CLINIQUEZ

PAIN

Pain management is truly a complex process and it starts with understanding of very different pathophysiologic processes involved in the causation of the pain. Our knowledge has compounded manifold during the recent past and extensive experimentation has been carried out throughout the world but still many aspects of pain etiology remain obscure. Here are ten MCQ’s to test your current knowledge about pain. The answers are given at the end. Select one best answer.

1. History and physical examination frequently leaves which two possible etiologies of hip pain in the child?
   (a) congenital anomalies and trauma
   (b) infection and inflammation
   (c) trauma and neoplasm
   (d) psychological and neoplastic

2. Which of the following is part of the required characteristics for the diagnosis of sacroiliac (SI) joint syndrome?
   (a) SI joint region pain with radiation to the groin, medial buttocks and/or posterior thigh
   (b) pain not reproduced by physical examination techniques
   (c) partial pain relief by local anesthetic injection
   (d) morphologically normal joint with demonstrable pathognomonic radiographic abnormalities.

3. Chronic widespread pain is defined as:
   (a) persistent lower extremity pain of 6 months or greater duration
   (b) persistent pain in 2 contra-lateral quadrants and the axial skeleton of at least 3 months duration
   (c) the antithesis of posttraumatic stress disorder (PTSD)
   (d) an antonym for fibromyalgia

4. Which of the following is NOT one of the facets of neuroticism?
   (a) anxiety
   (b) depression
   (c) strictly regimented
   (d) vulnerability

5. One possible pathomechanism thought to cause trigeminal neuralgia is:
   (a) dilatation of the superior or anteroinferior cerebellar artery
   (b) microvascular compression of the superior or anteroinferior cerebellar artery
   (c) synaptic communication between a-ß fibers and c-fibers
   (d) serotonin receptor inhibition

6. Assessing pain in babies is difficult because of all the following, EXCEPT:
   (a) the absence of self-report
   (b) limited behavioral expression
   (c) non-specific physiological responses
   (d) hypertension and tachypnea
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7. Moderate to high levels of psychopathology in association with discogenic low back pain resulted in what observed rate of analgesia from placebo (IV saline) injection?
(a) 3 times
(b) equal
(c) one-half the rate
(d) 1.5 times

8. Extrapolation of the results of this study toward the general migraine population is hindered due to:
(a) inconsistent dosing regimens
(b) synergy of rizatriptan with OTC medications
(c) the exclusion of 30% of enrolled patients from the data analysis
(d) the randomized nature of the test's design

9. As a result of the preincisional paravertebral block, IV opioid consumption was decreased by what percent?
(a) 5%
(b) 25%
(c) 40%
(d) 67%

10. Which of the following is NOT a measurable category for IM capsaicin-produced pain sensation?
(a) spontaneous pain
(b) allodynia
(c) hyperalgesia
(d) cyclooxygenase enzyme suppression

ANSWERS
1. b. Children who have hip pathology can present in different ways including complaints of pain, refusal to bear weight, limp or abnormal gait, or decreased movement of the lower extremity. A history of trauma guides the physical examination and imaging studies to look for fractures, dislocations, muscle strains, and joint sprains. History and physical examination frequently reveal infection or inflammation as leading possibilities as the etiology of hip pain.

2. a. Sacroiliac (SI) joint syndrome refers to the phenomenon of pain emanating from the SI joint without a readily demonstrable pathology such as spondyloarthropathy or crystal or pyrogenic arthropathy. The etiology of the pain is believed to be mechanical in origin. To be defined as having SI syndrome, patients must possess all of the following characteristics: 1) pain in the region of the SI joint, with radiation to the groin, medial buttocks, and posterior thigh; 2) reproduction of pain by physical examination techniques that stress the joint; 3) complete elimination of pain with intra-articular injection of local anesthetic; 4) an ostensibly morphologically normal joint without demonstrable pathognomonic radiographic abnormalities. Etiologic factors
implicated in the genesis of SI syndrome include trauma, cumulative injury, previous back surgery, or idiopathic causes.

3. Chronic widespread pain (CWP) is a common problem in the general population, with an estimated prevalence of 7-13% across different countries. CWP is defined as pain present in at least 2 contra-lateral body quadrants and the axial skeleton that has persisted for at least 3 months. Many believe that CWP and fibromyalgia (FM), a severe form of CWP, represent one end of the spectrum of musculoskeletal pain disorders. Clinic-based studies have shown that posttraumatic stress disorder (PTSD) and CWP, persistent pain, or FM were strongly associated, but the link was potentially attributable to the biases inherent in using clinical samples.

4. Neuroticism is defined as a tendency to experience negative emotions in stressful situations. Studies have consistently reported positive associations between neuroticism and the experience of pain. The relation between neuroticism and pain is often explained in terms of overreporting of pain-related complaints and exaggerated expression of disturbance. Neuroticism has 6 facets: anxiety, impulsivity, depression, self-consciousness, irritability, and vulnerability.

5. Trigeminal neuralgia is a recurrent severe shooting neuropathic pain in the area of the trigeminal nerve, which can be triggered by light stimuli such as touching, chewing, talking, and tooth brushing. The neuropathic etiology of trigeminal neuralgia is now generally accepted. Although the exact pathomechanism is unknown, it is thought that trigeminal neuralgia is caused by microvascular compression, which occurs most often at the loop of the superior or anteroinferior cerebellar artery, near the root entry zone of the trigeminal nerve. Pathologic contacts between a-β fibers and e-fibers are believed to occur due to arterial compression in the root entry zone. This hypothesis is consistent with the fact that antiepileptic drugs also provide pain relief, and is supported by recent neuroimaging data.

6. Appropriate and accurate assessment of ongoing pain is a critical element in deciding the need for and adequacy of analgesic and sedative medication. The absence of self-report in preterm infants, their limited behavioral expression, and non-specific physiological responses exacerbate the difficulties of pain assessment in babies.

7. Injections are powerful placebos and this report's findings indicate that this is more so the case in those with psychopathology. Patients with discogenic low back pain and moderate or high levels of psychopathology were found to have three times the rate of analgesia to an IV saline injection compared to a matched group with low levels of psychopathology. Similar to previous studies, higher baseline pain ratings were associated with elevated levels of depression or anxiety, or a neuropathic quality to pain. There is a possibility that there is an interaction between psychopathology level and neuropathic pain qualities.

8. A multicenter, prospective, open-label, two-way crossover study was carried out by Bell CF et al, to compare time to pain freedom and onset of pain relief with rizatriptan 10 mg and prescription usual-care oral medications in the acute treatment of migraine headaches: Extrapolation of the study findings to the general migraine population may be limited by the fact that 36.5% of the enrolled patients were not included in the data analysis.

9. Paravertebral block (PVB) can be used as the sole anesthetic technique for breast surgery, but today, PVB is used before or after the induction of general anesthesia to provide postoperative analgesia after breast surgery. Preincisional PVB with bupivacaine provided significant immediate postoperative analgesia, reducing the consumption of IV opioid by 40% in the postanesthesia care unit. The correlation between the consumption of the rescue analgesics during the first 14 postoperative days and pain at rest, and any pain in the axilla 12 months after surgery is in accordance with the concept that significant early postoperative pain predisposes to chronic pain symptoms.

d. Administration of 1M capsaicin can produce a pain sensation that manifests as changes in 5 measurable categories: 1) spontaneous pain, 2) allodynia, 3) hyperalgesia, 4) neurogenic inflammation, and 5) referred pain.