

Multiple Choice Questions

1 . 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

- a. prospective study
- b. case-control study
- c. cohort study
- d. meta-analysis
- e. double-blind clinical trial

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

- a. PJRF is the force compressing the patella against the femur
- b. PJRF becomes greater with increasing quadriceps tension activity
- c. PJRF becomes greater with increased knee flexion
- d. during squatting, PJRF increases to twice body weight
- e. in the weight-bearing leg, PJRF increases on climbing stairs

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

- a. neuropsychological
- b. self care
- c. sphincter control
- d. mobility
- e. locomotion

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

- a. It allows comparison between services
- b. It has predictive value
- c. It takes cognitive function into account
- d. It assesses 10 aspects of daily life
- e. Its validity has been studied extensively

5. 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?

- a. postural training
- b. eccentric isokinetic exercises of the neck extensors
- c. training and coordination of the muscles in the neck area
- d. isometric and isotonic resistance exercises of the cervicothoracic muscles
- e. proprioceptive feedback

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

- a. myositis ossificans is the formation of non-neoplastic cartilage or bone in connective tissue and muscle
- b. the quadriceps muscle is the most common site of involvement

- c. PMO can be seen within 1 week on plain radiographic films
- d. early detection is most sensitive with bone scan or ultrasonography
- e. active PMO tends to stabilize in size in 3 to 6 months

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

- a. Local injection of hydrocortisone
- b. Immobilisation of the foot and ankle
- c. Protective heel insoles
- d. Iontophoresis
- e. Extracorporeal short wave therapy

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

- a. Diffuse muscle discomfort and pain are found
- b. A disturbed, non restful sleep is found
- c. Multiple discrete areas of localised tenderness are found
- d. Gastro-intestinal symptoms are often present
- e. The symptoms are accentuated by warmth

9. 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?

- a. a long forearm residual limb is preferred because an optimal body-powered prosthetic restoration is the goal
- b. a long forearm residual limb is preferred because an optimal externally powered prosthetic restoration is the goal
- c. a short transradial level is preferred because an optimal body-powered prosthetic restoration is the goal
- d. a short transradial amputation does not limit elbow flexion strength
- e. 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

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

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

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

- a. duration of post-traumatic amnesia is a good indicator
- b. school age children and young adults achieve better outcomes than infants or older adults (> 45 years)

- c. one or both non-reactive pupillary light reflexes is associated with a poorer outcome
- d. combined severe musculo-skeletal injuries predict worse outcomes
- e. findings on CT scan of the brain are more sensitive compared to MRI as good predictor of outcome following severe traumatic brain injury

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

- a. Intensify rehabilitation
- b. Rapidly increase the dose of antispastic medication
- c. Diminish the ambient temperature of the patient's room
- d. Carry out a complete clinical examination
- e. Measure the alkaline phosphatase

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

- a. increased risk of respiratory tract infection
- b. tracheal stenosis
- c. paralysis of the posterior aspect of the palate
- d. trache-oesophageal fistula
- e. swallowing problems

14. 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 physical 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 :

- a. Consideration of trans tibial amputation
- b. Angiography of vessels in the lower extremity
- c. Referral to vascular surgery for vascular bypass
- d. Health education and a rehabilitation program
- e. Venography to rule out thrombophlebitis

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

- a. Sacral evoked response study
- b. Test with tricyclic antidepressants
- c. Cysto manometry
- d. Corpus cavernosometry
- e. Intracavernosal injection of vaso active agents

CLINICAL CASE 1

1. 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:

- a. Arteriography of the lower extremity

- b. Venography of the lower extremity
 - c. Radio-isotope bone scan of the lower extremity
 - d. Anterior tibial compartment pressure measurement
 - e. MRI of the lower leg
2. The most likely diagnosis in this case of leg pain is
- a. Periostitis
 - b. Thrombophlebitis
 - c. Chronic compartment syndrome
 - d. Stress fracture
 - e. Compression neuropathy of the superficial peroneal nerve
3. Which of the following conditions is unlikely to produce anterolateral leg pain
- a. Periostitis of the fibula
 - b. Fibular stress fracture
 - c. Peroneal nerve entrapment
 - d. Fascial defect with muscle herniation
 - e. Popliteal artery entrapment syndrome
4. 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:
- a. Venography of the lower extremity
 - b. Electromyography of the lower extremity
 - c. Anterior compartment pressure measurement of the lower leg
 - d. CT-scan of the lower leg
 - e. Echography of the lower leg
5. 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:
- a. Surgical decompression of the anterior compartment (fasciectomy)
 - b. Compression bandage
 - c. Cast immobilisation of the lower leg
 - d. Exploration of the peroneal nerve
 - e. Thrombectomy

Correct answers - Réponses correctes

1	D
2	D
3	A
4	C
5	B
6	C
7	D
8	E
9	A
10	A
11	E
12	D
13	C
14	D
15	B
16	D
17	C
18	E
19	C
20	A