M_PTQ_TraumaCRN (400+ Questions) - Quiz Questions with Answers

1.

When monitoring intracranial pressure in an adult, the trauma nurse must be aware that normal range is

5 to 10 mm Hg.

10 to 15 mm Hg.

15 to 20 mm Hg.

20 to 25 mm Hg.

Explanation:

When monitoring intracranial pressure in an adult, the trauma nurse must be aware that the normal range is 10 to 15 mm Hg. If bleeding occurs within the brain, the brain first attempts to compensate by decreasing the volume of CSF through increased absorption and decreasing blood flow, but when the brain can no longer compensate, the ICP begins to rise very rapidly, resulting in compression of the tissue and sometimes brain shift and herniation syndromes. If the condition is not immediately reversed, it can result in death within a very short period of time.

2.

Which of the following is an absolute contraindication to nasotracheal intubation?

Cervical spine injury

Facial trauma.

Skull fracture.

Apnea.

Explanation:

Apnea is an absolute contraindication to nasotracheal intubation. The primary indications are suspected or confirmed cervical spine injury resulting in a clenched jaw but with the gag reflex intact and severe respiratory distress. Facial and skull fractures may, in some cases, be contraindications, depending on the location and extent of fractures. The nares size must be adequate to accept endotracheal tube in sizes 7 to 8. Usually an anti-decongestant, such as phenylephrine 0.5 mg, is administered to the nostril prior to tube insertion.

3.

With targeted temperature management (TTM), AKA therapeutic hypothermia, the patient's temperature should generally be lowered and maintained at

24 to 28° C.

28 to 30° C.

30 to 32° C.

32 to 36° C.

Explanation:

With targeted temperature management (TTM), AKA therapeutic hypothermia, the patient's temperature should generally be lowered and maintained at 32 to 36° C. (Normal temperature is about 37° C). TTM is typically maintained for about 24 hours. Hypothermia is contraindicated in the presence of sepsis, recent surgery (within 2 weeks), coagulopathy, or pre-existing coma. Cooling may be achieved with ice packs, cooling blankets and/or helmets, and cool infusions or instillations.

4.

With a gunshot wound to the abdomen, the trauma nurse should anticipate that the organ most likely to be injured is the

colon.

stomach.

liver.

small intestine.

Explanation:

With a gunshot wound to the abdomen, the trauma nurse should anticipate that the organ most likely to be injured is the small intestine (half of injuries). However, depending on the trajectory and penetrance of the bullet, multiple other organs (such as the colon, liver, and major vessels) may also be injured. High energy gunshot wounds from close range may result in both primary injuries and secondary injuries, such as from bone fragments.

5.

A 40-year old male receives mannitol to decrease increased intracranial pressure resulting from a traumatic brain injury and exhibits cardiac arrhythmias. Which of the following electrolyte

abnormalities associated with mannitol administration is most likely the cause of the arrhythmias?

Hyperkalemia.

Hypokalemia.

Hypernatremia

Hypermagnesemia.

Explanation:

Mannitol administration for treatment of cerebral edema may result in fluid and electrolyte imbalance with hyperkalemia, which can cause cardiac arrhythmias. Mannitol is an osmotic diuretic that increases excretion of both sodium and water, increasing potassium levels, and reduces intracranial pressure and brain mass, especially after traumatic brain injury. Other side effects include nausea, vomiting, hypotension, tachycardia, fever, and urticaria. Mannitol may also be used to shrink the cells of the blood-brain barrier in order to help other medications breach this barrier. Cerebral spinal fluid pressure should show decrease within 15 minutes of administration.

6.

If a handgun is found in the pocket of a trauma victim, the first consideration when removing and securing the gun is to

place it in a paper bag.

arrange for security personnel to remove the gun.

avoid touching the trigger.

call the police.

Explanation:

If a handgun is found in the pocket of a trauma victim, the first consideration when removing and securing the gun is to avoid touching the trigger. All guns should be considered loaded even if assured it is empty of bullets. The gun should be removed wearing gloves and handled carefully to avoid disrupting fingerprints or gun powder residue and should be placed in a secure container, never a paper bag. When moving the gun, the barrel should never be pointed at others. If the gun has a safety device, it should be engaged.

7.

If a patient with facial fractures has dentoalveolar trauma with avulsion of permanent teeth, reimplantation should ideally be carried out within

15 minutes.

30 minutes.

60 minutes.

120 minutes.

Explanation:

If a patient with facial fractures has dentoalveolar trauma with avulsion of permanent teeth, reimplantation should ideally be carried out within 30 minutes because saving the tooth is often not possible after two hours or if the root is desiccated. If teeth cannot be immediately reimplanted, then they should be stored in a moist environment, such as in NS. Pediatric deciduous teeth are generally not reimplanted because of high failure rate and possible damage to underlying permanent teeth.

8.

When utilizing the AMPLE acronym to rapidly obtain important information about the patient's history, the L stands for

last meal.

length of time since injury.

legal directives.

loss of blood.

Explanation:

When utilizing the AMPLE acronym to rapidly obtain important information about the patient's history, the letter L stands for "Last meal." The information obtained is that which is essential to providing emergent care to the patient. If the patient is unable to respond, a family member or friend may provide information:

$$\begin{aligned}&\mathrm{A} = \text{Allergies.}\\&\mathrm{M} = \text{Medications (all current).}\\&\mathrm{P} = \text{Prior illnesses and surgeries.}\\&\mathrm{L} = \text{Last meal (time, size, contents).}\\&\mathrm{E} = \text{Events/Environment associated with the injury.}\end{aligned}$$

9.

An 11-month old boy climbed out of his highchair and fell onto a tile floor, hitting his head. At 48 hours he experienced a seizure and exhibited fever, weakness on the right side, poor feeding, and pronounced lethargy, indicating a subdural hematoma. Which emergent treatment is most indicated?

Insertion of an intracranial pressure-monitoring device.

Intravenous mannitol.

Intravenous hypertonic saline solution.

Surgical evacuation of hematoma.

Explanation:

Acute subdural hematoma, which is most common in children <1 and often results from falls, impact, or abuse, is an emergent situation requiring immediate surgical evacuation of the hematoma as it presses directly on the brain and can lead to death. An ICP device may be inserted during surgery to monitor pressure. Mannitol is an osmotic diuretic that increases excretion of sodium and water and reduces ICP related to traumatic brain injury. Hypertonic saline solution reduces hyponatremia, cerebral edema, and increased intracranial pressure associated with traumatic brain injury.

10.

During transport of a patient with depressed respirations from the scene of an accident to the trauma center, the oxygen delivery device that provides the highest level of FIO_2 is

partial rebreather face mask.

Venturi mask.

non-rebreather mask.

nasal cannula.

Explanation:

The non-rebreather mask, which covers the mouth and nose with a reservoir bag of oxygen, has a one-way valve that prevents the patient from rebreathing exhaled air and delivers FIO_2 of 60% to 80% or even higher at flow rates of 15 LPM. Partial rebreather masks provide 30% to 40% FIO_2 with oxygen flow between 6 and 12 LPM. Venturi masks provide 24% to 50% FIO_2 but FIO_2 is often unreliable over 35%. Nasal cannulas provide 24% to 40% FIO_2 and ≤6 LPM.

11.

Which of the following patients is least likely to require intracranial pressure monitoring?

Fifty-year old female with head injury, Glasgow coma score of 14, and BP of 60/95.

Forty-five-year old head injury patient with BP of 40/80 and unilateral posturing.

Four-year old with extensive subarachnoid hemorrhage.

Sixteen-year old with acute head injury and unable to follow commands.

Explanation:

Most patients with a Glasgow coma score of 13 to 15 and mild to moderate head injuries do not require ICP monitoring. Those with severe head injury (even with a normal CT) usually require monitoring if they are >40, exhibit posturing, and are hypotensive (<90 systolic). ICP monitoring may be indicated with subarachnoid and intraventricular hemorrhage, cerebrovascular accident, brain tumors, brain abscesses/infections, and hydrocephalus. ICP threshold value for adults is 20 to 25 mm HG and for children, 20 mm Hg.

12.

A patient is brought to the trauma center after an automobile accident. The patient has multiple fractured ribs and exhibits labored breathing with respiratory rate of 40/min. The patient's oxygen saturation is 86% and the patient is hemodynamically unstable. The trauma nurse should prepare the patient for

continuous positive airway pressure (CPAP).

intubation and mechanical ventilation.

hyperbaric oxygen therapy.

cardiopulmonary resuscitation.

Explanation:

If a patient is brought to the trauma center after an automobile accident with multiple fractured ribs and exhibits labored breathing with respiratory rate of 40/min and oxygen saturation of 86% and the patient is hemodynamically unstable, the trauma nurse should prepare the patient for intubation and mechanical ventilation. The patient's presentation is consistent with flail chest, and intubation is indicated with shock and/or respiratory distress, including labored breathing, respiration >35 or <8 per minute, oxygen saturation <90%, PaO_2 <60 mm Hg, and $PaCO_2$ >55 mm Hg.

13.

A patient who accidentally amputated his hand in a chainsaw accident is brought to the trauma center by a friend with the amputated hand wrapped in a dry towel. After irrigating the hand with NS, the hand should be stored by being

wrapped with saline moistened dressing inside a sealed plastic bag and immersed in ice water.

wrapped with dry dressing inside a sealed plastic bag and immersed in ice water.

immersed directly into a container of ice water.

immersed directly into room temperature NS.

Explanation:

An amputated body part, such as a hand, should have jewelry removed and be thoroughly irrigated to remove debris, wrapped with saline moistened dressing and placed inside a sealed plastic bag that is then immersed in ice water (1:1 ice to water). It's important to keep the part cool but to avoid freezing. The part should be reattached within 6 hours if possible but may be delayed up to 24 hours if the part is properly stored.

14.

If a patient experienced a high voltage electrical shock with electrical burns from touching a live wire with the palm of his hand while standing and bending over, the trauma nurse would expect exit wounds

on the top of the hand.

on the feet.

at multiple sites.

at the proximal arm.

Explanation:

If a patient experienced a high voltage electrical shock with electrical burns from touching a live wire with the palm of his hand while standing and bending over, the trauma nurse would expect exit wounds at multiple sites as the current's pathway is unpredictable. With low voltage electrical shocks, the exit wound is usually at a grounded site with lowest resistance. High voltage injuries may result in severe burns, myonecrosis, thrombosis, compartment syndrome, and nerve entrapment syndrome.

15.

If extended focused abdominal sonography for trauma (eFAST) is being used to identify pneumothorax or hemothorax associated with blunt trauma, the probe should be placed at the

fourth intercostal space at the parasternal line.

second intercostal space at the parasternal line.

fourth intercostal space at the mid-clavicular line.

second intercostal space at the mid-clavicular line.

Explanation:

If extended focused abdominal sonography for trauma (eFAST) is being used to identify pneumothorax or hemothorax associated with blunt trauma, the probe should be placed at the second intercostal space at the mid-clavicular line. Both left and right sides should be examined. FAST is a non-invasive ultrasound procedure that is part of the ATLS protocol for assessment of trauma and is generally now used in place of peritoneal lavage to detect free fluid. FAST is about 85% to 90% effective in diagnosing intraperitoneal bleeding as well as pneumo- and hemothorax and pericardial effusion.

16.

When placing an arterial line for a patient with hemodynamic instability, the preferred access site is the

femoral artery.

radial artery.

brachial artery.

dorsalis pedis artery.

Explanation:

When placing an arterial line for a patient with hemodynamic instability, the preferred access site is the radial artery with the femoral artery the second choice. Prior to insertion, adequate perfusion must be assessed and patient properly positioned:

- *Radial: Perform modified Allen test, and position wrist in dorsiflexion with armboard.*
- *Femoral: Place patient in supine position with leg on insertion side slightly abducted and extended.*

Other indications for an arterial line include frequent ABG monitoring, placement of IABP, monitoring arterial pressure, and medication administration when venous access cannot be obtained. Sterile technique is utilized for arterial line insertion.

17.

When applying a pelvic stabilization device for a patient with a fractured pelvis, the circumferential pressure should be applied to the

suprapubic area.

mid-pubic area.

greater trochanter region.

iliac crests.

