

1. The perception of pain and painful stimuli differ in men and women because:

- A. The affective component of pain is more pronounced in men
- B. Painful stimuli activate different pain receptors in men and women
- C. Neuroimmune signaling uses alternate pathways and cell types in men and women
- D. Painful stimuli are processed in different brain centers in men and women

2. How do testosterone and estradiol (E2) interact with the perception of pain?

- A. Testosterone enhances the perception of pain, while estradiol diminishes it
- B. Testosterone diminishes the perception of pain, while estradiol enhances it
- C. Testosterone might either diminish or enhance the perception of pain, while estradiol has no effect on pain
- D. Testosterone diminishes the perception of pain, while estradiol might either enhance or diminish the perception of pain

3. The steps in pain signaling from initiation to conclusion are:

- A. Transmission, transduction, modulation, and perception
- B. Transduction, transmission, modulation, and perception
- C. Transmission, modulation, transduction, and perception
- D. Transduction, modulation, transmission, and perception

4. Which of the following receptor–ligand pairs used in pain signaling is incorrect:

- A. Glutamate–N-methyl-D-aspartate (NMDA)
- B. Glutamate–amino-3-hydroxy-5-methyl-4-isoxazole propionate (AMPA)
- C. Substance P–Neurokinin-1(NK1)
- D. Brain-derived neurotrophic factor (BDNF)–amino-3-hydroxy-5-methyl-4-isoxazole propionate (AMPA)

5: Budapest criteria can be used to diagnose complex regional pain syndrome type 1 and 2. Per Budapest criteria, which of the following is incorrect?

- A. Pain is not proportional to the inciting event
- B. Another condition could explain the patient's pain presentation
- C. There is at least one symptom in 3 of the following 4 categories: sensory, vasomotor, edema, and motor
- D. All the above

6: A 16-year-old male presents to the emergency department 3 weeks after an ORIF of the right tibia with 9/10 pain and is unable to tolerate light touch or putting on socks/wearing shoes. What is the most likely diagnosis in this patient given the information presented in the question stem?

- A. CRPS Type 1
- B. CRPS Type 2
- C. Causalgia
- D. Both B and C

7: A 62-year-old active female suffered a ski injury resulting in a tibial plateau fracture. She underwent an open reduction and internal fixation. At 6 weeks follow up, she developed severe pain affecting the limb and skin color changes with edema. In addition to symptomatic pain management, which of the following would be the most appropriate next step in the management of her condition?

- A. Bed rest
- B. Prescription of oxycodone
- C. Physical therapy
- D. Lumbar sympathetic block

8: The trigeminal nerve gives rise to each of following nerves EXCEPT:

- A. Supraorbital nerve
- B. Infraorbital nerve
- C. Mental nerve
- D. Greater auricular nerve

9: Which of the following statements is false?

- A. The skin of the temporal region is innervated by the greater auricular nerve
- B. The sensory distribution of the supraorbital nerve includes the forehead, upper eyelid, nose, and anterior scalp
- C. The infraorbital nerve supplies sensation to the lower eyelid, lateral nares, anterior cheek, and upper lip
- D. The temporomandibular joint is innervated by the auriculotemporal nerve

10: All the following statements are true except:

- A. The supraorbital notch is a landmark for guiding the supraorbital nerve block
- B. The infraorbital foramen is used to guide the infraorbital nerve block
- C. The foramen rotundum is a landmark for auriculotemporal nerve block
- D. The sternocleidomastoid muscle can be used to guide greater auricle nerve block

11: Elderly patients in which of the following groups are most likely to be undertreated for pain?

- A. Men
- B. Women
- C. Patients with cognitive impairment
- D. Patients with degenerative bone and joint disorders

12: A 64-year-old woman presents to your clinic with a 5-month history of upper back pain. Upon palpation of tight trapezius muscle, you notice a point near the right base of her neck that causes sharp/radiating pain to the upper back. Social history is significant for a 6-year pack history and working as a secretary for 30 years. What diagnosis is most likely?

- A. Tension headache
- B. Myofascial pain disorder
- C. Fibromyalgia
- D. Ankylosing Spondylitis

13: A 44-year-old Caucasian female presents to your clinic with 6-months history of widespread body aches, difficulty falling asleep, and depressed mood. She says 'everything hurts and she spends most days in her bed'. She has undergone an extensive rheumatologic workup which failed to show any pathology. What is most appropriate next step in management?

