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| KING SAUD UNIVERSITYCOLLEGE OF MEDICINEDepartment of Orthopedics1. In Cerebral Palsy, involvement of all limbs with arms affected more than legs is known as
	1. Quadriplegia
	2. Diplegia
	3. Hemiplegia
	4. **Double Hemiplegia**
	5. Tetraplegia

 1. X-ray is done in a case of Cerebral Palsy to exclude
	1. Spinal deformity
	2. Hip dislocation
	3. Knee flexion deformity
	4. A & C
	5. **A & B**

 1. Hip adduction deformity in a case of Cerebral Palsy  is best treated by
	1. Adductor tendon lengthening
	2. **Adductor tenotomy**
	3. Orthotic Splint
	4. Osteotomy
	5. A & C

 1. if the fracture in 2 levels of the same bone we call it:
	1. comminuted fracture
	2. compound fracture
	3. spiral fracture
	4. **segmental fracture**

1. One of the following statement is not right for CTEV
	1. Occurs typically in an otherwise normal child
	2. More common in affected families
	3. Male are affected than female
	4. Bilateral cases are as high as 30 – 40 %
	5. **More benign than postural club foot**

 Newly born infant is presented with bilateral Congenital Talipes Equio-Varus1. The diagnosis depends on

**a.**      **Clinical examination**b.      MRI spinec.       X-ray of the feetd.      Ultrasound of the feete.       All of the above 1. Treatment of choice is

a.       Orthotic splint**b.**      **Manipulation and serial casting**c.       Soft tissue surgeryd.      Calcaneal osteotomye.       Leave alone till the age of one year then do surgical correction 1. The equines deformity is:
	1. deviation of the big toe
	2. stiff subtalar joint
	3. **fixed plantar flexion of the ankle**
	4. collapse of the medial arch

 1. the tibialis posterior tendon is:
	1. an inverter of the foot
	2. dynamic protector of the medial arch
	3. passes behind the medial malleolus
	4. **all the above**

  1. pes planus is:
	1. a rare deformity
	2. associated with stretched Achilles tendon
	3. **common in patients with ligaments laxity**
	4. treated always by surgery

**11.**  **The best treatment  of Salter Harris type 2  fracture  at distal tibia is ;** * 1. Closed reduction only
	2. closed reduction and below knee immobilization.
	3. open reduction and screw fixation.
	4. **closed reduction and k-wire fixation.**

  1. **The common  problem of tibia nail is.**

 a.       Nonunion**b.**      **Anterior knee pain**c.       Malunion.d.      Infection. 1. **all  are indications for  surgical treatment of ankle fracture except**

a.       fracture dislocation of ankleb.      weber C fracturec.       bimllealor fractured.      failure to maintain fracturee.       weber B  fracture without talar tilt1. Laboratory investigation for a child with Rickets will reveal
	1. Hypercalcaemia
	2. Hypercalcuria
	3. **High alkaline phosphatase**
	4. Increased thyroid function
	5. Impaired liver function

 1. X-rays of a lady with Osteomalacia may show

a.       Metaphyseal cupping**b.**      **Looser zone**c.       Multiple osteolytic lesionsd.      Increase bone densitye.       None of the above 16.  All of the following are indications for open reduction and internal fixation of humeral shaft fractures **EXCEPT**:f.       Bilateral humeral shaft fracturesg.      Open fractureh.      Unconscious patient**i.**        **Comminuted fracture**j.        Nonunion17.  All are true about anterior shoulder dislocation **EXCEPT**:k.      The initial management is closed reduction and immobilizationl.        Recurrent anterior shoulder dislocations may need surgical interventionm.    May be associated with axillary nerve injuryn.      Represents 95  % of the shoulder dislocations**o.**      **More common in elderly patients**18.  Which is **TRUE** regarding claviclar fractures:p.      The commonest site is the medial one thirdq.      The vast majority of them need surgical fixationr.        Malunion has lead to poor functional outcome**s.**       **The commonest age groups are children and elderly**t.        Commonly associated with shoulder dislocation1. plantar fasciitis is:
	1. rupture of the plantar fascia
	2. chronic heel ulcer
	3. collapse of the transverse arch
	4. **inflammation of the proximal insertion of the plantar fascia**