Explanation:

When applying a pelvic stabilization device for a patient with a fractured pelvis, the circumferential pressure should be applied to the greater trochanter region. The pressure should be firm enough to reduce bleeding and pain, prevent further injury, and help to align the fractured areas but not so tight as to cause the fractures to overlap. Specially designed pelvic stabilization devices, such as the SAM pelvic sling, provide better support than improvised devices, such as the sheet wrap.

18.

If using the ask-tell-ask framework to educate a patient and family about self-care, the trauma nurse would begin by

waiting for the patient to ask a question.

providing information and asking the patient to repeat it back.

asking the patient to write down a number of questions.

asking the patient what he/she knows and wants to know.

Explanation:

If using the ask-tell-ask framework to educate a patient about self-care, the trauma nurse would begin by asking the patient what the patient already knows about the condition and needs and what the patient wants to know. When the patient responds, the trauma nurse tells the patient the information needed or wanted and then asks if the patient still has more questions or needs more information, continuing the cycle of ask-tell-ask.

19.

The 5 key elements of pain assessment include (1) words, (2) intensity, (3) location, (4) duration, and (5)

method/administration

aggravating/alleviating factors.

frequency.

quality.

Explanation:

The 5 key elements of pain assessment include:

- *Words: Used to describe pain, such as burning, stabbing, deep, shooting, and sharp. Some may complain of pressure, squeezing, and discomfort rather than pain.*
- *Intensity: Use of 0-10 scale or other appropriate scale to quantify the degree of pain.*
- *Location: Where patient indicates pain is located.*
- *Duration: Constant or comes and goes, breakthrough pain.*
- *Aggravating/alleviating factors: Those things that increase the intensity of pain and those that relieve the pain.*

20.

A family reports that a trauma patient who was raised Catholic has not attended Mass for 50 years. The patient is nearing death but remains responsive and has not requested a priest. The trauma nurse should

assume the patient will not want to see a priest.

ask the priest on call to visit the patient.

ask the patient if he or she wants to see a priest.

ask the family if a priest should be called.

Explanation:

If a patient was raised Catholic but has not attended Mass for 50 years and is nearing death but remains responsive, the trauma nurse should ask the patient directly if the patient wants to see a priest. Even lapsed Catholics who have not been active in the church may obtain spiritual comfort from the sacraments commonly referred to as last rites. The trauma nurse should never make assumptions about a patient's spirituality.

21.

A 26-year-old male with no advance directive suffered a traumatic brain injury that left him in a vegetative state on life support. The patient's mother, sister, best friend, and fiancée are present. Which family member or other person can legally make the decision to withdraw life support?

Friend.

Sister.

Mother.

Fiancée.

Explanation:

If a 26-year-old male with no advance directive suffered a traumatic brain injury that left him in a vegetative state on life support, the family member who can legally make the decision to withdraw life support is the patient's mother. If the patient were married, the wife would be first in line, followed by adult children, parents, and then siblings. Unless the fiancée has power of attorney, the person is unrelated and, like the friend, has no legal authority to make decisions for the patient.

22.

A patient with blunt trauma to the genitals resulting from a physical assault has a fractured penis with gross hematuria. The trauma nurse should prepare the patient for which type of imaging?

CT.

FAST.

MRI.

RUG.

Explanation:

If a patient with blunt trauma to the genitals resulting from a physical assault has a fractured penis with gross hematosis, the trauma nurse should prepare the patient for retrograde urethrogram (RUG). When a male patient experiences trauma to the genital area, such as a penile fracture, gross hematuria or evidence of blood about at the urethral meatus are indications of possible damage to the urethra. With an RUG, contrast is instilled per urethra.

23.

A patient with a blunt trauma neck injury has apparent laryngeal damage with subcutaneous emphysema and irregular contour of thyroid cartilage. The patient is sitting in tripod position to ease respiratory distress. The trauma nurse should anticipate that the airway will be secured by

rapid-sequence intubation (oral).

emergent surgical airway.

CPAP with nasal administration.

nasopharyngeal airway.

Explanation:

If a patient with a blunt trauma neck injury has apparent laryngeal damage with subcutaneous emphysema and irregular contour of thyroid cartilage, and the patient is sitting in tripod position to ease respiratory distress, the trauma nurse should anticipate that the airway will be secured by emergent surgical airway. Any attempt to insert an oral or nasal tube may result in further damage and complete obstruction.

24.

A trauma victim has fractures of the lower ribs (8 and 9) on the right side. The patient should be carefully assessed for which secondary injury or injuries?

Liver trauma.

Splenic trauma.

Tracheal/Bronchial/Great vessel trauma.

Cardiac and splenic trauma.

Explanation:

Underlying injuries should be expected according to the area of fractures:

- *Upper 2 ribs: Injuries to trachea, bronchi, or great vessels.*
- *Right-sided ≥rib 8: Trauma to liver.*
- *Left-sided ≥ rib 8: Trauma to spleen.*

Pain, often localized or experienced on respirations or compression of chest way may be the primary symptom of rib fractures, resulting in shallow breathing that can lead to atelectasis or pneumonia. Fractured ribs are usually the result of severe trauma, such as blunt force from a motor vehicle accident or physical abuse.

25.

Based on research of best practices, the trauma nurse has recommended a number of best practice guidelines to improve patient safety and patient outcomes. Which type of best practice should the trauma nurse generally attempt to institute first?

A practice that requires new equipment.

A practice that involves the entire staff.

A practice that requires organizational change.

A practice that requires simple changes in procedure.

Explanation:

Staff compliance with best practice guidelines is usually best initially with simple changes in procedures, such as instituting checklists, because the learning curve is rapid and results are generally easily quantified. Because there is no financial outlay for new equipment or need for extensive training, setting up a pilot program is fairly simple. The trauma nurse should provide strong evidence based on research that the new practice is effective and should disseminate the results of a pilot program.

26.

A patient with a traumatic chest injury and multiple fractured ribs has shown increasing evidence of mild to moderate pulmonary contusion with slowly increasing hypoxemia and hemoptysis. The goal of fluid resuscitation in the presence of pulmonary contusion is

hypovolemia.

euvolemia.

hypervolemia.

unrelated to pulmonary contusion.

Explanation:

If a patient with a traumatic chest injury and multiple fractured ribs has shown increasing evidence of mild to moderate pulmonary contusion with slowly increasing hypoxemia and hemoptysis, the goal of fluid resuscitation in the presence of pulmonary contusion is euvolemia. Because fluid is filling the lung already, there is concern that fluid resuscitation may worsen contusion; however, the effects of hypovolemia can be life threatening, so the patient must be carefully monitored.

27.

When checking compartment pressure in the volar compartment of the forearm using the Stryker Intracompartmental pressure monitor device, the pressure reading that indicates onset of compartment syndrome is

>15 mm Hg.

>20 mm Hg.

>30 mm Hg.

>40 mm Hg.

Explanation:

When checking compartment pressure in the volar compartment of the forearm using the Stryker Intracompartmental pressure monitor device, the pressure reading that indicates onset of compartment syndrome is >30 mm Hg. When the pressure is>30 mm Hg, a fasciotomy is usually needed to preserve the limb. The 5 Ps associated with compartment pressure include: pain out of proportion to injury, paresthesia, pallor, paresis, and pulse deficit.

28.

Massive transfusion protocol (MTP) is usually activated if a patient's anticipated use of PRBCs is

≥3 units in <4 hours.

≥4 units in <4 hours.

≥6 units in <4 hours.

≥8 units in <4 hours.

Explanation:

Massive transfusion protocol (MTP) is usually activated if a patient's anticipated use of PRBCs is ≥4 units in <4 hours (although protocols may vary somewhat) or ≥10 units in 24 hours. Some patients may require up to 30 units in 8 hours. Autotransfusion may be used when appropriate. Upon activation of the protocol, the blood bank releases the MTP pack, which may vary but typically includes 4 units PRBCs, 4 units FFP, and 1 unit (6-pack) of platelets. More packs are released every 20 minutes or as needed.

29.

Which of the following would be excluded from a trauma registry?

Severe myocardial infarction.

Gunshot wound.

Motor vehicle injury.

Stabbing injury.

Explanation:

A severe myocardial infarction would be excluded from a trauma registry. Trauma registries maintain records of severe traumatic injuries, such as those associated with falls, motor vehicle accidents, physical attacks, stabbings, and shootings. All level I trauma centers are required by the ACSs to maintain a trauma registry. Data elements vary but may include specific demographic information, diagnosis, treatment, stages (when appropriate), status codes, abbreviated injury scale (AIS), injury severity scale (ISS), and functional status.

30.

Which of the following governmental agencies provides safety standards for the workplace and workers?

FEMA.

FDA.

OSHA.

FLSA.

Explanation:

The governmental agency that provides safety standards for the workplace and works is the Occupational Safety and Health Administration (OSHA). OSHA covers most employers in the private sector, but state and federal safety regulations also generally conform to OSHA standards. Employers must provide safety training, must inform workers of chemical hazards, and must provide required personal protective equipment. OSHA must be notified of a workplace-related death within 8 hour and workplace-related injury that results in hospitalization, loss of eye, or amputation within 24 hours.

31.

If a patient has ingested sodium hydroxide, the immediate response after ensuring airway patency should be to

induce vomiting.

administer activated charcoal.

administer antacid.

administer one-half to one cup of milk or water.

Explanation:

If a patient has ingested sodium hydroxide, the immediate response after airway patency should be to administer one-half to one cup of milk or water to dilute it. If the patient has chemical burns on the skin, contaminated clothing should be removed and the skin flushed with copious amounts of water. Chemical burns may result from acid or alkali substances with alkali burns usually more severe than acid burns. Symptoms vary depending on the substance,

strength, and site of injury but often includes severe pain, tissue blistering and sloughing, and bleeding.

32.

A colleague tells a newly-hired trauma nurse, "The suggestions you made were a complete waste of time, and if you want to get along with the staff you need to stop trying to make changes." This is an example of which of the following?

Discrimination.

Horizontal/Lateral violence.

Advice.

Vertical violence.

Explanation:

Horizontal/Lateral violence occurs when colleagues or peers use intimidation, verbal abuse, rudeness, or even physical attacks toward another. People may blame others or bully them into complying with their demands. Horizontal violence may be overt or covert. Horizontal violence serves to erode self-confidence and makes a hostile work environment, increasing absenteeism and lowering staff morale. Studies show that more than half of nurses have experienced horizontal violence in the workplace. Each institution should have a code of conduct and a plan in place for dealing with horizontal violence.

33.

A patient with spinal cord injury at T4 has developed bradycardia, hypotension, and autonomic instability. These indications suggest the patient is developing

autonomic dysreflexia.

neurogenic shock.

sepsis.

distributive shock.

Explanation:

If a patient with spinal cord injury at T4 has developed bradycardia, hypotension, and autonomic instability, these indications suggest the patient is developing neurogenic shock, which is a risk for those with injuries above T6. Initial treatment is rapid fluid administration of crystalloid solution to keep mean arterial pressure at 85-90 mm Hg. If hypotension persists, then inotropic agents, such as dopamine or dobutamine, may be required and atropine for persistent bradycardia.

34.

A patient with septic shock has progressed to multi-organ dysfunction syndrome (MODS) and has developed thrombocytopenia, increasing the patient's risk of

disseminated intravascular coagulation.

acute respiratory distress syndrome.

renal failure.

bowel necrosis.

Explanation:

A patient with septic shock has progressed to multi-organ dysfunction syndrome (MODS) and has developed thrombocytopenia, increasing the patient's risk of disseminated intravascular coagulation, which occurs in approximately 30% of those affected by MODS. MODS is a progression of SIRS with addition of a documented infection, organ dysfunction, hypotension, and hypoperfusion. MODS is the most common cause of sepsis-related death. Indications include depressed cardiac function, acute respiratory distress syndrome, renal failure, hepatic damage, and bowel necrosis.

35.

If a patient with a soft tissue infection of the foot that occurred following an accidental cut has developed severe pain, erythema, tense edema, and crepitus as well as hypotension, tachycardia, and elevated temperature, the most critical emergent treatment is

antibiotic therapy.

IV fluid resuscitation.

negative pressure therapy.

surgical debridement.

