability
90. DVT affects > ——— million people each year in the United States.
- A .5 B 1 C 2.5 D .7
91. The classic syndrome of calf discomfort, edema, venous distension, and pain on dorsiflexion of the foot is called.
- A Homan's sign B Charcott sign C Milk leg D Semilunar sign
92. In symptomatic patients, duplex ultrasound provides a sensitivity and specificity greater than ——— for infrainguinal DVT.
- A 55% B 65% C 75% D 95%

CHAPTER SEVENTEEN: OPERATING ROOM PRACTICE

93. A trauma OR table should be capable of radiography and fluoroscopy (i.e. ——— table).
- A Jackson B Perugia C Hamilton D Smith
94. A trauma OR table should have a minimum of ——— suction canisters.
- A three B four C seven D ten

CHAPTER EIGHTEEN: DISASTERS, MASS CASUALTY INCIDENTS

95. A(n) ——— occurs when the local resources are unable to meet the needs of the event.
- A cataclysm B epidemic C disaster D mass casualty
96. Disaster Medical ——— Teams (DMATs) designed to be a rapid-response element to supplement local medical care.
- A Alert B Awareness C Assistance D Associative
97. Injuries caused by projectiles either packed in the explosive device or created as the result of the explosion are called:
- A primary blast injury B secondary blast injury C tertiary blast injury D quandary blast injury

CHAPTER NINETEEN: INJURY PREVENTION

98. Over ——— of all US emergency department visits, almost 40 million in total, are related to injury.
- A one-tenth B one-third C one-eighth D one-fifth
99. A traditional public health model used to identify and tackle modifiable risk factors for injury includes hosts (———).
- A automobiles, firearms, knives B people and their risky behaviors C road signs, poor lighting, etc. D high unemployment, etc.

CHAPTER TWENTY: REHABILITATION

100. Cardiovascular deconditioning occurs rapidly with any period of:
A tachycardia B hypoxia C exertion D inactivity
101. Prevention of ulceration requires frequent turning of the patient, initially on a schedule of a minimum of every:
A 2 hours B 4 hours C 8 hours D 12 hours
102. Complete bed rest results in loss of ——— of muscle strength per week.
A 5% B 15% C 20% D 25%
103. Secondary disability is the result of prolonged immobilization of the patient.
A True B False

CHAPTER TWENTY-ONE(A): TRAUMA IN CHILDREN

104. ——— remains the cause of more childhood (ages 1 to 14) deaths than all other childhood diseases combined.
A Unintentional injury B Noncommunicable disease C Nutritional conditions D Maternal conditions
105. Head injury causes > ——— of pediatric trauma deaths.
A 25% B 55% C 75% D 95%

CHAPTER TWENTY-ONE(B): TRAUMA IN PREGNANT WOMEN

106. Trauma complicates 6% to 7% of all pregnancies and accounts for ———% of maternal deaths.
A 22 B 70 C 30 D 46
107. Motor vehicle collisions (MVCs) account for ——— of all traumas in pregnant women.
A 10% to 25% B 35% C 95% D 50% to 80%

CHAPTER TWENTY-ONE(C): TRAUMA IN OLDER ADULTS

108. Decrease in renal cortex mass results in as much as ———% functional cortical loss.
A 25 B 10 C 5 D 70
109. ——— are the most frequent cause of injury in the elderly.
A Falls B MVA C Gunshots D Violence

CHAPTER TWENTY-TWO: MECHANISM OF INJURY

110. MVCs cause at least ——— of closed head and spinal cord injuries.
A one-tenth B half C one-third D one-fourth
111. Regarding lateral crashes, greater than ——— of intrusion on the occupant side signify a greater than 20% chance of significant injury.
A 12 in. B 5 in. C 2 in. D 18 in.
112. Falls of 25 to 30 ft (three stories) have a mortality of 30%.
A True B False

CHAPTER TWENTY-THREE: TRAUMATIC BRAIN INJURY

113. The ——— is the largest and most well developed portion of the brain.
A cerebellum B pons C cerebrum D frontal lobe
114. The ——— doctrine states that the total volume of intracranial contents must remain constant because of the rigid bony cranium.
A Jacobson B Hamilton C Pintorelli D Monro-Kellie

CHAPTER TWENTY-FOUR: MAXILLOFACIAL INJURY

115. A ——— is a good screening radiograph for most dentoalveolar trauma.
A panorex B panrad C panphoton D panoria

CHAPTER THIRTY-NINE: ABDOMINAL COMPARTMENT SYNDROME, OPEN...

148. Mortality of ACS ranges from ——— after detection and treatment.

- A 21% to 38% B 2% to 15% C 42% to 68% D 25% to 32%

149. IAH is defined by a sustained increase in IAP of ——— or more.

- A 2 mm Hg B 25 mm Hg C 30 mm Hg D 12 mm Hg

CHAPTER FORTY: LIVER FAILURE

150. Fulminant hepatic failure (FHF) is synonymous with acute liver failure (ALF).

- A True B False

151. PH (portal hypertension) is defined as a portal pressure gradient between the portal vein and hepatic veins of greater than:

- A 12 mm Hg B 5 mm Hg C 2 mm Hg D 25 mm Hg

CHAPTER FORTY-ONE: SUPPORT OF THE ORGAN DONOR

152. Once life support is withdrawn, the general time window for procurement is approximately ——— minutes for the liver.

- A 45 B 120 C 180 D 30

153. Progression from brain death to somatic death results in the loss of ——— of potential donors.

- A 35% to 40% B 20% to 30% C 10% to 20% D 2% to 5%

CHAPTER FORTY-TWO: ACCIDENTAL AND THERAPEUTIC HYPOTHERMIA, COLD...

154. Severe hypothermia is classified primarily by the patient's core temperature – below:

- A 28°C B 18°C C 10°C D 23°C

155. Between ——— of severely injured trauma patients become hypothermic.

- A 10% and 20% B 21% and 50% C 51% and 62% D 63% and 70%

CHAPTER FORTY-THREE: INTRODUCTION TO EMERGENCY GENERAL SURGERY...

156. Dehydration is consistent with a BUN/Cr ratio of:

- A $\geq 20:2$ B $\geq 40:1$ C $\geq 30:1$ D $\geq 20:1$

157. Biliary scintigraphy is useful to assess the biliary tree and function of the:

- A small intestine B pancreas C gallbladder D spleen

CHAPTER FORTY-FOUR: PREPARATION, INITIAL RESUSCITATION, AND...

158. Hypotension in the setting of trauma is often arbitrarily defined as a systolic blood pressure below ——— mm Hg.

- A 90 B 70 C 80 D 65

159. Prothrombin ——— concentrates (PCCs) contain varying amounts of Factor II, VII, IX, X, and proteins C and S.

- A complex B combined C calcified D circulatory

CHAPTER FORTY-FIVE: ACUTE ABDOMEN IN ICU PATIENTS

160. Intra-abdominal pathology necessitating surgical intervention occurs in approximately ——— admitted to the intensive care unit.

- A 9% of patients B 4% of patients C 14% of patients D 20% of patients

161. US is not sensitive to ascites and intra-abdominal fluid collections (e.g., abscess).

- A True B False

CHAPTER FORTY-SIX: BOWEL OBSTRUCTION

162. A ——— bowel obstruction occurs when the lumen is totally occluded and does not allow passage of air or fluid.

- A partial B complete C simple D complex

163. ——— occurs when a segment of intestine twists about its mesentery.

- A Closed loop obstruction B Partial bowel obstruction C Complicated loop obstruction D Volvulus

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