



## EDRA sample MCQ questions

### 1. A sciatic nerve block was performed using ultrasound guidance with a low-frequency (2-5 Mhz) transducer. The ultrasound appearance of the sciatic nerve and its direct surroundings change from proximal to distal

Please evaluate the following statements as true or false:

- A. A decrease of neural tissue between the proximal and distal regions of the sciatic nerve is seen (true/false)
- B. The highest percentage of neural tissue inside the epineurium is seen in the midgluteal region (true/false)
- C. The largest amount of adipose and connective tissue surrounding the sciatic nerve is observed in the popliteal region (true/false)
- D. The ratio of neural to non-neural tissue changes significantly from 5:1 (midgluteal and subgluteal) to 1:1 (midfemoral and popliteal) (true/false)
- E. Not all neural tissue of the sciatic nerve is visualized by ultrasound using a low frequency ultrasound transducer (true/false)

### 2. Regarding the obturator nerve

Please evaluate the following statements as true or false:

- A. The obturator nerve forms in the lumbar plexus from the anterior primary rami of L2-L4 roots and descends to the pelvis in the iliacus muscle (true/false)
- B. The anterior branch of the obturator nerve provides the sole motor innervation to all the adductor muscles (true/false)
- C. The posterior branch lies between the fascial planes of the adductor longus and adductor magnus muscles (true/false)
- D. Successful obturator nerve block is indicated by complete loss of adductor muscle strength in that limb (true/false)
- E. Indications to perform an obturator nerve block include prevention of thigh adduction during transurethral bladder surgery (true/false)

### 3. Opioids are the most commonly used drug for peri-operative pain treatment

Please evaluate the following statements as true or false:

- A. Morphine is predominately metabolized by glucuronidation (true/false)

- B. Morphine-3-glucuronide is an active metabolite (true/false)
- C. Reduced hepatic blood flow and enzymatic function in elderly do not necessarily affect sensitivity to morphine (true/false)
- D. Hepatic enzyme systems are fully developed in neonates and premature infants (true/false)
- E. Clearance of morphine is determined by blood flow to the liver and not by enzyme function (true/false)

**4. A 67-year old female patient complains of postoperative footdrop after a combined femoral-sciatic nerve block for total knee replacement**

Please evaluate the following statements as true or false:

- A. Damage to the tibial nerve during the performance of the sciatic nerve block (true/false)
- B. Correction of a severe valgus deformity during surgery (true/false)
- C. Correction of flexion contractures during surgery (true/false)
- D. Risk is increased in patients with osteoarthritis compared to rheumatoid arthritis (true/false)
- E. A tourniquet time greater than 120 minutes (true/false)

**5. Regarding epidural space**

Please evaluate the following statements as true or false:

- A. Epidural space lies between dura and arachnoid mater (true/false)
- B. Epidural space extends from the base of the skull to the sacral hiatus (true/false)
- C. Posterior dura is heavily innervated by nerves, whereas anterior dura is poorly supplied (true/false)
- D. Both periosteum and ligamentum flavum are pain sensitive (true/false)
- E. The negative (subatmospheric) pressure of the epidural space in the thoracic and cervical regions is increased in the sitting position (true/false)

**Answers:**

**1.**

- A. True
- B. True
- C. True
- D. False
- E. True

**Reasoning for false statements & comments:**

- D. 2:1 vs 1:1

**2.**

- A. False
- B. False
- C. False
- D. False
- E. True

**Reasoning for false statements & comments:**

- A. Psoas muscle
- B. Adductor magnus also has sciatic innervation
- C. The posterior branch lies between the adductor brevis and adductor magnus muscles
- D. The ischial head of adductor magnus should still be able to adduct

**3.**

- A. True
- B. False
- C. False
- D. False
- E. True

**Reasoning for false statements & comments:**

- B. Inactive, M6G is the active metabolite
- C. Reduction in hepatic blood flow and enzymes may lead to enhanced sensitivity or prolonged effects of morphine
- D. Hepatic enzyme systems are immature in neonates and premature infants, allowing for morphine and its two main metabolites to accumulate, with rapid toxicity because of poor drug clearance

**4.**

- A. False
- B. True
- C. True
- D. False
- E. True

**Reasoning for false statements & comments:**

- A. A footdrop is caused by Common peroneal nerve injury
- D. Patients with rheumatoid arthritis have an increased risk of postoperative CPN palsy (up to 9.5%) compared with patients with osteoarthritis

5.

A. False

B. True

C. False

D. False

E. True

**Reasoning for false statements & comments:**

A. Between dura mater and walls of vertebral canal

C. Anterior dura is heavily innervated - posterior dura has a poor nerve supply

D. Ligamentum flavum is not pain sensitive