

Orthopaedic MCQs

1	Which fracture description does not match its name?
A	Lisfranc = dorsal dislocation of tarsometatarsal joint +/- # 1 st cuneiform or 2 nd MT
B	Monteggia = # proximal third ulna and dislocation of radial head
C	Clay-shoveller's = avulsion of C3, 4,5 spinous processes
D	Bennett's = intra-articular # base of thumb metacarpal and proximal, radial and dorsal displacement of distal fragment
Answer	

2	Which of the following is FALSE regarding C-spine injuries?
A	Hangman's # is a hyperextension injury
B	Anterior wedge # is usually mechanically stable
C	Anterior tear-drop # is nearly always mechanically unstable
D	C2 and C3 are the most commonly injured vertebra.
Answer	

3	Regarding knee injuries, which of the following is TRUE?
A	Segond fractures are important markers of PCL disruption
B	Fracture types I, II and III involve the medial tibial plateau with increasing articular depression
C	Medial tibial plateau fractures are twice as common as lateral fractures
D	Lateral plateau fractures are associated with ACL and MCL disruption
Answer	

4	Regarding forearm fractures, which of the following is TRUE?
A	Radial neck fractures with up to 30 degrees tilt can be managed conservatively
B	Post interosseous nerve injury is common with Monteggia fracture dislocation
C	X-rays in Galeazzi injury shows a radial fracture with dorsolateral tilt
D	Radial nerve injury is common in Colles fracture
Answer	

5	Regarding forearm fractures
A	Bartons fracture involves the distal radio-ulnar joint
B	Monteggia fracture dislocation involves fracture of the radius proximally and distal radio-ulnar joint disruption
C	Monteggia fracture requires POP application in supination
D	Galeazzi fractures require fixation of the related joint disruption in most cases as well as ORIF of the bone fracture
Answer	

6	The following statements are true EXCEPT
A	Volkman's ischaemic contracture of the fore-arm and hand may develop despite wrist pulses being present and the forearm skin being well perfused
B	'Fat pad' sign is helpful for diagnosing occult #'s outside the elbow joint capsule
C	On the lateral XR of the elbow, the radio-capitellar line should intersect the middle 1/3 of the capitellum
D	25 % of supra-condylar #'s are undisplaced and is the most common # involving the elbow in children
Answer	

7	In which area do clavicular fractures most commonly occur?
A	Inner 1/3.
B	Junction of inner 1/3 and middle 1/3.
C	Proximal end
D	Junction of middle 1/3 and outer 1/3.
Answer	

8	Which of the following regarding scapular fractures is FALSE?
A	Most commonly involve the blade.
B	Are commonly overlooked.
C	Are associated with thoracic injury in 80% of cases.
D	Commonly managed non-operatively.
Answer	

9	Which of the following is TRUE with regards to knee injuries?
A	Usually a varus force with axial loading will produce a lateral condylar fracture of the tibia
B	Elderly patients with a lateral tibial plateau fracture usually require a bone scan as part of their investigation
C	A Segond fracture is a marker of collateral ligament injury and ACL disruption
D	Popliteal artery is relatively protected from injury due to it's anatomical position
Answer	

10	In regard to elbow dislocation, which of the following is FALSE?
A	It is associated with significant soft tissue injury and resultant instability.
B	It is one of the three most common large joint dislocations – the others being glenohumeral and patellofemoral
C	Patients typically present with their arm held in near full extension
D	The commonest associated neurovascular injury is to the Ulnar nerve.

11	In the child with Slipped Upper Femoral Epiphysis (SUFE), which statement is FALSE?
A	SUFE is a Salter Harris type fracture.
B	Bilateral SUFE in a child under 10 years of age is more likely to be associate with endocrine / metabolic disorders.
C	The 'Klein line' is helpful in diagnosing SUFE
D	A 'Frog leg' plain XR view of the hips is a helpful investigation to diagnose SUFE
Answer	

12	In the child with Leg-Calve-Perthes Disease (LCPD), which statement is TRUE?
A	It is a form of capital femoral epiphysis avascular necrosis secondary to trauma
B	CT imaging is preferred above plain 'frog leg' XR's of the hips
C	Patients with suspected LCPD disease require admission for further inpatient management.
D	Is clinically indistinguishable from 'acute synovitis'
Answer	