Explanation:

If a patient with a soft tissue infection of the foot that occurred following an accidental cut has developed severe pain, erythema, tense edema, and crepitus as well as hypotension, tachycardia, and elevated temperature, the most critical emergent treatment is surgical debridement. These indications are consistent with necrotizing soft tissue infection. In some cases, multiple surgical debridements and even amputation may be required. The infection can spread rapidly and the risk of death increases markedly if surgery is delayed beyond 24 hours.

36.

An Rh- patient who is 7 months pregnant is involved in an automobile accident and experienced blunt abdominal trauma from the abdomen hitting the steering wheel. The fetus does not appear to be in distress and the mother's injuries are minor although the mother has experienced some mild irregular contractions. The patient should be

discharged and advised to see an obstetrician for follow up.

administered a tocolytic.

administered Rh-immune globulin.

administered magnesium sulfate.

Explanation:

If an Rh- patient who is 7 months pregnant is involved in an automobile accident and experienced blunt abdominal trauma from the abdomen hitting the steering wheel, but the fetus does not appear to be in stress and the mother's injuries are minor although the mother has experienced some mild irregular contractions, the patient should be administered Rh-immune globulin. All Rh- pregnant patients who experience abdominal trauma or other significant trauma should automatically receive 300 mcg of Rh-immune globulin plus additional 300 mcg for every estimated 30 mL of fetal blood circulating in the maternal blood.

37.

A patient with a fractured pelvis from blunt trauma has gross hematuria and CT cystography shows an extraperitoneal rupture of the bladder. The most likely initial treatment for the bladder injury is

wait and watch.

insertion of Foley catheter with continuous drainage.

surgical repair.

antibiotics.

Explanation:

If a patient with a fractured pelvis from blunt trauma has gross hematuria and CT cystography shows an extraperitoneal rupture of the bladder, the most likely initial treatment for the bladder injury is insertion of a Foley catheter with continuous drainage. Most extraperitoneal ruptures will heal within 10 days (7-21 range) without surgical intervention. The Foley catheter may be inserted per urethra or suprapubically. Extraperitoneal ruptures comprise 80% of bladder ruptures and are often associated with pelvic fractures.

38.

The primary purpose of using the SBAR (situation, background, assessment, recommendations) format for hands-off when transferring a patient from the trauma center to a different department is to

improve patient safety.

meet regulatory requirements.

simplify transitions.

save time.

Explanation:

The primary purpose of using the SBAR format for hands-off when transferring a patient from the trauma center to a different department is to improve patient safety by ensuring important information is not overlooked. Format:

- *Situation: Name, age, MD, diagnosis.*
- *Background: Brief medical history, co-morbidities, review of lab tests, current therapy, IV's, VS, pain, special needs, educational needs, discharge plans.*
- *Assessment: Review of systems, lines, tubes, and drains, completed tasks, needed tasks, future procedures.*
- *Recommendations: Review plan of care, medications, precautions (restraints, falls), treatments, wound care.*

39.

The trauma center has experienced a number of patient falls resulting in injuries. The first step in preventing falls is to

routinely ensure side rails are up and beds low.

maintain patient visibility.

ensure call light is easily accessible.

carry out routine risk assessments.

Explanation:

The first step in preventing falls is to carry out routine risk assessments with a valid assessment tool, such as the Morse Fall Risk Assessment. Risk factors include:

- *Advanced age (>65).*
- *Dizziness/vertigo/postural hypotension.*
- *Confusion/disorientation/cognitive impairment.*
- *Severe pain.*
- *Impaired sensorium (hearing, vision).*
- *History of previous falls or fainting spells.*

Interventions include identifying those at risk and making notation on chart and/or applying "at risk" wristband, use of side rails and bed in low position with the brakes applied to prevent rolling, patient visibility from nursing station, easily accessible call light, and sitter.

40.

Which of the following interventions is most likely to reduce nursing injuries?

Zero-lift policy.

Increased security personnel.

Mandatory reporting of injuries.

Eight-hour shifts instead of 12-hour.

Explanation:

While all of these interventions are important, the intervention that is most likely to reduce staff injuries is a zero-lift policy because the greatest majority of nursing injuries occur when lifting, transferring, and otherwise moving patients. While avoiding all lifting may be difficult in an emergent situation, lifting must be done by appropriate numbers of staff, and transfer boards and mechanical lifting devices should be available and staff members adequately trained for use.

41.

When beginning the chain of collection with recovery of a bullet from a gunshot wound, the three elements that must be included in addition to patient name/identifying number and signature of collecting practitioner are (1) description of item, (2) date and time of recovery, and (3)

size of item recovered.

location where it was recovered.

names of all witnesses to recovery.

manner of collection.

Explanation:

When beginning the chain of collection with recovery of a bullet from a gunshot wound, the three elements that must be included in addition to patient name/identifying number and signature of collecting practitioner are (1) description of item, (2) date and time of recovery, and (3) location where it was recovered. In this case, the bullet was recovered in the trauma center from the right proximal forearm, dorsal surface.

42.

If a train crash occurs with multiple injuries and deaths and the triage team is using the black-red-yellow-green triage classification system for tagging victims, the trauma nurse would ensure the first patients to receive care are those tagged with

black.

green.

yellow.

red.

Explanation:

If a train crash occurs with multiple injuries and deaths and the triage team is using the black-red-yellow-green triage classification system for tagging victims, the trauma nurse would ensure the first patients to receive care are those tagged with red. Classification:

- *Black: Patient is dead and will be left in the field until others are transported.*
- *Red: Patient is seriously injured and requires immediate attention.*
- *Yellow: Patient is injured but stable and can wait for transport and treatment.*
- *Green: "Walking wounded." Patient appears to have only minor injuries and is the lowest priority.*

43.

If the paramedic reports that a patient in transit has a Glasgow Coma Score of 7, the trauma nurse expects the patient to

have had brief periods of loss of consciousness but to be alert and responsive.

remain slightly confused but able to follow verbal direction.

exhibit focal neurological defects.

be intubated and comatose.

Explanation:

If the paramedic reports that a patient in transit has a Glasgow Coma Score of 7, the trauma nurse expects the patient to be intubated and comatose. Scores of 8 or less indicate severe brain injury and have high risk of death. Intracranial pressure is often elevated. GSCs range from 3 (lowest and most severe) to 15 (best score):

- *Mild: 13-15. Brief loss of consciousness.*
- *Moderate: 9-12. Confused but able to follow simple directions, possible focal neurological deficits.*
- *Severe ≤8. Comatose and requires ventilatory support, survivor likely have neurological impairment.*

44.

If a 5-year-old child cries frantically when the parents are present but quiets when the parents leave the bedside, the trauma nurse should

encourage the parents to stay in the waiting area.

reassure the parents that this is normal healthy response.

assume the child is crying due to fear of potentially abusive parents.

assume the child is trying to get attention.

Explanation:

If a 5-year-old child cries frantically when the parents are present but quiets when the parents leave the bedside, the trauma nurse should reassure the parents that this is a normal healthy response because the child feels secure enough with the parents to express fear and anxiety through crying. If the child quiets when the parents leave the bedside, the child is probably too afraid to cry. The parents should be encouraged to assist with assessment and treatment as much as possible.

45.

If a 16-year-old female patient is seriously injured but alert and responsive and the trauma nurse needs to find out if the patient may be pregnant but the parents are with the patient, the trauma nurse should

ask the patient in the presence of the parents.

ask the parents if the patient might be pregnant.

ask the parents to step outside briefly and ask the patient in privacy.

examine the patient for indications of pregnancy.

Explanation:

If a 16-year-old female patient is seriously injured but alert and responsive and the trauma nurse needs to find out if the patient may be pregnant but the parents are with the patient, the trauma nurse should ask the parents to step outside briefly and ask the patient in privacy. Teenagers may be reluctant to admit to being sexually active in front of parents, but all females of child-bearing age involved in trauma should be routinely asked if they may be pregnant.

46.

Which of the following symbols indicate a possible health hazard and could include carcinogens, toxic substances, and respiratory irritants?

I II III IV

I.

II.

III.

IV.

Explanation:

IV represents a health hazard:

Irritant (to skin, eyes, and respiratory tract)	*Biohazard (Body fluids)*	*Corrosive substances (skin burns, eye damage)*	*Health hazard (carcinogens, toxic substances, and respiratory irritants)*
			

47.

For patients with penetrating abdominal trauma, the three aspect of damage control/hemostatic resuscitation include (1) early activating of massive transfusion protocol, (2) avoiding the use of large volume crystalloid administration, and (3) utilizing

early laparotomy.

permissive hypotension.

FAST.

antibiotic prophylaxis.

Explanation:

For patients with penetrating abdominal trauma, the three aspect of damage control/hemostatic resuscitation include (1) early activating of massive transfusion protocol, (2) avoiding the use of large volume crystalloid administration, and (3) utilizing permissive hypotension. For most patients with gunshot wounds, early intervention also includes abdominal laparotomy although patients with stab wounds may, in some cases, be treated more conservatively.

48.

A patient has second-degree burns on both hands with blistering and sloughing of outer layers of skin. Which initial pain control method is generally preferred?

IV morphine.

Transdermal fentanyl patch.

Oral hydrocodone.

Soaking hands in ice water.

Explanation:

If a patient has second-degree burns on both hands with blistering and sloughing of outer layers of skin, the patient is likely experiencing severe pain. Initial treatment to control pain from burns generally includes an IV opioid, such as 0.1 mg/kg morphine sulfate (in titrated boluses until pain controlled). An alternative is 1.5mcg/kg intranasal fentanyl, which is also rapid acting. Once the patient's pain level is stabilized, the patient may switch to oral analgesia.

49.

When using waveform capnography (end-tidal CO_2) to assess ventilation in a patient with a head injury, a normal finding is

15 to 25 mm Hg.

25 to 35 m Hg.

35 to 45 mm Hg.

45 to 55 mm Hg.

Explanation:

When using waveform capnography (end-tidal CO_2) to assess ventilation in a patient with a head injury, a normal finding is 35 to 45 mm Hg. Normally, when CO_2 levels increase, the body compensates by increasing respiratory rate. If the end-tidal CO_2 increases and the respiratory rate remains depressed, then the brain is not adequately managing CO_2 levels. Capnography can be used to monitor and titrate ventilation and to confirm correct placement of an endotracheal tube.

50.

A patient who sustained a blunt thoracic injury when hit in the chest by a hardball while playing baseball is admitted with severe chest pain, but the patient suddenly develops the below rhythm. What does this ECG rhythm strip indicate?

 graphic for question

Supraventricular tachycardia.

Atrial flutter.

Ventricular tachycardia.

Ventricular fibrillation.

Explanation:

If a patient who sustained a blunt thoracic injury when hit in the chest by a hardball while playing baseball is admitted with severe chest pain, but the patient suddenly develops the following rhythm, the ECG rhythm strip represents ventricular fibrillation. The patient requires immediate defibrillation, as this is a life-threatening cardiac dysrhythmia. Ventricular fibrillation

(VF) is a rapid, very irregular ventricular rate >300 beats per minute with no atrial activity observable on the ECG, caused by disorganized electrical activity in the ventricles.

51.

If a patient experiences a distal fracture of the radius, the patient is at risk for neurovascular injury of the

radial nerve.

median nerve.

ulnar nerve.

axillary nerve.

Explanation:

If a patient experiences a distal fracture of the radius, the patient is at risk for neurovascular injury of the median nerve. The median nerve originates in the brachial plexus and runs down the length of the arm, passing through the carpal tunnel. A fracture may result in compression of the nerve and numbness and tingling in the thumb and first three fingers. Once the fracture is reduced, no further treatment is usually necessary.

52.

With a stab wound to the abdomen, the organ that is most frequently injured is the

liver.

colon.

small intestine.

diaphragm.

Explanation:

With a stab wound to the abdomen, the organ that is most frequently injured is the liver (40%). For that reason, if a patient is in transit, the trauma nurse should prepare for possible severe bleeding. Other organs at lesser risk include the small intestine, the diaphragm, and the colon. Stab wounds are more predictable than gunshot wounds with injuries usually more localized and secondary damage less likely although that may depend on the depth and trajectory of the wound.

53.

The most effective laboratory tests when assessing oxygenation and onset of shock in a patient who is bleeding heavily are

hemoglobin and hematocrit.

hematocrit and platelet count.

blood gases.

coagulation studies.

