

1. A new lower limb arthroplasty surgeon is choosing validated outcome measures to be used for his THA patients.
Which of the following scores is completed by the clinician rather than the patient

- A. Harris hip score
- B. Hip disability and osteoarthritis outcome score
- C. Oswestry hip score
- D. Oxford hip score

A

2. A woman who has recently given birth developed progressive severe non traumatic hip and Groin pain in the 3rd trimester of her pregnancy. Hip radiographs show subchondral cortical loss, diffuse osteopenia of the femoral head and neck and a preserved joint space.

What is the most appropriate management

- A. arthroplasty
- B. cannulated hip screws
- C. protected weight bearing
- D. Guided joint aspiration

C

3. A nerve is damaged during the direct lateral hip approach when the muscles are inadvertently split more than 5 centimetres proximal to the greater trochanter.

Asking the patient to perform which of the following movements is most likely to reveal a deficit ?

- A. Dorsiflex ankle
- B. Extend Great toe
- C. Extend knee
- D. Stand on one leg

D

4. When drilling a screw to augment fixation of an uncemented acetabular cup, profuse bleeding is encountered and the patient becomes hypotensive.
Which vessel has been injured

- A. external iliac
- B. internal iliac
- C. obturator
- D. pudendal

A

5. Which anatomical structure does not enter the pelvis via the lesser sciatic foramen

- A. internal pudendal artery
- B. internal pudendal vein
- C. nerve to obturator internus
- D. obturator internus

D

6. Sickle cell disease is associated with which complication following total hip arthroplasty

- A. Early prosthetic loosening
- B. Higher risk of heterotrophic ossification
- C. Increased blood loss
- D. Periprosthetic infection

A

7. Which of the following ligaments is the strongest

- A. Iliofemoral
- B. Ischio femoral
- C. Ischio sacral
- D. Pubofemoral

A

8. A retired manual labourer presents with gradual worsening of knee pain with the previous history of high tibial osteotomy performed 15 years earlier. Radiographs show progressive arthritis of the knee joint and you counsel patient about total knee arthroplasty.

Which of the following is the likely issue that you may encounter during total knee arthroplasty following previous HTO.

- A. Lateral patellar instability
- B. Patella Baja
- C. Patella fracture
- D. Patella osteonecrosis

B

9. While performing a posteromedial approach to the knee, which of the following structures helps you identify the correct plane
- | | | |
|--------------------------|-------------------|----------|
| A. saphenous nerve | B. saphenous vein | C |
| C. semitendinosus tendon | D. sural nerve | |
10. What is the main blood supply of the talar body
- | | | |
|---------------------------|------------------------------|----------|
| A. Anterior tibial artery | B. artery of the sinus tarsi | D |
| C. Peroneal artery | D. posterior tibial artery | |
11. From the options listed below choose the most appropriate muscle that plantar flexes the first metatarsal
- | | | |
|---------------------------|---------------------------|----------|
| A. flexor hallucis brevis | B. flexor hallucis longus | C |
| C. peroneus longus | D. tibialis posterior | |
12. An 18 year old young woman presents with forefoot pain and stiffness of the second metatarsal phalangeal joint. Pain worsened on axial loading of the joint. Radiographs demonstrate arthrosis and flattening of the metatarsal head. What is the likely diagnosis
- | | | |
|-----------------------|-------------------|----------|
| A. Kohler's disease | B. Severs disease | C |
| C. Freiberg's disease | D. Turf toe | |
13. 1 year old female is brought into your clinic. Her mother is concerned about her 4th toes bilaterally. They appear to be shortened and overlapping the 5th toes. Radiographs demonstrate disruption of the tarsal parabola and premature closure of the 4th metatarsal physis. You also notice the child to be smaller than average with the short web neck. What condition could this child have ?
- | | | |
|--------------------------|-----------------------|----------|
| A. Klippel Feil syndrome | B. Poland syndrome | C |
| C. Turner's syndrome | D. Sprengel deformity | |
14. A 60 year old man has a fall from standing height and is admitted. He complains of cervico-thoracic back pain. On examination he is in discomfort but neurologically intact. Supine radiographs of the cervico thoracic and lumbar spine are obtained that do not show a fracture. The most appropriate action is which of the following
- | | | |
|--------------------------------|----------------------------|----------|
| A. Mobilise with physiotherapy | B. MRI scan in the morning | C |
| C. Spinal precautions, CT scan | D. Standing X-rays | |
15. The plane developed during the approach for anterior cervical discectomy and fusion (ACDF) is best described as between which of the following
- | | |
|---|----------|
| A. Carotid sheath and sternocleidomastoid | B |
| B. Carotid sheath and pre-tracheal fascia | |
| C. Deep investing layer of cervical fascia and the vertebral fascia | |
| D. sternocleidomastoid and platysma | |
16. A 40 year old patient with the background of ankylosing spondylitis with spinal deformities has arrived in emergency after an RTA at 70 Km/H. He is conscious and speaking. Blood pressure of 90 and heart rate off 120. Which of the following is likely to negatively affect the outcome of this patient
- | | |
|--|----------|
| A. Assess airway and breathing and start high flow oxygen | D |
| B. Pass too large Iv lines and assess for sites of bleeding | |
| C. Trauma CT scan | |
| D. Triple immobilization of the cervical spine with rigid collar | |