13	Features seen on a child's cervical spine XRay that are different from an adult's include all of the following EXCEPT
A	Anterior pseudosubluxation C2 on C3 can be normal until 8 years
B	Increased depth of anterior soft tissue space
C	Prepedicular space (C1) up to 5mm
D	Prominent lordosis
Answer	

14	Which of the following statement regarding Femoral neck fractures is TRUE?
A	They are more common in men
B	Intracapsular fractures are more common than extracapsular fractures
C	Displaced fractures should be treated with skin traction in the ED
D	Intermittent catheterization is preferable to indwelling catheters
Answer	

15	Radial head fractures are commonly associated with all of the following EXCEPT
A	Lateral collateral ligament injury
B	Medial collateral ligament injury
C	Coronoid fracture
D	Olecranon fracture
Answer	

16	With regards to isolated medial epicondyle fractures, which is FALSE?
A	Patients present with pain on flexion of the digits
B	They are extraarticular injuries
C	The medial epicondyle may become entrapped in the joint space in Medial Collateral ligament tears.
D	They affect adults more commonly than children
Answer	

17	Which association is the least likely?
A	Brachial plexus injury and fracture of the coracoid process
B	Pseudosubluxation in proximal humeral fractures
C	Wrist drop in Type III supracondylar fractures
D	Volkmanns Ischaemic Contracture in supracondylar fractures
Answer	

18	Which is FALSE regarding supracondylar fractures?
A	Posterior displacement of the distal fragment are more common than anterior displacement
B	Fat pad sign may be negative in severe supracondylar fractures involving capsular rupture
C	Injuries to the anterior interosseous nerve are easily missed and are detected by an inability to use FDP on the radial side
D	An absent radial pulse as an isolated finding generally warrants urgent surgical exploration
Answer	

19	Regarding arm injuries which of the following is TRUE?
A	Radial neck fractures with $>10^\circ$ angulation should be reduced.
B	Colles fractures in post-menopausal women require only orthopaedic follow-up.
C	A Barton fracture with minimal displacement will require operative reduction.
D	Galeazzi fracture should not be diagnosed when there is $<4\text{mm}$ of distal radio-ulnar separation.
Answer	

20	In knee injuries which of the following is TRUE?
A	A common triad of injuries is ACL/MCL and medial meniscus.
B	Proximal tib-fib dislocation occurs with a twisting force to the extended knee.
C	Tears of the patellar tendon need repair due to the high stress of quadriceps contraction.
D	60% of adolescents with a knee haemarthrosis on x-ray will have an osteochondral fracture.
Answer	

21	Which of the following is FALSE Regarding the systemic form of Juvenile Chronic Arthritis, (Stills disease)?
A	A temperature of 39.5 for two weeks is required for the diagnosis of the systemic form
B	Pericarditis is an association
C	Lymphadenopathy is common
D	The child generally appears well
Answer	

22	Regarding Paediatric Arthritis,
A	The arthritis of psoriatic arthritis always follows the skin lesions
B	Enthesitis is associated with HLAB27
C	Iritis is associated particularly with the polyarticular form
D	Constitutional features are common with the pauci-articular form
Answer	

23	Regarding hip injuries, which is TRUE?
A	Garden I and II fractures are non displaced fractures and can be managed conservatively
B	Intracapsular fractures are more common than extracapsular fractures
C	The hip is least stable when it is flexed and abducted
D	Superior femoral head fractures are often associated with anterior hip dislocations
Answer	

24	Regarding knee injuries, which is FALSE?
A	Lateral tibial plateau fractures are associated with MCL and ACL injury
B	The knee joint is the most commonly injured joint in the body
C	Patella often dislocated laterally due to the weakening of the vastus lateralis tendon insertion
D	Dislocation of the knee is associated with popliteal artery and tibial nerve injury
Answer	

25	Which of the following statements is FALSE?
A	The tibia shaft is the most commonly fractured long bone
B	Lateral malleolar fractures are the commonest ankle fracture
C	The knee is the largest and most complicated joint
D	Non-union is the most common complication of hip fractures
Answer	