- A. SSRI
- B. NSAIDs
- C. Physical therapy
- D. Full agonist opioids

14: The ideal laboratory test to diagnose fibromyalgia would include:

- A. CBC
- B. TSH
- C. ESR
- D. None of the above

15: Some of the criteria used to diagnose fibromyalgia, include:

- A. Widespread Pain Index, Symptom Severity Scale
- B. Widespread Pain Index, Cognitive Impairment Assessment
- C. Symptom Severity Scale, Bird/Word Criteria
- D. Bird/Word Criteria, Widespread Pain Index
- E. None of the above

16: A 30-year-old female presents for an initial evaluation of low back pain. The patient has a longstanding history of low back pain that is intermittent and waxes and wanes dependent on activity. She reports a history of discogenic low back pain. Which of the following presentations would most likely correlate with her known diagnosis?

- A. Pain worse with walking and standing
- B. Pain aggravated by transitions (sitting to standing)
- C. Pain relieved by sitting and forward flexion
- D. Pain worse with coughing/sneezing, sitting, bending

17: A 20-year-old patient presents to a clinic with axial low back pain that is consistent with discogenic pain. The patient has chronic pain and has failed to improve after 6 months of conservative measures. The patient has a benign exam and there are no red flags on history. Which modality of spine imaging would be most appropriate to evaluate this patient for advanced interventional pain procedures?

- A. MRI of the lumbar spine without contrast
- B. MRI of the spine with and without contrast
- C. CT scan of the lumbar spine
- D. CT myelography

18: Which of the following symptoms is not consistent with the diagnosis of trigeminal neuralgia?

- A. Attacks are paroxysmal
- B. Numbness in the maxillary distribution
- C. Symptoms are one-sided
- D. Pain provoked by light touch

19: Which of the following is the least appropriate treatment option for myofascial pain syndrome in a patient without any history of generalized anxiety or mood disorder?

- A. Cognitive Behavioral Therapy (CBT)
- B. Massage therapy
- C. Muscle Strengthening
- D. Trigger Point Injections

20: A 35-year-old male is following up after successful treatment for discogenic low back pain with physical therapy, pharmacologic and procedural interventions. He has almost complete resolution of the acute symptoms. The patient wishes to return to work after 3 months but is worried he will have an exacerbation of pain and has been avoiding certain activities. Which of the following is most likely to reduce disability for this patient?

- A. Return to work without restriction and prescribe anxiolytic
- B. A combination treatment of physical therapy and epidural injections
- C. Referral for psychotherapy and return to full activity
- D. Fear avoidance education with controlled exposure to aggravating activities when returning to work

21: A 86-year-old female with a past medical history of CAD, COPD with O₂ dependency presents with a 1-year history of paroxysmal pain in the right maxillary distribution that is triggered by light touch. She has failed medication management. Which of the following interventions is the most appropriate next step?

- A. Cognitive behavioral therapy
- B. Glycerol Rhizolysis of the gasserian ganglion
- C. Microvascular decompression
- D. Diagnostic or therapeutic nerve block

Question 22: A 60-year-old male with a past medical history of CAD, HTN, and trigeminal neuralgia presents to the ED with a new-onset altered mental status. His current medication list includes aspirin, amlodipine, and recently started carbamazepine for trigeminal neuralgia. He denies any recent alcohol or illicit drug use. Which of the following is most likely the cause of his altered mental status?

- A. Hyperglycemia
- B. Hypoglycemia
- C. Hyponatremia
- D. Hyponatremia

23: Which of the following are most likely to occur after a successful lumbar sympathetic block?

- A. Motor deficits including lower extremity weakness
- B. Numbness of the lower extremity
- C. Increased temperature of the lower extremity
- D. Hypertension

24: Which structures are innervated by the hypogastric plexus?

- A. Distal esophagus to mid transverse colon, liver, adrenals
- B. Kidney, ureters
- C. Descending/sigmoid colon, proximal rectum, vaginal fundus, bladder, prostate, uterus, ovaries
- D. Perineum, distal rectum and anus, distal urethra, vulva, distal vagina

25: Which of the following best describes the superior hypogastric plexus?

- A. The plexus carry sympathetic afferents that arise from S2-S4
- B. The plexus lies over the mid sacrum
- C. The iliac artery and vein lie just posterior to the plexus
- D. The plexus cannot be accessed from a transdiscal approach