17. Which of the following is not a component of thoraco-lumbar injury classification and severity score for thoracolumbar fractures **A**
- A. Canal compromise on axial CT scan B. Injury morphology
C. Neurology D. Widening of interspinous distance
18. Which of the following is a classical finding in lumbar canal stenosis **B**
- A. Pain on walking uphill B. Pain on spinal extension
C. Positive straight leg raise D. Weak pedal pulsation
19. A 24 year old athlete sustains a traumatic dislocation of the left shoulder. Following reduction he is noted to have absent sensation in the deltoid area. Which of the following is most likely to be positive **C**
- A. empty can test B. garber's lift off test
C. hornblower sign D. O'Brien test
20. A patient undergoes an open Latarjet procedure for recurrent shoulder dislocation. A nerve injury most likely to occur during harvesting and preparation of the coracoid graft is most likely to lead to which of the following **D**
- A. absent elbow flexion
B. absent elbow flexion and reduced sensation in lateral forearm
C. reduced sensation in the regimental badge area and weak shoulder abduction
D. weakness of forearm supination
21. Which of the following is not a content of the anterior compartment of the leg **C**
- A. extensor digitorum longus B. extensor hallucis longus
C. peroneus longus D. peroneus tertius
22. Undisplaced distal radius fracture is mostly associated with rupture of which structure **C**
- A. extensor digitorum communis B. extensor indicis proprius
C. extensor pollicis longus D. flexor pollicis longus
23. Regarding traumatic knee dislocation the ankle brachial pressure index is a useful tool for assessing associated vascular injury. What figure is associated with a vascular injury and warrants urgent angiography **D**
- A. <0.6 B. <0.7
C. <0.8 D. <0.9
24. Regarding principles of elastic nailing which of the following is false **C**
- A. apex of the nail crossover should be at the fracture site
B. the diameter of the nail should be 40% of the isthmus diameter
C. the nail diameter should be 60% of the isthmus diameter
D. the nails should be pre bent to 3 times the diameter of the medullary canal
25. Which X ray view will help best assess conservatively treated anterior column pelvic fracture **C**
- A. inlet view B. Judet - iliac oblique view
C. Judet - obturator oblique view D. outlet view
26. 56 year old woman with 6 month history of difficulty extending her ring and middle fingers of both hands after flexing into her palms. She needs to use her opposite hand to straighten the digits and this is associated with pain in her palm at the base of the digits. Which one of the following medical conditions is commonly associated with this pathology **B**
- A. carpal tunnel syndrome B. diabetes
C. hypothyroidism D. Scleroderma

