Pediatric Orthopedics/Trauma
Faculty: Allison Gilmore, MD

1. What radiographs are appropriate to work up a patient with a slipped capital femoral epiphysis?
   a. AP pelvis and lateral of the hip  
   b. AP pelvis and frog leg lateral of both hips  
   c. AP and lateral of the painful hip  
   d. AP pelvis only

2. Which of the following is NOT a predictor of septic arthritis of the hip?
   a. ESR >40  
   b. WBC > 12,000  
   c. Inability to bear weight  
   d. Temperature < 38.0 degrees F

3. At what age does Perthes disease most commonly occur?
   a. Age >8  
   b. Age 4-8  
   c. Age <4  
   d. During infancy

4. Which best describes the difference between septic arthritis and toxic synovitis of the hip?
   a. They both get worse each day but septic hips are more painful  
   b. Labs are more abnormal with septic hips  
   c. A septic hip usually gets worse if not taken care of while symptoms from transient synovitis tends to diminish over 24-48 hours

5. What is the definitive treatment of septic arthritis of the hip in a child?
   a. Ultrasound guided aspirate and antibiotics  
   b. Irrigation and debridement plus antibiotics  
   c. Antibiotics alone  
   d. Ultrasound guided aspirate only.

6. Which type of fracture is most common in children?
   a. Salter Harris I  
   b. Salter Harris II  
   c. Salter Harris III  
   d. Salter Harris IV  
   e. Salter Harris V
7. What sign on an x-ray is pathognomonic of an occult supracondylar humerus fracture?
   a. A anterior fat pad sign
   b. A posterior fat pad sign
   c. A obvious crack through the bone
   d. A anterior and posterior fat pad sign

8. What would be the most appropriate splint for a child with a slightly angulated distal radius fracture?
   a. A sugar tong splint
   b. A posterior splint
   c. A volar wrist splint
   d. Immediate casting

9. What is the most appropriate splint for an 11 year old male with a supracondylar humerus fracture?
   e. A posterior splint with side slabs
   b. A sugar tong splint
   c. A volar forearm splint

10. The anterior humeral line lines up with the______on the lateral x-ray of a normal elbow.
    a. Olecranon
    b. Radial head
    c. Proximal humerus
    d. Capitellum
11. The nerve that is compressed in carpal tunnel syndrome is which of the above?
   a. Radial
   b. Ulnar
   c. Median
   d. Axillary

12. The nerve that is compressed in cubital tunnel syndrome supplies sensation to what part of the hand?
   a. Thumb
   b. Index finger
   c. Long finger
   d. Small finger

13. Palpation in the anatomic snuffbox of the wrist is crucial to detect which non-displaced fractures?
   a. Hook of hamate fractures
   b. Scaphoid waist fractures
   c. Pisiform fractures
   d. Capitate fractures

14. Cat bite wounds are associated with bacterial infections caused by which organism?
   a. Pasteurella
   b. Bartonella
   c. Clostridia
   d. Candida

15. The radial nerve’s motor function is tested by which of the following?
   a. Thumb flexion
   b. Long finger flexion
   c. Proximal interphalangeal joint extension of ring finger
   d. Metacarpophalangeal joint extension of long finger
Upper Extremity Injuries
Faculty: Scott Zimmer, MD

16. Which fracture in children carries the highest risk of compartment syndrome?
   a. Non-displaced forearm fractures
   b. Radial head fractures
   c. Supracondylar elbow fractures
   d. Coronoid fractures

17. Tennis elbow affects which anatomic location?
   a. Pronator teres off medial epicondyle
   b. Extensor carpi radialis brevis off lateral epicondyle
   c. Extensor digitorum off lateral epicondyle
   d. Flexor carpi ulnaris off medial epicondyle

18. Humeral shaft fractures are most commonly associated with which nerve injuries?
   a. Median
   b. Ulnar
   c. Musculocutaneous
   d. Radial

19. Anterior shoulder dislocations are most commonly associated with which nerve injuries?
   a. Axillary
   b. Median
   c. Radial
   d. Ulnar

20. The rotator cuff tendons include all of the following EXCEPT?
   a. Infraspinatus
   b. Teres major
   c. Supraspinatus
   d. Subscapularis
Lower Extremity Injuries
Faculty: Donald Goodfellow, MD

21. An obese 15 year old male presents with a short history of anterior right thigh pain. He points to the distal thigh just above the patella as the source of this pain. He walks with an antalgic gait with an abductor lurch on the right. Physical examination of his right knee shows no effusion, full ROM both actively and passively. Ligaments are stable He has no medial or lateral joint line tenderness and McMurray’s tests are negative. He has normal patella tracking with no tenderness or apprehension. He has limited flexion of the hip and pain with IR of his hips. The most appropriate next step in his evaluation should be:
   a. Radiographic examination of the right knee
   b. Radiographic examination of the right hip
   c. Arthrocentesis of the right knee
   d. MRI of the right knee
   e. MRI of the right hip