1. hallux rigidus is:
	1. lateral deviation of the big toe
	2. medial deviation of the hallux joint
	3. **osteoarthritis of the first metatarso-phalangeal joint**
	4. stifness of the ankle joint

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21.When data are combined from smaller studies into a larger sample size, which can then be statistically evaluated in a more robust fashion than the smaller samples, the following term is applied

* 1. prospective study
	2. case-control study
	3. cohort study
	4. **meta-analysis**
	5. double-blind clinical trial

22. One of the following statements in the patellofemoral joint reaction force (PJRF) is not correct

* 1. PJRF is the force compressing the patella against the femur
	2. PJRF becomes greater with increasing quadriceps tension activity
	3. PJRF becomes greater with increased knee flexion
	4. **during squatting, PJRF increases to twice body weight**
	5. in the weight-bearing leg, PJRF increases on climbing stairs

23. In TBI subjects the Functional Independence Measure (FIM) is inadequate in which of the following areas:

* 1. **neuropsychological**
	2. self care
	3. sphincter control
	4. mobility
	5. locomotion

24. Which among the following statements concerning the Barthel index is incorrect?

* 1. It allows comparison between services
	2. It has predictive value
	3. **It takes cognitive function into account**
	4. It assesses 10 aspects of daily life
	5. Its validity has been studied extensively

25. In cervical spine disorders a cervicothoracic stabilisation programme is designed to limit pain,maximize function and prevent further injury. Which of the following treatment modalities should not be included in this rehabilitation programme?

* 1. postural training
	2. **eccentric isokinetic exercises of the neck extensors**
	3. training and coordination of the muscles in the neck area
	4. isometric and isotonic resistance exercises of the cervicothoracic muscles
	5. proprioceptive feedback

26. Posttraumatic Myositis Ossificans (PMO) is a complication that can develop after a muscular contusion. Which of the following statements is incorrect?

* 1. myositis ossificans is the formation of non-neoplastic cartilage or bone in connective tissue and muscle
	2. the quadriceps muscle is the most common site of involvement
	3. **PMO can be seen within 1 week on plain radiographic films**
	4. early detection is most sensitive with bone scan or ultrasonography
	5. active PMO tends to stabilize in size in 3 to 6 months

27. Which of the following treatments is ineffective in longstanding plantar fasciitis in a young man?

* 1. Local injection of hydorcortisone
	2. Immobilisation of the foot and ankle
	3. Protective heel insoles
	4. **Iontophoresis**
	5. Extracorporal short wave therapy

28. Which one of the following features is not characteristic of a fibromyalgia syndrome?

* 1. Diffuse muscle discomfort and pain are found
	2. A disturbed, non restful sleep is found
	3. Multiple discrete areas of localised tenderness are found
	4. Gastro-intestinal symptoms are often present
	5. **The symptoms are accentuated by warmth**

29. The surgeon asks your advice for a 25-year old carpenter with a severe trauma of the non-dominant hand and wrist. Surgical limb salvage is considered to be impossible. Which one is the correct advice to the surgeon?

* 1. **a long forearm residual limb is preferred because an optimal body-powered prosthetic restoration is the goal**
	2. a long forearm residual limb is preferred because an optimal externally powered prosthetic restoration is the goal
	3. a short transradial level is preferred because an optimal body-powered prosthetic restoration is the goal
	4. a short transradial amputation does not limit elbow flexion strength
	5. the long, medium and short transradial amputation levels require the same rehabilitation levels and prosthetic components and therefore the surgeon is allowed to decide on the level himself

30. Which of the following is not true in spasticity following traumatic brain injury (TBI) ?

* 1. **spasticity of cerebral origin characteristically presents with lesser extensor tone in the lower extremities and more tendency to spasms compared with spinal cord spasticity**
	2. Diazepam and oral baclofen are recommended for spasticity
	3. liver enzymes need to be monitored when using Dantrolene sodium
	4. splinting techniques can be used both to decrease tone and to stretch soft tissues
	5. Botulinum toxin A is recommended for focal spasticity