27. Which is the last carpal bone to ossify
- A. Capitate
C. Pisiform
- B. Lunate
D. Trapezium
- C**
28. 76 year old male presents with weakness in his left hand and altered sensation in the little and ring fingers. He has a mild flexible claw deformity of his little and ring fingers. Where is the most likely nerve pathology in his case.
- A. Arcade of Struthers
C. Guyon's canal
- B. cubital tunnel
D. Mid forearm
- B**
29. 45 year old female presents with a recent history of pain at the tip of a right middle finger. She also complains of hypersensitivity to cold stimulus at the tip of the finger. On examination a small mass lesion is palpated in the tip and there is a slight discoloration of the nail bed. What is the most likely diagnosis
- A. glomus tumour
C. mucus cyst
- B. malignant Melanoma of the nail bed
D. osteoid osteoma
- A**
30. The 20 year old male is stabbed in the axilla. Surgical exploration is performed and a bleeding artery is identified and repaired. When does the axillary artery nominally become the brachial artery
- A. At the inferior border off subscapularis
B. at the level of the 4th rib
C. at the lower border of teres minor
D. at the origin of pectoralis minor
- C**
31. Which of the following shoulder muscles are innervated by a nerve that arises from the upper trunk of the brachial plexus
- A. Subscapularis
C. Teres minor
- B. Supraspinatus
D. teres major
- B**
32. During the volar (Henry) approach to the proximal 3rd of the radius, which structure is protected from the field by retracting the supinator muscle radially (laterally) ?
- A. Anterior interosseous nerve
C. radial recurrent artery
- B. posterior interosseous nerve
D. superficial radial nerve
- B**
33. A 65 year old male has been non operatively managed for a distal radial fracture. He had difficulty extending his thumb at the interphalangeal joint with also reduced power extending the thumb and the metacarpophalangeal joint and a tendon rupture is diagnosed. Which extensor compartment does this specific tendon belong to ?
- A. 1
C. 3
- B. 2
D. 4
- C**
34. Regarding Brodie's abscess, which of the following is true.
- A. A well circumscribed cavity that is surrounded by a halo of sclerosis.
B. Brodie's Abscess typically occurs in the diaphysis of the bone
C. pseudomonas is typically found in the Abscess
D. systemic reaction is proportional to the size of the Abscess
- A**
35. Which of the following is incorrect
- A. mycobacteria are seen as bright red with Zeihl-Neelsen stain
B. mycobacterium tuberculosis are acid fast bacilli
C. mycobacterium tuberculosis are obligate aerobes
D. short duration chemotherapeutic treatment is required to minimise the risk of developing resistance
- D**

36. Which of the following is not used as a diagnostic criterion for periprosthetic infection
- A. A sinus tract communicating with the joint
 - B. elevated CRP and ESR
 - C. elevated serum WCC
 - D. positive histologic analysis of periprosthetic tissue
- C**
37. Which of the following statements is incorrect regarding bone tumours
- A. adamantinoma usually occurs in the diaphysis of the tibia
 - B. UBC or ABC usually affect the metaphyseal region
 - C. chondroblastoma typically occurs in the epiphyseal region
 - D. giant cell tumours of the bone are almost always located in the diaphyseal region
- D**
38. Which one of the following amputations involves preservation of the calcaneus which is then fused to the distal tibia
- A. Boyd
 - B. Chopart
 - C. Gritti-Stokes
 - D. Symes
- A**
39. When stabilising mid diaphyseal femoral fracture using an intramedullary nail, locking bolts are passed proximal and distal to the fracture. The main function of these bolts is which of the following
- A. allow for easier Nail extraction
 - B. increase the bending stiffness of the construct
 - C. increase the torsional stiffness of the construct
 - D. reduce the risk of proximal distal nail migration
- C**
40. Polymethyl methacrylate PMMA cement powder contains a polymer and which other substance
- A. Decelerator
 - B. stabilizer
 - C. accelerator
 - D. initiator
- D**
41. 9 year old boy sustains a transverse femoral fracture, which is being managed with elastic nails. All of the following are important principles in maintaining a balanced construct in elastic stable intramedullary nails except.
- A. Avoiding elastic nail in highly comminuted fracture patterns
 - B. bending both nails at the same level
 - C. cutting both nail ends flush with the bone
 - D. using 2 nails of the same material
- C**
42. Proximal Femoral Varus Osteotomy works by all the following factors EXCEPT.
- A. Altering hip biomechanics
 - B. altering the rate of femoral head healing
 - C. forced rest and activity modification dictated by surgery
 - D. load relieving effect of varus angulation
- B**
43. During exploration of the cubital fossa what structure is typically expected to be running ulnar (medial) to the tendon that inserts at the radial tuberosity
- A. Median nerve
 - B. Brachial artery
 - C. radial nerve
 - D. median cubital vein
- B**
44. During the volar (Henry) approach to the proximal 3rd of the radius, which structure is protected from the field by retracting the supinator muscle radially (laterally)
- A. Anterior interosseous nerve
 - B. posterior interosseous nerve
 - C. radial artery
 - D. radial recurrent artery
- B**