Explanation:

The most effective laboratory tests when assessing oxygenation and onset of shock in a patient who is bleeding heavily are blood gases. One of the earliest signs of hypoxemia is acidotic pH (<7.25). If the level falls to 7.2, this is life-threatening metabolic acidosis. Hemoglobin and hematocrit often remain stable for the first 8 to 10 hours, and a decrease may reflect diluting effects of fluid resuscitation rather than need for transfusions. Coagulation studies may remain normal with initial bleeding.

54.

The primary purpose of using rapid sequence intubation (RSI) is to:

reduce the risk of gastric aspiration.

prevent esophageal trauma.

speed intubation.

reduce tracheal trauma.

Explanation:

Rapid sequence intubation (RSI) is used to anesthetize and intubate the non-fasting patient to reduce risk of gastric aspiration. RSI may also be used for pregnant patients, very obese patients, and those with gastric reflux. Two intravenous lines should be in place prior to RSI and the patient pre-oxygenated for ≥3 minutes. Sellick's maneuver (pressure applied externally with thumb and index finger to cricoid) is used to close off the esophagus and prevent aspiration. An induction agent (thiopental, Entamide®, propofol) is followed by a muscle relaxant (suxamethonium). Sixty seconds after the muscle relaxant, an endotracheal tube is inserted with a laryngoscopy, cuff inflated and secured and placement verified by capnometer.

55.

In an unstable patient with blunt abdominal trauma, the preferred method of screening is

plain radiography.

DPL.

CT scan.

FAST.

Explanation:

In an unstable patient with blunt abdominal trauma, the preferred method of screening is FAST (focused assessment sonography for trauma) because it can be done quickly while the delay caused by transporting and preparing the patient for CT scan can delay critical treatment. However, for stable patients, the CT scan is generally preferred. Plain radiographs do not provide adequate information.

56.

If a patient receiving blood transfusions shows signs of a mild allergic reaction, including pruritis, erythema, and urticaria, the usual treatment is to stop the transfusion and administer

antihistamine.

epinephrine.

corticosteroids.

vasopressin.

Explanation:

If a patient receiving blood transfusions shows signs of a mild allergic reaction, including pruritis, erythema, and urticaria, the usual treatment is to stop the transfusion and administer an antihistamine. Once the symptoms subside, the transfusion may be able to be restarted, but it should be administered slowly and the patient carefully monitored. If symptoms worsen, however, and the patient shows signs of shock or respiratory distress, the patient may need epinephrine, corticosteroids, and other pressor support.

57.

Which of the following is the preferred site for placement of a central line?

Left internal jugular vein.

Right internal jugular vein.

Femoral vein.

Subclavian vain.

Explanation:

Central lines may be placed into the internal jugular vein (right preferred), subclavian vein, or femoral vein (usually avoided). The right internal jugular is preferred because it has a greater diameter and better compliance than the left. Central lines allow rapid administration of large volumes of fluid, blood testing, and CVP measuring. For placement into the right jugular vein, the patient should be positioned in supine Trendelenburg position or, if not possible, with legs elevated.

58.

A Salem sump tube is inserted nasogastrically for a patient with bowel obstruction in order to decompress the stomach, which is painful and distended. Following insertion, the trauma nurse

aspirates gastric fluids to check pH values. Which of the following values is consistent with gastric fluids?

7.2.

5.7.

4.5.

3.8.

Explanation:

If a Salem sump tube is inserted nasogastrically for a patient with bowel obstruction in order to decompress the stomach, which is painful and distended; and following insertion, the trauma nurse aspirates gastric fluids to check pH values, the value consistent with gastric fluids is 3.8. Gastric fluids tend to be very acidic (<4.0) while aspirates from the intestines are usually >4 and from the lungs, >5.5.

59.

If a patient is involved in an accident with injury to the occipital lobe (coup injury), the other part of the brain that likely experienced injury (contrecoup) is the

frontal lobe.

midbrain.

parietal area.

temporal area.

Explanation:

If a patient is involved in an accident with injury to the occipital lobe (coup injury), the other part of the brain that likely experienced injury (contrecoup) is the frontal lobes because they on the opposite side of the head and sharp edges inside the skull can cause injury. With frontal coup injuries, the occipital lobe is less likely to have damage because the inside of the skull is quite smooth in that area.

60.

If a patient was involved in a football injury with a concussion resulting from impact to the temporal lobe, typical indications include

bizarre behavior.

visual disturbance.

disorientation/amnesia.

gait disturbances.

Explanation:

If a patient was involved in a football injury with a concussion resulting from impact to the temporal lobes, typical indications include disorientation and/or amnesia. Patients with concussion of the frontal lobes, on the other hand, are more likely to exhibit bizarre behavior. With concussion, the patient's imaging may show no signs of structure damage, but neurological functioning may be impaired for extended periods of time because of damage to neurons.

61.

If a patient with a pneumothorax is hemodynamically stable and the physician is preparing to carry out needle decompression in the midclavicular line, the trauma nurse should prep the skin at the

fifth and/or sixth intercostal space.

third and/or fourth intercostal space.

third and/or fourth intercostal space.

second and/or third intercostal space.

third and/or fourth intercostal space.

third and/or fourth intercostal space.

Explanation:

If a patient with a pneumothorax is hemodynamically stable and the physician is preparing to carry out needle decompression in the midclavicular line, the trauma nurse should prep the skin at the second and/or third intercostal space. A 10- to 14-gauge angiocath of at least 8 inches in length is used. The needle is inserted perpendicular to the skin, making sure to position the needle over the ribs instead of under where neurovascular bundles are located.

62.

The three elements involved in establishing the mechanism of injury include

questioning/listening, observation, and physical examination.

looking, touching, and listening.

physical examination, laboratory/imaging, and type of injury.

laboratory, Imaging, and physical examination.

Explanation:

The three elements involved in establishing the mechanism of injury include:

- *Questioning/Listening: Reports from the patient (if responsive and cognitively aware), family or friends, and first responders may establish how an injury occurred.*
- *Observation: The patient's general appearance, obvious injuries (bruises, swelling, and bleeding), and odor may provide clues.*
- *Physical examination: Typical patterns of injury may be associated with different mechanisms of injury.*

63.

When providing discharge education to an adolescent who experienced a second grade 2 concussion, the adolescent should be advised that participating in sports should be avoided until after follow up with neurosurgeon and for at least

one week after asymptomatic.

two weeks after asymptomatic.

one month after asymptomatic.

two months after asymptomatic.

Explanation:

Treatment following concussion depends on the concussion grade and includes:

- *Grade 1: May return to activity within 15 minutes if no residual effects noted.*
- *Grade 2: May return to activity after being asymptomatic for one week for first concussion, but for second concussion, the person must have follow up with neurosurgeon and be asymptomatic for 2 weeks.*
- *Grade 3: The person may return to activity after follow up with neurosurgeon and be asymptomatic for 2 weeks.*

64.

A patient who identified as a Jehovah Witness needs a transfusion of packed red blood cells because of blood loss, but his religion prohibits blood transfusions. Which of the following is the correct action?

Assume the patient will not accept a transfusion and report this to the physician.

Tell the patient that he may die without the transfusion.

Tell the patient that his health is more important than religious beliefs.

Provide full information and the reasons for the transfusion.

Explanation:

It's important to approach the patient/family with full information and reasons for the transfusion or blood components without being judgmental, allowing them to express their feelings and make decisions. One should never assume that an individual would refuse blood products based on religion alone. Also, Jehovah Witnesses can receive fractionated blood cells, thus allowing hemoglobin-based blood substitutes. The following guidelines are provided to church members:

Basic blood standards for Jehovah Witnesses

Not acceptable Whole blood: red cells, white cells, platelets, plasma

Acceptable Fractions from red cells, white cells, platelets, and plasma

65.

If a burn patient's fluid resuscitation needs have been calculated as 12,000 mL/24 hours according to the burn/Baxter formula (4 mL of LR X kg body weight X TBSA burned), how many mL of fluid should be administered during the first 8 hours?

3000 mL.

4000 mL.

6000 mL.

9000 mL.

Explanation:

If a burn patient's fluid resuscitation needs have been calculated as 12,000 mL/24 hours according to the burn/Baxter formula (4 mL of LR X kg body weight X TBSA burned), 6000 mL of fluid (50% of total) should be administered during the first 8 hours and the remaining 6000 mL over the next 16 hours. Fluid resuscitation is indicated with burns of 20% or more of total body surface area (TBSA) burned. Lactated Ringers IV solution is used instead of NS, which can lead to hypernatremia and hyperchloremia.

66.

Which of the following is a legal document that specifically designates someone to make decisions regarding medical and end-of-life care if a patient is mentally incompetent?

Advance directive.

Do-not-resuscitate order.

Durable Power of Attorney.

General Power of Attorney.

Explanation:

The legal document that designates someone to make decisions regarding medical and end-of-life care if a patient is mentally incompetent is a Durable Power of Attorney. This is a type of Advance Directive, which can include living wills or specific requests of the patient regarding treatment. A Do-Not-Resuscitate order indicates the patient does not want resuscitative treatment for terminal illness or condition. A General Power of Attorney allows a designated person to make decisions for a person over broader areas, including financial.

67.

Adult patients with abdominal trauma that necessitates a splenectomy should receive which vaccination?

Hepatitis B.

Tetanus.

Human papillomavirus.

Polyvalent pneumococcal.

Explanation:

Adult patients with abdominal trauma that necessitates a splenectomy should receive the following vaccinations:

Polyvalent pneumococcal (Pneumovax 23®)	*Initially and then every 6 years.*
Haemophilus influenzae b conjugate (HibTITER®)	*Initially, no repeat necessary.*
Quadrivalent meningococcal/diphtheria conjugate (Menactra®)	*Initially and then every 3 to 5 years for patients age 16 to 55.*
Quadrivalent meningococcal polysaccharide (Menomune-A/C/Y/W-135®)	*Initially and every 3 to 5 years for patients over age 55.*

68.

If a patient has suffered from hypothermia with reduced core temperature to 30° C, rewarming should be done at the rate of

0.5 to l° C per 0.5 hr.

0.5 to l° C per hr.

1 to 2° C per hr.

3 to 4° C per hr.

Explanation:

If a patient has suffered from hypothermia with reduced core temperature to 30° C, rewarming should be done slowly at the rate of 0.5 to l° C per hr. Rewarming may be carried out through

infusion of warmed intravenous fluid, warm humidified air, and/or the use of warming blankets. Hypothermia occurs with exposure to low temperatures that cause the core body temperature to fall <95°F (35°C). Autoregulation of cerebral blood flow is lost at 25° C and hypotension occurs. Deep tendon reflexes are depressed <32° C and are usually absent <26° C.

69.

If a patient experienced a blunt impact sports-related scrotal injury and presents with severe pain and swelling of the scrotum, for what type of imaging should the trauma nurse prepare the patient?

Ultrasound.

Radiograph.

CT.

MRI.

Explanation:

If a patient experienced a blunt impact sport-related scrotal injury and presents with severe pain and swelling of the scrotum, the trauma nurse should prepare the patient for ultrasound as it is the most effective to examine patterns of injury and blood flow to the testicles. Additionally, because urethral damage may also occur, the patient should have an RUG unless urethral damage can be ruled out. Scrotal injury may result in rupture of testis, hematocele and dislocation of the testes.

70.

A severely mangled extremity is likely to require amputation if the score on the Mangled Extremity Severity Scoring (MESS) is less than

12.

9.

7.

5.

Explanation:

A severely mangled extremity is likely to require amputation if the score on the Mangled Extremity Severity Scoring (MESS) is less than 7. Scores range from 1 to 14. MESS:

Category	*0*	*1*	*2*	*3*	*4*
Skeletal/ Soft Tissue	*--*	*Low energy*	*Medium energy*	*High energy*	*Very high energy*
Shock	*Systolic BP >90*	*Transient hypotension*	*Persistent hypotension*	*--*	*--*
Limb ischemia (Doubled if >6 hrs)	*None*	*Mild (pulse decreased but perfusion ok)*	*Moderate (capillary refill decreased)*	*Severe capillary refill absent*	*--*
Age	*<30*	*30-50*	*>50*	*--*	*--*

71.

A normal prothrombin time is

21 to 35 seconds.

10 to 15 seconds.

30 to 45 seconds.

2 to 9.5 minutes.