31. Which of the following statements is not correct regarding the prognosis of traumatic brain injury

* 1. duration of post-traumatic amnesia is a good indicator
	2. school age children and young adults achieve better outcomes than infants or older adults (> 45 years)
	3. one or both non-reactive pupillary light reflexes is associated with a poorer outcome
	4. combined severe musculo-skeletal injuries predict worse outcomes
	5. findings on CT scan of the brain are more sensitive comparedto MRI **as good predictor of outcome following severe traumatic brain injury**

32. What initial action should one take for a paraplegic patient suddenly presenting with increased spasticity?

* 1. Intensify rehabilitation
	2. Rapidly increase the dose of antispastic medication
	3. Diminish the ambient temperature of the patient’s room
	4. **Carry out a complete clinical examinaton**
	5. Measure the alkaline phosphatase

33. Which of the following is not a potential complication of tracheostomy ventilation?

* 1. increased risk of respiratory tract infection
	2. tracheal stenosis
	3. **paralysis of the posterior aspect of the palate**
	4. trache-oesophageal fistula
	5. swallowing problems

34. An orthopaedic surgeon refers a man (age 59 years) who complains of bilateral calf pain after walking 500 a 600 metres. The pain subsides when the patient stops walking. Lower extremity pulses are normal, as is the rest of the physcial examination. Computed tomography scan, lumbosacral spine films and electromyogram are within normal limits. Non-invasive vascular studies only reveal an ankle-to-brachial ratio of 0.75. You recommend :

* 1. Consideration of trans tibial amputation
	2. Angiography of vessels in the lower extremity
	3. Referral to vascular surgery for vascular bypass
	4. **Health education and a rehabilitation program**
	5. Venography to rule out thrombophlebitis

35. All of following diagnostic tests can be used to determine organic versus psychological sexual dysfunction, except one:

* 1. Sacral evoked response study
	2. **Test with tricyclic antidepressants**
	3. Cysto manometry
	4. Corpus cavernosometry
	5. Intracavernosal injection of vaso active agents

## CLINICAL CASE

36. An athlete complains for 3 months of pain induced only by athletic activity, often arising at a precise point in the training session. The pain is located at the anterior aspect of the lower leg, with pain during stretch of the toe and ankle dorsal flexors in inversion. There is a slight weakness in the tibialis anterior and extensor digitorum longus muscles. There is also some numbness in the dorsal first cleft of the toes. X-ray of the lower leg is normal.
At this stage which of the following examinations is indicated:

* 1. Arteriography of the lower extremity
	2. Venography of the lower extremity
	3. Radio-isotope bone scan of the lower extremity
	4. **Anterior tibial compartment pressure measurement**
	5. MRI of the lower leg

37.The most likely diagnosis in this case of leg pain is

* 1. Periostitis
	2. Thrombophlebitis
	3. **Chronic compartment syndrome**
	4. Stress fracture
	5. Compression neuropathy of the superficial peroneal nerve

38. Which of the following conditions is unlikely to produce anterolateral leg pain

1. Periostitis of the fibula
2. Fibular stress fracture
3. Peroneal nerve entrapment
4. Fascial defect with muscle herniation
5. **Popliteal artery entrapment syndrome**

39. One month later he complains of a sudden increase in pain causing him to stop running. The pain itself is out of proportion to the clinical situation. Passive stretching of the anterior leg muscles precipitate excruciating pain and an inability to generate a significant contraction due to pain inhibition. There is also a slight decrease of the dorsalis pedis artery pulse. At this moment one of the following investigations is necessary:

1. Venography of the lower extremity
2. Electromyography of the lower extremity
3. **Anterior compartment pressure measurement of the lower leg**
4. CT-scan of the lower leg
5. Echography of the lower leg

40. Some hours later, due to inadequate management, muscular weakness and sensory loss increases. This is in association with intractable pain. The pulse is again decreased. The following urgent treatment is indicated:

1. **Surgical decompression of the anterior compartment (fasciectomy)**
2. Compression bandage
3. Ca Exploration of the peroneal nerve
4. Thrombectomy
5. st immobilisation of the lower leg

**41.Fracture of neck of femur in children best treatment:**

a.    Russell's traction.

b.    Plaster spica in abduction

c.    Plaster spica in adduction

**d.    Open reduction**

e.    Skeletal traction

**42.**    **In adult non displaced fracture femur best treatment is:**

1. **ORIF.**
2. Skeletal traction.
3. Cylinder cast.
4. Hip spica.
5. Percutaneous pinning

**43.**    **Traumatic ulnar nerve injury commonly at:**

     a.   Mid shaft humerus.

     b.   Lateral humeral condyle.

     c.   Mid shaft ulna.

     d.   Ulnar styloyleid

1. **Medial humeral condyle**

**44.**    **Above knee cast is the treatment of choice in:**

 a.  **10 degree angulated of both bones in children.**

b.    Open fracture.

      c.  Compartment syndrome.

b.    Complete tendon Achilles tear.

            e.   Septic arthritis of the knee.

**45.**    **8 Years old boy presented in the clinic due to pain lower thigh after minor trauma. X-Ray showed osteolytic lesion lower femur with sun ray appearance. The investigation needed to assess the conditions:**

  a.  Bone scan.

b.    CT scan and MRI.

c.    Bone biopsy.

d.    **All of the above.**

e.    (b) and (c)

**46.Tuberculosis of the spine**, **Investigation will demonstrate**:

1. Normal ESR.
2. **Radiological evidence of destruction of the affected vertebral bodies.**
3. Normal bone (technetium) scans.
4. Polymorphonuclear leucocytosis.
5. All of the above.
6. **Initial treatment of choice in TB spine without paraplegia is**:
7. **Chemotherapy and rest.**
8. Laminectomy.
9. Immediate surgical exploration.
10. Aspiration of pus.
11. Bed rest only.

**A one and half-year old girl presented in the emergency room with clinical evidence of acute septic arthritis of her right hip**.

**48. The gait in this patient will reveal**:

1. Trendelenburg gait.
2. Waddling gait.
3. **Antalgic gait.**
4. Normal gait.
5. Non of the above.

**49. Physical examination will demonstrate**:

1. Full abduction of the both hips.
2. Shortening of right lower limb.
3. Abnormal thigh creases.
4. **Gross limitation of right hip motion.**
5. Non of the above.

**50. The treatment of choice for this child is**:

1. Skeletal traction.
2. Skin traction and rest followed by hip spica.
3. **Intravenous antibiotics and possible surgery.**
4. Observation.
5. Non of the above.

**A 25-year-old patient presented in the clinic with established non-union of the tibia for the last two years.**

**51. In such patient, the presenting features will be**:

1. Pain at rest.
2. Severe bony tenderness at the non-union site.
3. Radiographic sclerosis and narrowing of the bony ends in hypertrophic non-union.
4. Only a) and c).
5. **Non of the above.**

**52. The common cause of this problem is/are**:

1. Inadequate immobilization of the fracture.
2. Soft tissue interposition at the fracture site.
3. Poor blood supply at the fracture site.
4. **All of the above.**
5. Only a) and b).

**53. The treatment of choice for this problem is**:

1. Skeletal traction followed by cast immobilization.
2. **Open reduction and internal fixation with bone grafting.**
3. External fixation alone.
4. All of the above.
5. Non of the above.

**A 75-year-old lady was admitted to the hospital following a fall. Her radiograph of the right hip joint demonstrated undisplaced intracapsular fracture of the femoral neck**.

**54. Treatment of choice for her will be:**

1. Skin traction.
2. Hip spica immobilization.
3. Skeletal traction on Thomas splint.
4. **Open reduction and internal fixation.**
5. Hip replacement.

**55. The common complications of this fracture are**:

1. Deep vein thrombosis.
2. Delayed union and nonunion.
3. Avascular necrosis of the femoral head.
4. **All of the above.**
5. Only (b) and (c).