45. An open median nerve decompression is performed for carpal tunnel syndrome. What is the structure that is expected to arise between the tendons of palmaris longus and flexor carpi radialis, and course superficial to the flexor retinaculum.
- A. Anterior interosseous nerve
 B. median nerve
 C. palmar cutaneous branch of the median nerve
 D. Recurrent (motor) branch of the median nerve
- C**
46. During the posterior approach to the radial shaft the surgeon identifies and preserves a nerve that passes through and innervates Supinator. What is this specific branch within the supinator muscle.
- A. Deep branch of the radial nerve
 B. deep branch of the ulnar nerve
 C. muscular branches of the ulnar nerve
 D. superficial branch of the ulnar nerve
- A**
47. The surface anatomy of the common femoral artery within the femoral triangle is defined as which of the following
- A. halfway between ASIS and the pubic symphysis
 B. halfway between ASIS and pubic tubercle
 C. 1/3 the distance from the ASIS And pubic symphysis
 D. 1/3 the distance from the ASIS and pubic tubercle
- A**
48. During 2 incision fasciotomy of the posterior compartment of the leg which of the following structures is at risk of injury
- A. anterior tibial vein
 B. deep peroneal nerve
 C. saphenous vein
 D. superficial peroneal nerve
- C**
49. Anterolateral approach incision to the tibial plateau classically crosses which of the following bony landmarks
- A. Fibula head
 B. Gerdy's Tubercle
 C. Intercondylar eminence
 D. neck of the fibula
- B**
50. During the anterior approach to the cervical spine (ACDF) a deep structure is reflected subperiosteally and laterally on each side of the midline to immediately expose the anterior vertebral body. What is the structure
- A. Longus capitis
 B. longus colli
 C. Multifidus
 D. sternocleidomastoid
- B**
51. In the adult the spinal cord usually terminates at which lumbar levels
- A. T12-L1
 B. L1-L2
 C. L2-L3
 D. L3-L4
- B**
52. During spinal anesthesia which structure is typically encountered during this procedure that attaches to adjacent laminae
- A. Supraspinous ligament
 B. intertransverse ligament
 C. ligamentum flavum
 D. posterior longitudinal ligament
- C**
53. Which joint is most commonly affected in osteoarthritis
- A. Hip
 B. Shoulder
 C. Knee
 D. thumb carpometacarpal joint
- C**

54. Which of the following signs is present in lower motor neuron lesions
- A. Hypertonia
C. fasciculation
- B. Hyperreflexia
D. clonus
- C**
55. Which of the following is the first type of immunoglobulin to increase in response to acute infection
- A. IgA
C. IgE
- B. IgM
D. IgG
- B**
56. Which of the following complications is not associated with blood transfusion
- A. Hypercalcaemia
B. Hyperkalemia
C. hemolytic reaction
D. febrile reaction
- A**
57. What is the reason for adding barium sulfate to bone cement
- A. it acts as an accelerator
B. it acts as an inhibitor
C. it acts as a colouring agent
D. it acts as a radio-opacifier
- D**
58. Which metatarsal bears the most weight during gait
- A. First
B. Second
C. Third
D. Fifth
- B**
59. A 15 year old cricket player presents with 6 months history of low back pain. No associated neurological symptoms are present. His blood test results are normal. Radiographs appear normal apart from slight anterior translation of L5 on the sacrum. Which of the following is the most likely diagnosis.
- A. Spina bifida occulta
B. Spondylolysis
C. sacral agenesis
D. Scheurmann's disease
- B**
60. In which area does osteomyelitis usually begin in children
- A. epiphysis
B. Physis
C. Metaphysis
D. Diaphysis
- C**