Explanation:

Prothrombin time (PT)	*10 – 15 seconds*	*Increases with anticoagulation therapy, vitamin K deficiency, decreased prothrombin, DIC, liver disease, and malignant neoplasm.*
Partial thromboplastin time (PTT)	*30 – 45 seconds*	*Increases with hemophilia A & B, von Willebrand's, vitamin deficiency, lupus, DIC, and liver disease.*
Activated partial thromboplastin time (aPTT)	*21 – 35 seconds*	*Similar to PTT, but decreases in extensive cancer, early DIC, and after acute hemorrhage. Used to monitor heparin dosage.*
Thrombin clotting time (TCT) or Thrombin time (TT)	*7 – 12 seconds (<21)*	*Used most often to determine dosage of heparin.*
Bleeding time	*2 – 9.5 minutes*	*Increases with DIC, leukemia, renal failure, aplastic anemia, von Willebrand's, some drugs, and alcohol.*
Platelet count	*150 – 400,000*	*Increased bleeding <50,000 and increased clotting >750,000.*

72.

When teaching a patient incision care prior to discharge, the best technique to ensure the patient understands is

ask the patient to give a return demonstration.

give the patient a brief quiz.

ask the patient to explain the procedure.

provide written directions for the patient to refer to.

Explanation:

A return demonstration is given by patients to show mastery of a procedure. This may be done for each step during initial instruction but should eventually include a demonstration of the entire procedure:

- *The nurse should ask if the patient has any questions before the demonstration.*
- *The patient should gather all necessary equipment, using a checklist to ensure that nothing is forgotten.*
- *The patient should explain the steps.*
- *The nurse should provide positive feedback occasionally during the procedure: "You've placed the equipment exactly right," and may remind the patient to look at the checklist.*

73.

When assessing skeletal or soft tissue injury, a stab wound would be classified as

very high energy.

high energy.

medium energy.

low energy.

Explanation:

When assessing skeletal or soft tissue injury, a stab wound would be classified as low energy:

- *Low: handgun wounds, stab wounds, simple uncomplicated fracture.*
- *Medium: Dislocation, multiple fractures, open fractures.*
- *High: Rifle gunshot wound, high speed motor vehicle accident.*
- *Very high: High speed trauma (such as motor vehicle accident) along with gross contamination of wound.*

74.

When carrying out the apnea test on a patient to determine brain death, once the patient is off of the ventilator, the test should be aborted when the oxygen saturation falls to

<95%.

<93%.

<90%.

<85%.

Explanation:

When carrying out the apnea test on a patient to determine brain death, the test should be aborted when the oxygen saturation falls to <90% or the patient becomes hemodynamically unstable. For the apnea test, the patient's systolic BP should be >90mm Hg with normal PaO_2 and $PaCO_2$, body temperature, and electrolytes. The patient is preoxygenated and 100% oxygen delivered per the trachea. Blood gases are measured after 5 and 10 minutes. If there is no

respiratory movement and $PaCO_2$ increases to ≥60 mm Hg, the patient is brain dead. If any respiratory effort is observed, the patient is not brain dead.

75.

Intracranial pressure monitoring is usually indicated for patients with traumatic brain injury and Glasgow Coma Score of

≤4

≤6

≥8.

≤10.

Explanation:

Intracranial pressure monitoring is usually indicated for patients with traumatic brain injury and Glasgow Coma Score of ≥8. Uncontrolled intracranial pressure is the most common cause of mortality in neurosurgical patients and can lead to severe neurological compromise in those who survive. ICP monitoring is usually continued until the levels remain within normal range without support for 48 to 72 hours. Cerebrospinal fluid normally comprises only 5% of the volume in the skull with the brain tissues comprises 85% and blood 10%, so there is little leeway for shifts.

76.

With massive hemorrhage and lack of adequate volumes of donor blood, which of the following patients is a candidate for autotransfusion?

A patient with a large volume hemothorax associated with a malignant lesion.

A patient with a large volume hemothorax from traumatic injury.

A patient with a gunshot and shrapnel wounds to the abdomen with severe bleeding.

Any patient with severe blood loss and no other available blood.

Explanation:

With massive hemorrhage and lack of adequate volume of donor blood, a patient with a large volume hemothorax from traumatic injury is a candidate for autotransfusion. Blood is collected from a body cavity, most often the pleural cavity. Autotransfusion is contraindicated if malignant lesions are present in area of blood loss, pooled blood is contaminated (such as with fecal material), or wounds are >4-6 hours old. Commercial collection/transfusion kits (Pleur-Evac®, Thora-Klex®) are available but blood can be collected through the chest tube into a sterile bottle.

77.

A 25-year-old patient with severe neurological injury and brain death is being maintained on life support until the organs can be recovered for donation. Which of the following tests is indicated prior to organ recovery?

coronary angiograms.

echocardiogram.

coronary calcium CT.

chest radiograph.

Explanation:

If a 25-year-old patient with severe neurological injury and brain death is being maintained on life support until the organs can be recovered for donation, the test that is indicated prior to organ recovery is the echocardiogram to assess the heart's function. Coronary angiograms are usually avoided in patients under 35 years. Those 35 to 45 with a history of cocaine use or greater than 3 risk factors for coronary artery disease should have coronary angiograms as well as all males over age 45 and all females over age 50.

78.

If a nursing diagnosis for a patient with a crush injury to the right leg is "risk for ineffective tissue perfusion," an expected patient outcome to interventions is

distal limb dusky.

tissue cool to touch.

Color pale.

capillary refill time 3 seconds.

Explanation:

If a nursing diagnosis for a patient with a crush injury to the right leg is "risk for ineffective tissue perfusion," an expected patient outcome to interventions is capillary refill time 3 seconds (normal 2 to 4 seconds). Additionally, the skin distal to the wound should be pink (not dusky, which indicates cyanosis) or pale. The tissue should be warm to the touch rather than cool, which suggests inadequate perfusion.

79.

An open irregular wound resulting from the tissue tearing in response to blunt trauma is classified as a(n)

laceration.

incision.

avulsion.

penetration.

Explanation:

An open irregular wound resulting from the tissue tearing in response to blunt trauma is classified as a laceration. If the wound is caused by a sharp object, such as a knife or a piece of glass, it is classified as an incision. An avulsion occurs when tissue is pulled away from where it is attached or inserted. A penetration wound includes a knife wound in which the knife is inserted into the tissue and then withdrawn. A puncture wound generally retains the penetrating object, such as a nail.

80.

If a physician has ordered negative pressure wound therapy (NPWT) for a patient, which of the following is a contraindication to the treatment?

Copious purulent drainage.

Exposed vessels.

Arterial ulcers.

Diabetic ulcers.

Explanation:

If a physician has ordered negative pressure wound therapy for a patient, a contraindication to the treatment is exposed vessels because the suction applied may cause the vessels to erode and bleeding to occur. Other contraindications include malignant wounds, osteomyelitis, and non-enteric unexplored fistulae. Negative pressure wound therapy utilizes a closed system with a suction unit attached to a semi-occlusive dressing over the wound. It is especially useful for wounds that are slow healing (arterial and venous ulcers, diabetic ulcers) or that have copious discharge (non-bleeding).

81.

Which of the following patients is most likely to receive fluid resuscitation with isotonic IV fluids?

A patient with pulmonary edema.

A patient with increasing intracranial pressure.

A patient with extracellular fluid loss associated with bleeding.

A patient in diabetic ketoacidosis.

Explanation:

A patient with extracellular fluid loss associated with bleeding is most likely to receive fluid resuscitation with isotonic IV fluid, such as normal saline (0,9% saline), 5% dextrose in water (D5W) and lactated Ringer's. Isotonic fluids may also be indicated with extracellular fluid loss related to surgery or dehydration. Because the osmolality of isotonic fluids is similar to the fluid in the human body, isotonic fluids prevent shifts of fluid from one compartment to another.

82.

A trauma patient needs emergent surgery but has been receiving warfarin for atrial fibrillation. Prior to surgery, how is reversal of anticoagulation achieved?

Administration of vitamin K and fresh frozen plasma.

Administration of platelets.

Administration of vitamin K.

Reversal is not necessary.

Explanation:

If a trauma patient needs emergent surgery but has been receiving warfarin for atrial fibrillation, prior to surgery, reversal of anticoagulation is with administration of vitamin K and fresh frozen plasma. If the patient had been receiving heparin, then only vitamin K is necessary as a reversal agent. For those on antiplatelet medications, such as clopidogrel and aspirin, platelets are often administered.

83.

A 76-year-old patient has a severe head injury. The caregiver reports that the patient fell. Physical examination shows multiple bruises in various stages of healing and a review of the patient's history shows 5 visits to the emergency department over the previous 18 months for minor to moderate injuries (cuts, fractures, bruising). The patient's appearance is unkempt, and the patient is very thin. The trauma nurse should suspect

a bleeding disorder.

cognitive impairment.

elder abuse.

negligence.

Explanation:

If a 76-year-old patient with a severe head injury has a history of 5 visits to the emergency department over the previous 18 months for minor to moderate injuries (cuts, fractures, bruising), bruises in various stages of heeling, and the patient's appearance is unkempt, and the patient is very thin (suggesting negligent care), the trauma nurse should suspect elder abuse. The appropriate authorities, such as Social Services or Adult Protective Services should be notified.

84.

If a patient involved in a motor vehicle accident has typical lap-belt contusions (lap belt sign) and fracture of a lumbar vertebrae, the internal structure that is primarily at risk of contusion or transection is the

aorta.

pancreas.

liver.

spleen.

Explanation:

If a patient involved in a motor vehicle accident has typical lap-belt contusions (lap belt sign) and fracture of a lumbar vertebrae, the internal structure that is primarily at risk of contusion or transection is the pancreas. In addition, the patient may experience intestinal rupture. If only the lap belt contusions are present but not a lumbar fracture, then the risk is for intestinal rupture and/or mesenteric tear or contusion.

85.

A 35-year old female involved in a side-impact automobile collision suffered pronounced cervical rotation and complains of severe right-sided neck pain and severe unremitting right-sided headache and exhibits ecchymosis and swelling of the right neck and right ophthalmic ptosis with contraction of the pupil (miosis). Which is the most likely reason for the symptoms?

Herniated cervical disc.

Carotid dissection.

Neck strain.

Spinal cord injury.

Explanation:

Ipsilateral neck pain, headache, ecchymosis and swelling of the neck, and ptosis with miosis (partial Horner syndrome) are consistent with traumatic carotid dissection, which may occur from direct neck trauma or hyperextension or rotation injuries. Other symptoms include hemiparesis, cervical bruit, and epistaxis. Carotid dissection may result in hematoma (intramural) or dilatation, which can lead to emboli and ischemic stroke. Dissection may be intra- or extracranial (most frequent) and may be spontaneous or trauma-related.

86.

A patient is to have an intracranial monitoring device inserted that allows for CSF drainage and sampling. Which of the following devices is appropriate?

Subarachnoid bolt/screw.

Fiberoptic transducer-tipped catheter.

Subdural/epidural catheter.

Intraventricular catheter.

Explanation:

Only the intraventricular catheter allows for CSF drainage and sampling, but it is the most invasive device and increases risk of infection and complications, such as CSF leakage. However, it is also the most accurate and allows for instillation of contrast if necessary. The transducer must be leveled at the foramen of Monro and all ICP measurements done with the transducer at that level. The subdural/epidural catheter is the least invasive monitoring device although baseline drift occurs over time, reducing reliability.

87.

If a soccer player was hit in the head by the ball and showed signs of transient confusion for 10 minutes after the injury but then the confusion resolved, the concussion would be classified as

Grade 1.

Grade 2.

Grade 3.

Grade 4.

Explanation:

If a soccer player was hit in the head by the ball and showed signs of transient confusion for 10 minutes after the injury but then the confusion resolved, the concussion would be classified as Grade 1. There are 3 grades:

- *Grade 1 (Mild): Transient confusion without loss of consciousness, and symptoms resolve in <15 minutes.*
- *Grade 2 (Moderate): Transient confusion without loss of consciousness, and symptoms resolve in >15 minutes.*
- *Grade 3 (Severe): Any loss of consciousness of any duration.*

88.