26	Regarding forearm fractures which is FALSE?
A	All Galeazzi fracture-dislocations require surgery
B	All Monteggia fracture-dislocations require ORIF
C	Radial head fractures with up to 20° tilts can be managed conservatively
D	Smith's fracture is managed with below elbow plaster with wrist in pronation and full dorsiflexion
Answer	

27	Regarding Segond fractures which is TRUE?
A	Small avulsio-fracture proximal medial tibia
B	Signifies tear of the menisco-tibial attachment of the middle 1/3 of the medial capsular ligament
C	All have anterior cruciate tears
D	Few have meniscal tears
Answer	

28	Which of the following is FALSE in regard to Plaster of Paris?
A	Created by heating Gypsum at 350 ⁰ C to form Calcium sulphate hemihydrate
B	Hardens in an exothermic reaction when exposed to water
C	A forearm cast will be fully dry by 36 hours post-application
D	A Forearm cast will develop 50% of the final full strength by one hour post-application
Answer	

29	Which of the following is FALSE in regard to the Mangled Extremity Severity Score (MESS)?
A	The presence and degree of other major injuries is a parameter that contributes to the final score
B	Limb ischaemia is a parameter that contributes to the final score
C	A score of 7 or more is associated with 100% chance of amputation
D	The degree of soft tissue injury is a parameter that contributes to the final score
Answer	

30	Which of the following is TRUE ?
A	Clinical examination is more sensitive than xray in picking up a fracture
B	A 'fat pad' sign of a fracture is less reliable in obese individuals
C	xray is less specific than clinical examination in regards to fracture diagnosis
D	Xrays with 2 views is 95% sensitive and specific for major joint dislocation
Answer	

31	Which philosopher is MOST likely to be useful to FACEM examination candidates?
A	Hegel
B	Kant
C	Nietzsche
D	Fromm
Answer	

32	Which of the following pairs is CORRECT
A	Femoral head fractures – Pipkin classification
B	Femoral head fractures -Gardiner classification
C	Patellar fractures – Hohl classification
D	Ankle factures – Boehler classification
Answer	

33	Which of the following is CORRECT when treating neck of femur fractures
A	Alignment maintained by pre operative skin traction helps post operative mobility
B	Indwelling urinary catheters are not associated with post operative infection
C	Antibiotics at time of anaesthetic induction reduce post operative infection rates
D	Patients do not need nursing on pressure mattresses in the pre operative period where surgery is conducted within 24 hrs
Answer	

34	Which of the following fracture-eponym combinations is NOT correct?
A	Tillaux # - avulsion # of tibia at inferior tibiofibular joint
B	Essex-Lopresti – fractured radial head and dislocated distal radioulnar joint
C	Hume # - fractured distal radius with dislocation of distal radioulnar joint
D	Bennet # - # dislocation at the base of the 1 st metacarpal
Answer	

35	With regard to scaphoid #'s which statement is TRUE?
A	Risk of # if not seen on initial X-ray is 10-20%
B	Most common location is proximal pole ≈ 50%
C	Can get AVN of tubercle #'s
D	MRI sensitivity approaches 100%
Answer	

36	Which of the following is TRUE
A	Most tibial plateau fractures involve the medial plateau
B	A Second fracture suggests PCL disruption and anterolateral rotatory instability
C	The younger the age of onset of Perthes disease, the better the prognosis
D	The more proximal the scaphoid fracture, the lower the incidence of avascular necrosis
Answer	

37	Which of the following is TRUE
A	An ipsilateral Pelvic fracture is commonly associated with an L5 transverse process fracture
B	The posterior column of the thoracolumbar spine involves the posterior longitudinal ligament
C	Intracapsular hip fractures are more common than extracapsular fractures
D	The Hawkins classification can be used for hip fractures
Answer	

38	In regards to Slipped Upper Femoral Epiphysis (SUFE), which is CORRECT?
A	More common in females
B	In chronic slip passive flexion is associated with external rotation
C	In unstable SUFE patient can still weight bear
D	More common in children under the age of 10
Answer	

39	What is the key event required for a Triplane Ankle Fracture to Occur?
A	Inversion Injury
B	Ossification of Epiphysis
C	Axial Loading Injury
D	Partial Fusion of Growth Plate
Answer	

