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Questions and answers

Preguntas y respuestas

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1. The following findings were derived from the systematic review by Oliveros et al,¹ on the perioperative use of levosimendan in heart surgery:

- According to high-quality studies, the use of levosimendan in patients undergoing cardiovascular surgery has positive effects, reducing 30-day mortality.
- There was a protective effect on postoperative renal failure requiring dialysis.
- There were significant differences in terms of the onset of postoperative atrial fibrillation with the use of levosimendan, as compared with the control group.
- There were no significant differences in the development of low cardiac output syndrome against studies with very low heterogeneity.

2. Which of the following parameters is consistent with the definition of low cardiac output syndrome in heart surgery?¹

- Cardiac index $<2.0\text{L/min/m}^2$, systolic blood pressure $<90\text{mm Hg}$ and hypoperfusion signs in the absence of hypovolemia.
- Cardiac index $<1.5\text{L/min/m}^2$, systolic blood pressure $<80\text{mm Hg}$ and signs of hypoperfusion in the absence of hypovolemia.
- Cardiac index $<1.0\text{L/min/m}^2$, systolic blood pressure $<90\text{mm Hg}$ and signs of hypoperfusion in the absence of hypovolemia.

d. Cardiac index $<1.0\text{L/min/m}^2$, systolic blood pressure $<80\text{mm Hg}$ and signs of hypoperfusion in the absence of hypovolemia.

3. Which of the following clinical conditions is more strongly associated with statistical significance with failed laryngeal mask use?²

- Age.
- Intraoperative use of muscle relaxant.
- Supervised insertion by a medical student.
- Thyromental distance $<6\text{cm}$.

4. The Fourth Universal Definition of Myocardial Infarction suggests that the term *Acute Myocardial Infarction* (AMI) should only be used when there is acute myocardial injury with clinical evidence of acute myocardial ischemia. The Type I AMI³:

- Presents as a result of atherothrombotic coronary disease and is usually precipitated by the rupture or erosion of the atherosclerotic plaque.
- It is due to the imbalance between oxygen uptake and oxygen consumption.
- It is associated with cardiac surgery treatments.
- Presents in patients with typical AMI symptoms, but they die before being able to determine the level of troponin or before troponin rises.

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5. Wellen's syndrome is an unusual cardiac perioperative event, with imminent infarction and⁴:

- Severe proximal stenosis of the left anterior descending artery.
- Stenosis of the circumflex artery.
- Stenosis of the right coronary artery.
- Stenosis of the marginal artery.

6. Charcot-Marie-Tooth (CMT) disease is the most common hereditary peripheral neuropathy, with an incidence of 1:25,000. Which of the following statements is false?⁵

- The most frequent presentation is atrophy of the peroneal nerve, with anterior and lateral weakness of the leg.
- The sensitive deficit is usually milder than the motor deficit.
- Any medication that may trigger malignant hyperthermia should be avoided.
- The medical literature has suggested that patients with CMT exhibit a significantly prolonged response to muscle relaxants.

7. In terms of the erector spinae plane block, the following statement is false⁶:

- It is and interfascial block.
- The local anesthetic agent distributes through the connective and ligamentous tissue anteriorly and toward the transverse process into the paravertebral space.
- Does not compromise the communicating branches carrying autonomic fibers from the sympathetic lymph nodes.
- The block may be administered as a postoperative analgesic component in the context of opioid-free multimodal analgesia in thoracic surgery.

8. The phantom limb pain is a debilitating chronic condition, frequently observed in patients with amputations. Which of the following statements is not characteristic of such pain?⁷

- Is a neuropathic-like pain, secondary to the presence of painful sensations in a missing limb.
- Depends on central factors such as spinal plasticity and cortical reorganization which is usually difficult to manage.
- Presents in around 50% to 80% of amputees.
- Typically, no association with factors of the peripheral nervous system is found.

9. Ziconotide is a conotoxin originally isolated from the *Conus magus* mollusk, and is currently the only US Food and Drug Administration-approved non-opioid intrathecal analgesic agent. It depends on the presynaptic block of the N-type medullar and cortical calcium channels, and since it reduces the calcium inflow, the release of pain neurotransmitters is decreased. Frequent side effects include the following, except for⁷:

- Visual hallucinations.
- Ataxia.
- High blood pressure.
- Creatinine kinase elevation.

10. Amiodarone is one of the main drugs used for the management of cardiac arrhythmia. Thyroid dysfunction is one of most commonly recognized problems. The following findings have been associated with its use⁸:

- The most recent reviews estimate the incidence of hyperthyroidism at 5% to 15%.
- There is just 1 form of thyrotoxicosis and it is induced by an increased synthesis and the release of thyroid hormones.
- The medical treatment of amiodarone-induced thyrotoxicosis is based on the discontinuation of amiodarone and the use of steroids only.
- Thyroid artery embolization as pre-surgical therapy may be used in cases of refractory amiodarone-induced thyrotoxicosis.

Answers

- b.
- a.
- a.
- a.
- a.
- d.
- c.
- d.
- c.
- d.

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