A patient who fell off of a 12-foot ladder onto a concrete floor complains of chest pain and pain in the posterior scapula area. The trauma nurse notes asymmetry in blood pressure of upper extremities, and upper extremity hypertension with a widened pulse pressure. Chest x-ray shows fracture of the scapulae and widened mediastinum (10 cm). Based on these findings, the trauma nurse suspects

rupture of the aorta.

cardiac tamponade.

diaphragmatic injury.

tracheobronchial injury.

Explanation:

Traumatic rupture of the aorta (a tear in the wall of the aorta contained by arterial adventitia and parietal pleura) may result from rapid deceleration, such as occurs with a fall from a large height or high impact motor vehicle accident. Although some patients are initially asymptomatic, some may complain of chest pain and/or pain in the posterior scapula area. Asymmetry of blood pressure in the upper extremities and widened pulse pressure are typical findings. The most common finding on a chest x-ray is a widened mediastinum (>8cm).

89.

If a pregnant patient dies from traumatic injuries at 34 weeks of gestation and the mother is provided continuous CPR, perimortem Caesarean to save the fetus must be carried out within

5 minutes.

15 minutes.

30 minutes.

60 minutes.

Explanation:

If a pregnant patient dies from traumatic injuries at 34 weeks (≥26 weeks) of gestation and the patient is provided continuous CPR, perimortem Caesarean to save the fetus must be carried out within 15 minutes. The neonate must be managed in the NICU, especially if it is many weeks premature. The Caesarean is done with a midline incision to most quickly access the fetus. The fetus is at risk for hypoxia and associated complications.

90.

A 76-year-old female patient who has generally been in good health has suffered a pathological fracture of the proximal femur. The patient states it occurred while walking, resulting in a fall. The most likely cause is

abuse.

multiple myeloma.

osteoporosis.

bone cyst.

Explanation:

If a 76-year-old female patient who has generally been in good health has suffered a pathological fracture of the proximal femur while walking, resulting in a fall, the most likely cause is osteoporosis. All women age 65 and older should be routinely screened for osteoporosis. Bone loss often exceeds 35% before the patient experiences symptoms. The DEXA scan is the imaging method of choice with results expressed as T scores. A T score of minus 2 (-2) is diagnostic of osteoporosis and indicates bone mass is 20% less than normal.

91.

If a dying patient tells the trauma nurse that she sees her mother, who has been deceased for many years, the most appropriate response is

"Does seeing your mother comfort or frighten you?"

"You are just dreaming."

"I'm sure your mother is watching over you."

"It's probably because of the medicine."

Explanation:

If a dying patient tells the nurse that she sees her mother, who has been deceased for many years, the most appropriate response is: "Does seeing your mother comfort or frighten you?" Patients who are dying often report visits from loved ones who are deceased or from spiritual figures, such as angels or devils. The trauma nurse should neither challenge or support these perceptions but should encourage the patient to discuss feelings about them if the patient is still able to verbalize.

92.

If a patient has spinal cord injury resulting from a gunshot wound, reflex testing for L4 injury is carried out at the

biceps.

triceps.

ankle.

knee.

Explanation:

If a patient has spinal cord injury resulting from a gunshot wound, reflex testing for L4 injury is carried out at the knee. Reflex testing:

- *C5 injury: Testing of biceps area, jaw jerk, and deltoid.*
- *C7 injury: Testing of triceps.*
- *T9 to T12 injury: Testing of pectoral, superficial abdominal.*
- *L4 injury: Testing of brachioradialis, knee.*
- *S1 injury: Testing of ankle.*
- *S3 to S4 injury: Testing of bulbo- or clitorocavernositis.*
- *S5 injury: Testing of anal wink.*

93.

Which of the following procedures is used to evaluate the function of cranial nerve XI (spinal accessory) for a patient with a traumatic neck injury?

Ask the patient to raise both eyebrows and frown.

Place hands on patient's shoulders and ask the patient to shrug against resistance.

Touch the patient's cornea with a fine piece of cotton and observe for blink response.

Ask patient to swallow, speak, and say "Ahhh."

Explanation:

To evaluate the function of cranial nerve XI (spinal accessory) for a patient with a traumatic neck injury, the trauma nurse should place hands on the patient's shoulders and ask the patient to shrug against resistance. Cranial nerve XI is especially at risk of injury with trauma to the neck, including whiplash injury, as well as cervical fractures and spinal cord injuries. Patients may complain of pain in the shoulder and exhibit weakness of the trapezius muscle.

94.

An adult patient has central venous pressure (CVP) monitoring, and the pressure is falling. Which procedure confirms suspected hypovolemia?

Rapid fluid infusion of 250 to 500 mL and then evaluation in 10 minutes.

Repeat readings every 5 minutes X 5 to determine further decrease in pressure.

Decrease rate of IV fluids and observe for further decrease in pressure.

Increase rate of fluids 2 X current rate and evaluate for increase in pressure.

Explanation:

Because the most common reason for a fall in CVP is hypovolemia, a rapid fluid infusion of 250 to 500 mL may be given. If the pressure again starts to fall ≤10 minutes, then the fall indicates

probable hypovolemia. Serial readings should always be used to verify increase or decrease. CVP is the pressure in the superior vena cava near the right atrium and helps to evaluate the function of the right atrium and right ventricle and the flow of blood back into the heart. Normal ranges for CVP are 0 to 8 cm H_2O or 2 to 6 mm Hg (depending on the type of measurement used).

95.

The primary indications of mandibular fracture include

dental avulsion and pain in mandibular area.

malocclusion and ecchymosis of floor of the mouth.

impaired sensation in chin and floor of mouth.

pain and edema in chin and neck area.

Explanation:

The primary indications of mandibular fracture include malocclusion and ecchymosis of the floor of the mouth. An interdental gap may be evident. Most injuries result from blunt trauma, and multiple fractures may be present. Hemorrhage is uncommon with blunt injuries although bleeding may occur if the fracture lacerates an artery, such as the inferior alveolar artery; however, surgical exploration is rarely necessary as fracture reduction, application of pressure, and/or local anesthetic with epinephrine are usually sufficient to control bleeding.

96.

A 30-year-old patient with an ipsilateral fracture of the distal radius and dislocation of the elbow complains of severe increasing pain in the forearm. The pain is unrelieved by analgesia. Which of the following should the nurse suspect?

Infection.

Fat embolism.

Drug tolerance.

Compartment syndrome.

Explanation:

Severe increasing pain that is unrelieved by analgesia and located distal to the injury (in this case, the forearm) is an initial sign of compartment syndrome, which is usually caused by bleeding into the tissue. On examination, the compartment feels tense and pain may be present with passive stretching of the muscles. Patients may develop paraesthesia and hypoaesthesia. Motor weakness is a late sign as is vascular insufficiency, so the nurse should not assume that finding a pulse below the injury precludes compartment syndrome.

97.

A patient has had a long-leg plaster cast applied to the left leg after a skiing accident that resulted in a fractured tibia and fibula. The cast is still damp, but the patient complains that the cast feels hot and uncomfortable. Which of the following does the feeling of heat most likely indicate?

Infection.

Ill-fitting cast.

Normal reaction.

Anxiety.

Explanation:

Heat is generated during the drying process of a cast, so the feeling of the cast being hot and uncomfortable is normal. The patient should be advised to be sure to keep the cast uncovered until it is completely dry (24 to 48 hours). The limb should be kept elevated to decrease swelling but may be supported on a pillow, which may help prevent the cast becoming misshapen as it dries. The patient should be turned every 2 hours to allow air to circulate about the cast so that it dries evenly.

98.

Upon arrival at the trauma center, a pregnant woman is about to deliver but the umbilical cord is prolapsed. What position should the woman be placed in to relieve pressure on the cord?

Supine.

Knees to chest.

Left lateral.

Right lateral.

Explanation:

Management of umbilical cord prolapse includes elevating the presenting part off the cord, having the mother elevate her knees to the chest, and preparing for C-section. A prolapse of the umbilical cord occurs when the umbilical cord precedes the fetus in the birth canal and becomes entrapped by the descending fetus. An occult cord prolapse occurs when the umbilical cord is beside or just ahead of the fetal head. About half of prolapses occur in the second stage of labor and relate to premature delivery, multiple gestation, polyhydramnios, breech delivery, and an excessively long umbilical cord.

99.

When assessing the ABCDEs of a patient with a traumatic brain injury, indications of Cushing's triad (bradycardia, hypertension, and abnormal irregular respirations) may be a sign of

brainstem herniation.

cerebral hemisphere damage.

dilation of ventricles.

decreased intracerebral pressure.

Explanation:

When assessing the ABCDEs (Airway, Breath/ventilation, Circulation, Disability, Exposure/environmental control) of a patient with a traumatic brain injury, indications of Cushing's triad (bradycardia, hypertension, and abnormal irregular respirations) may be a sign of brainstem herniation. Herniation most often results from increasing intracranial pressure that interferes with blood flow to the brain and oxygenation.

100.

A patient with blunt trauma to the lower jaw and suspected mandibular fracture should first be assessed for

airway obstruction.

tooth loss.

hemorrhage.

sensory changes.

Explanation:

A patient with blunt trauma to the lower jaw and suspected mandibular fracture should first be assessed for airway obstruction, which may result from avulsed teeth lodging in the airway or bilateral fractures. The patient should have the head elevated and oral suctioning carried out if necessary. The anterior flail portions of the fractured mandible may be manually positioned anteriorly to open the airway temporarily.

101.

Which of the following is the purpose of defusing sessions in critical incident stress management (CISM)?

Allow people to express feelings.

Provide a critique of the stress-inducing event.

Educate and provide guidance in handling feelings.

Identify signs of stress.

Explanation:

Defusing sessions usually occur very early, sometimes during a stressful event, and are used to educate personnel about what to expect over the next few days and to provide guidance in handling feelings and stress. Debriefing sessions usually follow in one to three days and may be repeated periodically as needed. People are encouraged to express their feelings and emotions about the event. Critiquing the event or attempting to place blame is not productive as part of the CISM process.

102.

One hour after an emergency delivery of a term infant, palpation of the mother's fundus shows that it is firm but deviates from midline. What should the trauma nurse suspect is the cause?

Uterine bleeding.

Bladder distention.

Normal variation.

Uterine rupture.

Explanation:

The fundus should be firm and midline. A deviation to one side or the other is often related to bladder distention, so this should be evaluated and the mother offered a bedpan or allowed to use a toilet if possible. If unable to urinate, she may need to be catheterized. Hemorrhage results in a boggy, soft fundus. Uterine rupture usually occurs during labor and is associated with pain, bleeding, and signs of shock.

103.

A patient suffered cardiac trauma with tamponade and has an emergent unguided pericardiocentesis with ECG monitoring. As the needle is advanced and blood withdrawn, premature ventricular contractions (PVCs) occur. What does this most likely indicate?

Normal response to reduction in pressure.

Acute injury to myocardium.

Laceration of peritoneum.

Irritation of the epicardium.

Explanation:

PVCs or increase in the amplitude of the T waves is consistent with irritation of the epicardium from contact with the needle, so the needle should be slowly withdrawn until the PVCs stop and the ECG returns to baseline readings. Acute injury to the myocardium may elicit changes in the ST segment or QRS complex. A laceration of the peritoneum may not be evident at the time of injury but may result in subsequent infection and peritonitis. Other injuries can include damage to coronary arteries or veins, pneumothorax, esophageal laceration, and pneumopericardium.

104.

A patient with a basilar skull fracture is especially at risk of

seizures.

hemorrhage.

cerebrospinal fluid leakage.

airway obstruction.

Explanation:

A patient with a basilar skull fracture is especially at risk of cerebrospinal fluid leakage (occurring in about 20%) because these fractures often involve the petrous temporal bone (70%). CSF may leak from the nose or ear. Diagnosis of CSF leak can be difficult because

glucose tests are unreliable. Beta2-transferrin testing is most accurate but not widely available. High-resolution CTs may help to identify defects that can cause leakage.

105.

In the ATLS protocol for trauma, during which step is a complete physical examination done, including neurological assessment and defining of disability?

Primary survey.

Resuscitation.

Secondary survey.

Definitive treatment.

Explanation:

A complete physical examination is done as part of the secondary survey, including a neurological assessment. The ATLS protocol steps include:

- *Primary survey: Assessment of ABCs (airway, breathing, and circulation).*
- *Resuscitation: Active efforts to resuscitate and stabilize patient.*
- *Secondary survey: Reviews the ABCs and adds DE to the original—disability and exposure/examination to provide further information about the extent of injury.*
- *Definitive treatment: Treatment may include surgery or other medical treatment as indicated.*

106.