22. A 19 year old female long distance runner presents with right groin pain with running for the past 3 days. The pain is increasing and now bothers her with walking. Physician exam show FROM of her Right hip with mild pain in extreme IR of her right hip. She has no swelling or bulges around the groin and no pain with Valsalva maneuver. Radiographic of the right hip and pelvis are normal. The next step in management of this patient would be:
   a. Admission for IV antibiotics
   b. Immediate CT scan of pelvis and hip
   c. Abduction splint of the right hip
   d. Bed rest until pain subsides
   e. Crutch ambulation with minimal weight bearing to the point of no pain and MRI within the next several days.

23. A 14 year old female soccer player presents with a hemarthrosis of the left knee proven by aspiration. The most common cause of the hemarthrosis is:
   a. Hemophilia
   b. Fractured patella
   c. Patella dislocation
   d. Torn anterior cruciate ligament
   e. Torn medial meniscus
24. In a patient with complete Achilles tendon rupture which statement is NOT true?
   a. The patient can often walk without pain
   b. The patient often reports being kicked in the heel
   c. There is a defect in the tendon
   d. The Thompson test is positive
   e. The patient can plantar flex against resistance

25. A 26 year old softball player presents with increasing pain in his left shin area after being struck by a line drive. He was able to finish the game but over the past 3 hours the pain has become increasingly intense. Radiographs are normal. Which is the most sensitive finding for anterior compartment syndrome?
   a. Increased pain on passive planter flexion of the foot or toes
   b. Dependent rubor
   c. Distention of the dorsal veins
   d. Decreased dorsalis pedis pulse
   e. No active dorsiflexion of the foot or toes
26. The ‘First Ray’ is very important for weight-bearing responsibilities of the foot and accommodates for approximately ________ of the load.
   a. 1/5th
   b. 2/5th
   c. 3/5th
   d. 4/5th
   e. 100%

27. A 13 year old boy presents to the urgent care for a complaint of ‘ankle sprain’. This is his fifth ‘sprain’ in the last 6 months. His exam is essentially normal with the exception that his subtalar motion feels ‘locked’. Clinical suspicion of which condition should be high?
   a. Congenital Vertical Talus
   b. Sinus Tarsi Syndrome
   c. Pes Planus
   d. Tarsal Coalition
   e. Stress Fracture

28. Avulsion fractures (Dancer’s) of the base of the 5th metatarsal are usually treated with:
   a. Post-Op shoe or Bootwalker with WB as tolerated
   b. Cast Application with NWB for 6-8 weeks
   c. Urgent ORIF (Open Reduction Internal Fixation) followed by NWB for 12 weeks
   d. External Fixation
   e. None of the above

29. On an AP radiograph, the medial border of the 2nd metatarsal should line up with:
   a. Lateral border of the medial cuneiform
   b. Medial border of the middle cuneiform
   c. Lateral border of the middle cuneiform
   d. Medial border of the lateral cuneiform
   e. None of the above

30. When the calcaneus (heel) fractures, which of the following happens to its shape?
   a. Flattens
   b. Widens
   c. Shortens
   d. Varus
   e. All of the above
31. Refer all patients to burn center, EXCEPT:
   a. Partial thickness burn
   b. Full thickness burn
   c. Electrical burn
   d. Inhalation injury

32. Which of the following describes a superficial burn?
   a. Red, blanches with pressure, heals in 2-3 weeks without scarring
   b. Red or pink, blanches with pressure, heals in a week without scarring
   c. Red, blisters, heals in 2-3 weeks, scarring is unusual
   d. More cream or yellow than red, does not blanch with pressure, heals in 3-6 weeks, may need skin grafting

33. The following is TRUE of partial thickness burns:
   a. Management of second degree burns and partial thickness burns are essentially the same
   b. Deep partial thickness burns can be differentiated from superficial partial thickness burns by the absence of hair follicles
   c. Deep partial thickness burns are waxy white, brown or black, does not blanch with pressure, heals in 3-6 weeks, may need skin grafting
   d. The presence of blisters is the hallmark of partial thickness burns; deep partial thickness burns may have blisters but are thin and easily rupture

34. These principles of burn care are true EXCEPT:
   a. Blister debridement enhances healing by reducing the risk of infection and improving blood flow to damaged tissues
   b. Use of moist, occlusive dressing aids in wound healing by facilitating epidermal cell migration
   c. Silver sulfadiazine has been shown to delay wound healing by formation of pseudo-eschar that is debrided during dressing changes
   d. Frequent dressing changes aid in healing by preventing wound infection in burns
35. Patients presenting to the urgent care center may actually be sicker than they appear to be, thus have a high index of suspicion in the following patients:
   a. A red, painful scald burn in a child is suspicious for a full thickness burn, instead of a deep partial thickness burn
   b. A person with facial burns from flame or fire injury with normal pulse oximetry is suspicious for having concomitant inhalation injury
   c. An injured worker who presents with circumferential burn of his pinky finger will need immediate referral because the tourniquet effect can occur in less than 24 hours
   d. All of the above suspicions are correct
Principles of Wound Management
Faculty: Natasha Cruz, MD

36. **True/False.** The dermis is the anchoring site for superficial and deep sutures.
   a. True  
   b. False

37. **True/False.** Direct wound infiltration: injecting the anesthetic within the superficial fascia results in a shorter onset of block.
   a. True  
   b. False

38. **True/False.** Aspirating before injection prevents neurologic and cardiovascular excitation from local anesthetics.
   a. True  
   b. False

39. **True/False.** There is considerable overlap between all four digital nerves such that all branches must be blocked.
   a. True  
   b. False

40. **True/False.** Povidone Iodine, Chlorhexidine and Hydrogen Peroxide solutions are all equally effective and safe for wound cleansing and debridement.
   a. True  
   b. False

41. **True/False.** To create an everted wound edge, the needle must be inserted at a 45-degree angle from the surface of the skin, exit on the other side of the wound edge at the same angle and distance.
   a. True  
   b. False

42. **True/False.** Deep closure is an excellent technique for reducing wound tension, however, due to increased inflammatory response, a minimum number of deep sutures must be placed.
   a. True  
   b. False

43. **True/False.** When repairing eyebrow lacerations, align the superior and inferior margins first, then close rest of the wound with small bites. This is the same principle used in repair of lip lacerations.
   a. True  
   b. False
Principles of Wound Management Continued
Faculty: Natasha Cruz, MD

44. True/False. Dermabond® can be safely used in wounds with low tension, clean edges and little to no oozing; it is less painful than suture placement and prevents keloid formation.
   a. True
   b. False

45. True/False. Advantages of wound stapling include less time required for application, less inflammatory reaction, less infection and have the same cosmetic result as suture placement.
   a. True
   b. False
Head Trauma
Faculty: Joseph Toscano, MD

46. Which of the following can be a post-concussive symptom?
   a. Headache
   b. Nausea
   c. Dizziness
   d. Fatigue
   e. Each of the above can be a post-concussive symptom

47. Which of the following is NOT a category within the Glasgow Coma Score?
   a. Eye opening
   b. Sensory loss
   c. Motor response
   d. Verbal response

48. Each of the following patients presents to urgent care clinic within a few hours of a fall from standing with a head impact on the ground. There was no loss of consciousness or amnesia. Which patient would NOT, based on clinical grounds alone, require consideration of extended observation and/or CT scanning to assess for clinically occult brain injury?
   a. An asymptomatic 80 year old patient with a normal physical and neurological exam.
   b. A 35 year-old patient with mild headache and left hemotympanum.
   c. A 45 year-old patient with nausea and a normal physical and neurological exam.
   d. An asymptomatic 40 year-old patient, on warfarin, with a normal physical and neurological exam.

49. Concussion describes neuronal dysfunction most likely due to which of the following?
   a. Mild diffuse axonal injury
   b. Epidural hematoma
   c. Cerebral contusion
   d. Increased intracranial pressure

50. A risk factor for complications relating to head injury includes which of the following?
   a. Hypertension
   b. Diabetes
   c. Current anticoagulant use
   d. Recent stroke
   e. All of the above increase the risk of complications
Head Trauma
Faculty: Joseph Toscano, MD

51. An indication for immediate transfer of a patient with head injury to the nearest emergency department includes which of the following?
   a. An episode of vomiting in an awake, alert patient with no exam abnormalities
   b. A single seizure immediately following head impact in an awake, alert patient with no exam abnormalities
   c. Loss of consciousness for half a minute following head impact in an awake, alert patient with no exam abnormalities
   d. An open skull fracture in an awake, alert patient with no other exam abnormalities

52. Which is the following is the preferred imaging modality for patients with acute head injury and suspicion of significant intracranial injury?
   a. Head/brain CT scanning without contrast
   b. Skull radiographs
   c. Head/brain MRI with IV contrast
   d. Head/brain CT scanning with IV contrast
   e. All of the above are equally useful for head injury imaging