40	Regarding Nerve Injuries that characteristically accompany certain Orthopaedic Injuries which pairing is CORRECT?
A	Lunate dislocation - Ulnar nerve
B	Femoral Shaft Fracture- Femoral Nerve
C	Shoulder Dislocation- Radial Nerve
D	Knee Dislocation- Peroneal Nerve
Answer	

41	Regarding Compartment Syndrome which bone fracture is MOST commonly implicated?
A	Femur
B	Radius
C	Tibia
D	Humerus
Answer	

42	Which is a CORRECT indication for replantation post amputation?
A	Single digit amputations proximal to the FDS insertion
B	Sharp amputations with minimal to moderate avulsion proximal to the elbow
C	Multiple level amputations
D	Self- Inflicted amputations
Answer	

43	Which of the following regarding elbow x rays is FALSE
A	The anterior humeral line passing through the middle third of the capitellum indicates a supracondylar fracture
B	A visible posterior fat indicates an intracapsular fracture
C	A small anterior fat pad is normal
D	The radio-capitellar line should pass through the middle 1/3 of the capitellum
Answer	

44	Which of the following statements regarding ankle fractures is TRUE
A	A Maisonneuve fracture is produced by forced external rotation
B	The Pott's system is based on the level of the fibula fracture
C	The Weber classification is based on the number of malleoli involved
D	The Ottawa ankle rules have not been prospectively validated in children
Answer	

45	All of the following is true with regards to Perthes disease, EXCEPT:
A	All children with irritable hips should be referred to an orthopaedic surgeon
B	It is mostly unilateral
C	It occurs more often in malnourished children
D	When followed up 20 years later, most patients are pain free and active
Answer	

46	In regard to slipped upper femoral epiphysis (SUFE) :
A	On an AP X-ray, a line drawn up along the superior femoral neck will not intersect the femoral head
B	Obesity does not play a role in its pathogenesis
C	Ultrasound has low sensitivity to detect slip of the epiphysis
D	Most patients will develop avascular necrosis of the hip
Answer	

Answers

1. C
2. D
3. D
4. B
5. C
6. B
7. D
8. C
9. C
10. C
11. D
12. D
13. D
14. D
15. A
16. D
17. C Wrist drop is associated with humeral #, Supracondylar #'s are associated with Median nerve injury
18. D Transient radial artery spasm is common
19. C (A >20°, B bone density scan too)
20. D
21. D
22. B
23. D Cameron 3.7 hip Injuries
24. C Cameron, Knee injuries, Chp 3.9
25. E Cameron orthopaedic injuries (AVN is the most common complication)
26. D Cameron, p140
27. C Dunn, p530
28. E Dunn p506
29. A Dunn p507
30. A A True-Clinical examination is more sensitive but less specific than xray B False-sign relies on intra-articular interface not external fat CFalse-see A DFalse-100% sens and spec E False-some (V) don't Practical fracture treatment
31. B Answer-B, no absolute truths, truth is what the observer believes to be true, hard to get a question wrong with this philosophy

32. A Gardine – femoral neck, Patellar is none purely descriptive, Ankle is Weber, Tibial is Hohls
33. C
34. C This is a Galleazzi #; Hume # is # proximal ulna with anterior dislocation of radial head
Dunn, 4th Ed, pg 665
35. D – risk is 1-5% B – most common is mid-body 50%, proximal 38%, distal 12% C - never get AVN of tubercle E – higher false positives (elderly with arthritis, children with epiphyses, patients with acute synovitis) Dunn, 4th Ed, pg 637-8
36. C
37. A
38. B Cameron et al Textbook of Paed Emerg A – More common in Males B – Correct Answer
C – The marker of instability is inability to WB D – 80% occurs during puberty (10-16M, 9-15F) E – Pain is referred down medial thigh (or knee or groin)
39. D A & C – Injury occurs due to external rotation B – This occurs much earlier in development D – A potential sequelae of injury E – Triplane # only occur in patients with partially fused growth plates
40. D Rosens p476
41. C Rosens p477
42. B Rosens p519
43. A
44. A Dunn page 643
45. A Cameron et al. Textbook of Paeds Emerg Med, p. 622 A: If presentation is less acute and X-ray/ultrasound findings are non-specific, then referral is only indicated if symptoms persist beyond 3 weeks B: 90% unilateral
46. A Textbook of Paed Em Med, Cameron et al., p. 623