The "death triangle" associated with rapid volume resuscitation and transfusions for treatment of hypovolemic shock includes acidosis (metabolic), coagulopathy, and which of the following?

Cerebral edema.

Hypothermia.

Increased hemorrhage.

Pulmonary edema.

Explanation:

The "death triangle" associated with rapid resuscitation includes acidosis, coagulopathy, and hypothermia. ATLS protocol calls for 2L (crystalloid) rapid bolus for adults and 20 mL/kg for children. Transfusions may be added with extensive blood loss. Protocol calls for two large bore IVs although central line may be needed in some cases. Short tubing and compression may allow infusion rates up to 500 mL/min, but this may rapidly cool the patient. Hypothermia may increase coagulopathy, so warming IV fluids, keeping the ambient temperature at 21°C, and using warming blankets may help prevent complications.

107.

A 14-year-old child with brain trauma presents with status epilepticus and a series of tonic-clonic seizures with intervening time too short for the child to regain consciousness. Which initial treatment is indicated?

Rapid sequence intubation.

Acyclovir and ceftriaxone.

Phenytoin and phenobarbitol.

Fast-acting benzodiazepine, such as Ativan®.

Explanation:

The initial treatment for status epilepticus (SE) is a fast-acting benzodiazepine (such as Ativan®), often in steps with administration every 5 minutes until seizures subside. If there is no response to the first 2 doses of anticonvulsants (refractory SE), rapid sequence intubation (RSI), which involves sedation and paralytic anesthesia, may be done while therapy continues. Phenytoin and phenobarbitol may be added, but combining phenobarbitol and benzodiazepine can cause apnea, so intubation may be necessary. Acyclovir and ceftriaxone may be administered if cause is unknown as SE may be triggered by viral encephalitis.

108.

A patient who experienced facial trauma has epistaxis from tearing of posterior vessels of the nose. The most likely treatment is

local pressure.

nasal vasoconstrictive spray.

compression tamponade.

cold compresses.

Explanation:

If a patient who experienced facial trauma has epistaxis from tearing of posterior vessels of the nose, the most likely treatment is compression tamponade, which may be done with an inflatable Foley catheter or packing. Tearing of anterior vessels, on the other hand, is usually more easily controlled with direct pressure, cold compresses, or nasal vasoconstrictive spray. In both cases, the patient should be positioned with the head elevated.

109.

A 30-year-old football player experienced a dislocation of the right knee and is in the emergency department with the knee splinted. Which of the following assessments has priority?

Vascular assessment.

Nerve function assessment.

Pain evaluation.

Assessment for further injuries to tendons, ligaments, and cartilage.

Explanation:

While all of these are important, the critical assessment is of vascular status because dislocation of the knee often tears the popliteal artery. Knee dislocation places the patient at high risk of compartment syndrome and amputation, especially if circulation is impaired for more than 6 hours. The presence of pedal pulses is not sufficient to rule out vascular injury, so the patient must undergo arteriograms or ultrasound evaluation. Nerve assessment is also important, as injury to the tibial and peroneal branches of the sciatic nerve is common.

110.

A 27-year-old patient is admitted to the emergency room with an open contaminated fracture of the tibia following a tractor accident. Which of the following information is especially important to obtain from the patient?

Cause of accident.

Date of last treatment with antibiotics.

Description of environment where accident occurred.

Date of last tetanus shot.

Explanation:

The date of the last tetanus shot is especially important for all open contaminated wounds. Patients whose tetanus toxoid injections are up-to-date and have had three or more immunizations generally require no further preventive treatment; however, if the patient is not immunized, has had fewer than three immunizations, or is unclear about immunization, then the patient should receive both the tetanus toxoid and tetanus immune globulin because tetanus toxoid does not confer immediate immunity while tetanus immune globulin provides temporary immunity immediately.

111.

A 70-year-old patient with fracture of the proximal femur develops sudden onset of hypoxia, tachypnea, high fever, buccal and conjunctival petechiae, and tachycardia 24 hours after injury. Initial arterial blood gases indicate respiratory alkalosis. Which of the following possible complications is most likely the cause of these symptoms?

Venous thromboembolia.

Infection.

Hemorrhage.

Fat embolism syndrome (FES).

Explanation:

Risk of FES is greatest with multiple fractures or fractures of long bones, ribs, or pelvis. Those 20-30 years and elderly adults with fracture of proximal femur are at increased risk. Onset of

symptoms (hypoxia, tachypnea, elevated temperature, and tachycardia) is usually at 24 to 72 hours but may be delayed for up to 7 days:

- *Early signs include respiratory alkalosis progressing to respiratory acidosis, leading to respiratory distress syndrome and congestive heart failure.*
- *Fat emboli in the brain cause CNS abnormalities, such as headache and confusion leading to coma.*
- *Systemic embolization may cause widespread petechiae, elevated temperature (>39.5°C), and kidney failure.*

112.

For a patient with contained blunt aortic injury but multiple other injuries that require delay in surgical repair, antihypertensives are administered to maintain systolic blood pressure below

80 mm Hg.

100 mm Hg.

120 mm Hg.

140 mm Hg.

Explanation:

For a patient with contained blunt aortic injury but multiple other injuries that require delay in surgical repair, antihypertensives are administered to maintain systolic blood pressure below 120 mm Hg to reduce the stress on the injured area. While almost always requiring surgical repair, repair of contained injuries may need to be delayed if the patient has other severe injuries, such as head injuries, pulmonary injuries, or coagulopathy. The proximal descending aorta is the most commonly injured with blunt thoracic trauma and should always be suspected because clinical signs may be absent, especially if the aorta has a partial-thickness tear.

113.

Which of the following fractures poses the greatest risk of hypovolemic shock?

Humerus.

Tibia.

Clavicle.

Femur.

Explanation:

Because bones are very vascular, a fracture may result in hemorrhage (internal or external), especially if blood loss is substantial immediately after the fracture occurs. The patient is at greatest risk if fractures occur in the long bones, especially the femur. Other fractures that pose risk of hypovolemic shock include fractures of the pelvis, thorax, and vertebrae. Patients with any type of major fracture should be monitored carefully to observe for signs of hypovolemic shock.

114.

If an adult patient has second- and third-degree burns of both arms (front and back), the front of the trunk, and the perineum, using the rule of 9s, what percentage of total body surface area (TBSA) is burned?

37%.

45%.

46%.

55%.

Explanation:

If an adult patient has second- and third-degree burns of both arms (front and back) (9 + 9 = 18), the front of the trunk (18) and the perineum (1), the total body surface area (TBSA) that is burned is 37% (18 +18 +1 = 37). Rule of 9s estimates BSA burned: Adults—9% head, trunk (front) 18%, trunk (back) 18%, arm 9%, leg 18%, perineum 1%. Infants/Children—18% head, trunk (front) 185, trunk (back) 18%, arm 9%, leg 14%, perineum 1%.

115.

A patient with a fractured vertebra is experiencing severe muscle spasms. Which of the following treatments is likely to offer the most relief?

Cold to fractured area.

Opioid analgesia.

Position change.

Heat to fractured area.

Explanation:

Muscle spasms are a common complaint of those with fractured vertebrae, and the treatment that may provide the most relief is to apply heat to the fractured area as this improves circulation and relaxes the muscles. Pain increases on movement and weight bearing. Patient may also be prescribed muscle relaxants to help alleviate muscle spasms. Unstable fractures usually require immediate surgery to prevent further neurological deficits; however, stable fractures can usually be treated conservatively.

116.

A patient has small shards of glass lodged in the surface of both corneas. After instillation of a topical anesthetic, the foreign bodies are usually removed with a

small hemostat.

pair of tweezers.

21-gauge needle.

folded gauze pad.

Explanation:

If a patient has small shards of glass lodged in the surface of both corneas, after instillation of a topical anesthetic, the foreign bodies are usually removed with a 21-gauge needle, gently dislodging and removing them one at a time under slit-lamp magnification. If shards are imbedded deeply, then surgical removal may be necessary. Patients with corneal foreign bodies typically have pain and tearing and may feel as though something is in the eye. Following removal, antibiotic ophthalmic ointment is applied and the eye patched.

117.

The most common traumatic intracerebral lesion is the

epidural hematoma.

subdural hematoma.

subarachnoid hemorrhage

intracerebral hemorrhage.

Explanation:

The most common traumatic intracerebral lesion is the subdural hematoma and is found in almost a third of patients with head injuries, so it should always be suspected. If present, there may also be underlying injuries. Acute subdural hematomas occur in fewer than 72 hours after injury while subacute occur up to 7 days after injury and chronic 21 days or more after injury. The treatment of choice is generally surgical evacuation.

118.

A physician has ordered that a patient with an unstable pelvic fracture have a Foley catheter inserted into the bladder. Which of the following should be done prior to insertion of the Foley?

Urinalysis.

Cystoscopy.

Intravenous pyelogram.

Retrograde urethrogram.

Explanation:

About 33 percent of those with unstable pelvic fractures has injury to the urethra, so before a Foley catheter is inserted into the bladder, a retrograde urethrogram should be completed. Other tests, such as a cystogram or intravenous pyelogram may be ordered if indicated. Unstable fractures also put the patient at increased risk of hemorrhage and various other internal injuries, so a thorough examination of the perineal area and a rectal exam should also be completed before catheter placement.

119.

A patient with compression fractures of the thoracic and lumbar region has been prescribed a thoracolumbosacral orthosis (TLSO) brace with metal sternal attachment. After logrolling the patient to sitting position, which should the trauma nurse assist the patient to do first?

Put on a tight-fitting t-shirt.

Place one arm through the straps on one side.

Center the metal sternal attachment.

Fasten the lumbar support.

Explanation:

The first step to applying a TLSO brace is for the patient to put on a tight-fitting t-shirt to protect the skin and prevent chafing. Next, the patient puts the arm through the opening that lies between the shoulder strap and the lumbar portion on one side. The metal sternal attachment is then centered and the lumbar belt pulled around and fastened. Then, the shoulder strap on the other side is attached through the loop on the sternal bar. The metal bar of the sternal attachment should be 4 finger-widths below the sternal notch. Last, the straps on the lumbar portion are tightened and attached.

120.

A volleyball player slipped and fell hard, resulting in vertebral herniation at level L4—L5. For which of the following conditions is the patient most at risk?

Cauda equina syndrome.

Autonomic dysreflexia.

Paraplegia.

Spinal cord shock.

Explanation:

The cauda equina is the group of nerves at the end of the spinal cord, containing the nerve roots for L1 to S5 vertebrae. Compression of the nerves of the cauda equina, most often occurring at L4 and L5, can result in cauda equina syndrome, which presents as "saddle" numbness of the buttocks and lower legs. The legs may become progressively weak and the patient may experience fecal and urinary incontinence and impotence. Surgical decompression of the nerves must be done immediately to prevent permanent damage.

121.

When determining the burden of proof for acts of negligence, how would risk management classify willfully providing inadequate care while disregarding the safety and security?

Negligent conduct.

Gross negligence.

Contributory negligence.

Comparative negligence.

Explanation:

Gross negligence would be indicated in this scenario. Negligence indicates that proper care has not been provided, based on established standards. Reasonable care uses rationale for decision-making in relation to providing care. Types of negligence include:

- *Negligent conduct indicates that an individual failed to provide reasonable care or to protect/assist another, based on standards and expertise.*
- *Gross negligence is willfully providing inadequate care while disregarding the safety and security of another.*
- *Contributory negligence involves the injured party contributing to his or her own harm.*
- *Comparative negligence attempts to determine what percentage amount of negligence is attributed to each individual involved.*

122.

A trauma victim has fractures of the upper 2 ribs on the right side. The patient should be carefully assessed for which secondary injury or injuries?

Liver trauma.

Splenic trauma.

Tracheal/Bronchial/Great vessel trauma.

Cardiac and splenic trauma.

Explanation:

Underlying injuries should be expected according to the area of fractures:

- *Upper 2 ribs: Injuries to trachea, bronchi, or great vessels.*
- *Right-sided ≥rib 8: Trauma to liver.*
- *Left-sided ≥ rib 8: Trauma to spleen.*

Pain, often localized or experienced on respirations or compression of chest way may be the primary symptom of rib fractures, resulting in shallow breathing that can lead to atelectasis or pneumonia. Fractured ribs are usually the result of severe trauma, such as blunt force from a motor vehicle accident or physical abuse.

123.

Ensuring that a patient has given informed consent and understands his or her rights and all of the risks and benefits of a procedure or treatment supports the ethical principal of

beneficence.

nonmaleficence.

justice.

autonomy.

Explanation:

Autonomy is the ethical principle that the individual has the right to make decisions about his/her own care. The nurse practitioner must keep the patients fully informed so they can exercise autonomy in informed decision-making. Beneficence is an ethical principle that involves performing actions that are for the purpose of benefitting another person. Nonmaleficence is an ethical principle that means healthcare workers should provide care in a manner that does not cause direct intentional harm to the patient. Justice is the ethical principle that relates to the distribution of the limited resources of healthcare benefits to the members of society.

124.

A trauma patient exhibits chest pain, pulsus paradoxus and Beck's triad: increased central venous pressure with distended neck veins, muffled heart sounds, and hypotension. Which of the following interventions is indicated?

Angioplasty.

Pericardiocentesis.

Transmyocardial revascularization.

Cardioversion.

Explanation:

Beck's triad is an indication of cardiac tamponade, treated with pericardiocentesis with large bore needle or surgical repair to control bleeding and relieve cardiac compression. Cardiac tamponade occurs with pericardial effusion in which fluid accumulates in the pericardial sac, causing pressure against the heart. It may be a complication of trauma, pericarditis, cardiac surgery, or heart failure. Other symptoms may include a feeling of pressure or pain in the chest as well as dyspnea, and pulsus paradoxus >10 mm Hg (systolic blood pressure heard during exhalation but not during inhalation).

125.

A patient is suspected of having compartment syndrome associated with abdominal trauma and shock. Intraabdominal pressure is usually assessed by inserting

a Foley catheter attached to a pressure transducer into the bladder.

an NG tube attached to a pressure transducer into the stomach.

a needle attached to a transducer into the abdominal fascia.

an enteral tube attached to a transducer into the jejunum.

Explanation:

If a patient is suspected of having compartment syndrome associated with abdominal trauma and shock, intraabdominal pressure is usually assessed by inserting a Foley catheter attached to a pressure transducer into the empty bladder. The catheter is clamped and transducer zeroed at the iliac crest along the midaxillary line. Then, about 10 mL (2 to 25 mL) of fluid is injected into the bladder and left in place for 30-60 seconds before reading the pressure following a patient expiration. Compartment pressures should be <30 mm Hg and the difference between diastolic BP and compartment pressure should be >30 mm Hg.

126.

A patient who receives multiple transfusions with citrated blood products must be monitored closely for

hyponatremia.

hypomagnesemia.

hypokalemia.

hypocalcemia.

Explanation:

Patients who receive multiple transfusions with citrated blood products must be carefully monitored for hypocalcemia. Calcium is important for transmitting nerve impulses and regulating muscle contraction and relaxation, including the myocardium. Calcium activates enzymes that stimulate chemical reactions and has a role in coagulation of blood. Values include:

- *Normal values: 8.2 to 10.2 mg/dL.*
- *Hypocalcemia: <8.2 mg/dL. Critical value: <7 mg/dL.*
- *Hypercalcemia: >10.2 mg/dL. Critical value: >12 mg/dL.*

Symptoms include tetany, tingling, seizures, altered mental status, and ventricular tachycardia. Treatment is calcium replacement and vitamin D.

127.

When irrigating a wound, what wound irrigation pressure is needed to effectively cleanse the wound while avoiding trauma?

<4 psi.

20-30 psi.

10-15 psi.

>15 psi.

Explanation:

Wounds should be irrigated with pressures of 10 to 15 psi. An irrigation pressure of <4 psi does not adequately cleanse a wound, and pressures >15 psi can result in trauma to the wound, interfering with healing. A mechanical irrigation device is more effective for irrigation than a bulb syringe, which delivers about ≤2 psi. A 250 mL squeeze bottle supplies about 4.5 psi, adequate for low-pressure cleaning. A 35-mL syringe with a 19-gauge needle provides about 8 psi.

128.

A 25-year-old patient with multiple fractures from an auto accident develops hypoxia, dyspnea, precordial chest pain, tachycardia, and thick milky sputum. Auscultation of the lungs shows crackles and wheezes. The patient complains of headache and has a fever of 40°C. Which of the following interventions should be done first?

High-flow oxygen.

Corticosteroids (IV).

Vasopressors.

Morphine.

Explanation:

These symptoms are consistent with fat embolism syndrome (FES), which may cause rapid acute pulmonary edema and ARDS, so the patient should be immediately provided with high-flow oxygen. Controlled-volume ventilation with PEEP may be indicated to prevent/treat pulmonary edema. Corticosteroids may reduce inflammation of the lungs and reduce cerebral edema. Vasopressors prevent hypotension and interstitial pulmonary edema. Morphine with a benzodiazepine may be indicated for patients who require artificial ventilation.

129.

An 80-year-old patient has no insurance but is brought to the trauma center of a private hospital after a motor vehicle accident. The patient is hypovolemic and unstable, but the physician wants to transfer the patient. Which of the following acts should the trauma nurse cite as a reason to stop the transfer until the patient stabilizes?

The Health Insurance Portability and Accountability Act (HIPAA).

The Emergency Medical Treatment and Active Labor Act (EMTALA).

American's with Disabilities Act (ADA).

Older American Act (OAA).

Explanation:

EMTALA prohibits patient "dumping" from EDs. Stabilization of emergent conditions or active labor must be done prior to transfer, and the patient's condition should not deteriorate during transfer. HIPAA addresses the rights of the individual related to privacy of health information.

ADA is civil rights legislation that provides the disabled, including those with mental impairment, access to employment and the community. OAA provides improved access to services for older adults and Native Americans, including community services (meals, transportation, home health care, adult day care, legal assistance, and home repair).

130.

A 3-year old girl has a spiral fracture of the shaft of her right humerus and numerous bruises, ranging from purple to yellow-green to brown, on her arms, legs, and face. The parent states that the child fell off of a swing set while playing the previous evening. The most appropriate action is

contact Child Protective Services.

caution the parent to supervise the child during play.

ask the child what happened.

tell the parent you suspect child abuse.

Explanation:

Child Protective Services should be notified so authorities can investigate the possibility of child abuse. Spiral fractures of the shafts of long bones are the most common abuse-related fracture in children. Additionally, new bruises should be red-purple. Widespread yellow-green and brown bruises suggest earlier injuries. A 3-year old child is not a reliable reporter, and forewarning the parent by questioning him or her about abuse or giving advice may cause an abusive parent to remove the child from care to avoid detection.

131.

A 72-year-old female on Medicare is being discharged home with a healing burn on her left arm that she is unable to care for independently because of arthritis. She requires dressing changes every 3 days. She depends on public transportation and walks with difficulty. The bus stop is two blocks from her house. Her 12-year old granddaughter lives with her. The best solution is

transferring the patient to an extended care facility.

providing treatment on an outpatient basis at the hospital clinic.

teaching the woman's 12-year old granddaughter to do the dressing changes.

making a referral to a home health agency to provide in-home care.

Explanation:

The best solution is a referral to a home health agency to provide in-home care, as this ensures that the woman will receive skilled nursing care and be able to stay at home and supervise her granddaughter. A 12-year old is too young for the responsibility of wound care. The patient's dependence on public transportation and difficulty walking precludes outpatient care. Home health care is a more cost-effective solution than transferring the patient to an extended care facility, which would leave the granddaughter without care. Medicare will not pay for extended hospital care for healing wounds.

132.

A blood specimen is obtained from a patient with a suspected highly infectious pathogen. Procedures should include which from the following?

I. Notifying the lab in advance so they can take extra precautions.

II. Labeling the vial as infectious.

III. Placing the vial in a hazardous waste container for transport.

IV. Discussing case with lab personnel prior to collection.

I only

I and II only

I and IV only

I, II, and III only

Explanation:

I and IV. If a blood specimen is obtained from a patient with a suspected highly infectious pathogen, the case should be discussed with the laboratory personnel prior to collection to ensure that proper procedures are followed, and the laboratory should be notified in advance so that they can take extra precautions as indicated. Protocols should be utilized for preparation and transport. Highly infectious pathogens include ebola virus, Mycobacterium tuberculosis, N. meningitidis, Francisella tularensis, SARS coronavirus, and H5N1.

133.

If a patient is on droplet precautions and no private room or cohorting is available, what minimum spatial separation should be maintained between the infected patient and a non-infected patient?

six feet.

four feet.

three feet.

two feet.

Explanation:

Ideally, patients on droplet precautions should be maintained in private rooms or cohorted with another patient infected with the same organism (but no other infection). However, if these options are not available, the patient may be placed in a room with a non-infected patient with a

spatial separation of at least 3 feet and a curtain between them. The door may be kept open and no special air handling is required. Patient transport should be limited.

134.

A patient with inhalation injury has a carboxyhemoglobin (COHB) level completed with initial lab work as part of evaluation for carbon monoxide (CO) poisoning. A normal percentage of COHB is

<5%.

<10%.

<15%.

<20%.

Explanation:

If a patient with inhalation injury has a carboxyhemoglobin (COHB) level completed with initial lab work as part of evaluation for carbon monoxide poisoning, a normal percentage of COHB is less than 5%. If the level is ≥20%, patients are usually asymptomatic, but at 20% to 30%, patients exhibit headache, impairment of fine muscle control, nausea, and vomiting. At 30% to 40%, patients become weak and lethargic. At 40% to 50%, patients lapse into comas, and death occurs with levels greater than 60%.

135.

The most common type of transmission of infectious organisms in the healthcare facility is

common source/vehicle.

droplet

airborne.

contact.

Explanation:

The most common type of transmission of infectious organisms in the healthcare facility is contact transmission, especially associated with inadequate hand washing. Healthcare personnel may be less susceptible to infection than patients who are ill, so the healthcare personnel can become colonized, such as with nasal Staphylococcus aureus, and serve as carriers. If personnel don't wash their hands after caring for a patient, they can carry bacteria directly on their skin from one patient to another.

136.

If a patient receiving packed red blood cells develops febrile nonhemolytic reaction with chills, fever, headache, muscle ache, restlessness, and flushing, but BP and respiratory status remain stable, the reaction the patient is having is probably directed at the

red blood cells.

residual plasma.

residual white blood cells.

residual platelets.

Explanation:

If a patient receiving packed red blood cells develops febrile nonhemolytic reaction (NHR) with chills, fever, headache, muscle ache, restlessness, and flushing, but BP and respiratory status remain stable, the reaction the patient is having is probably directed at the residual white blood cells. The transfusion can usually be resumed after the patient is administered antipyretics. If a patient has a history of NHR, then leukocyte-depleted RBCs may be indicated.

137.

Prehospital, a patient is found lying on the street with multiple stab wounds and the knife protruding from the right chest. During transport, the knife should be

removed immediately.

padded for support and left in place.

removed if blood is oozing about the knife.

held in place manually.

Explanation:

If prehospital, a patient is found lying on the street with multiple stab wounds and the knife protruding from the right chest, during transport, the knife should be padded for support about the handle and any protruding shaft as removing it may result in severe hemorrhage. Holding the knife in place manually increases risk that the knife may be jarred during transport.

138.

According to CDC guidelines, in the emergency response to a needlestick or a cut, the first action is to

apply a disinfectant.

notify a supervisor.

irrigate the area with normal saline.

wash the area with soap and water.

Explanation:

According to CDC guidelines, in the emergency response to a needlestick or a cut, the first action is to wash the area with soap and water. Splashes of body fluids or contaminated liquids to the face, skin, mouth, or nose should be flushed with water and eyes irrigated with normal saline, clean water, or sterile irrigant. Following this emergency step, the incident should be immediately reported to a supervisor and medical treatment sought to determine if post-exposure prophylaxis is indicated.

139.

When looking at benchmarks, the trauma nurse notes that the trauma center ranks 69% in one category. This means that the center

scored higher than 69% of those benchmarked against.

scored lower than 69% of those benchmarked against.

has an actual score of 31%.

scored higher than 31% of those benchmarked against.

Explanation: