

Questions and answers

Preguntas y respuestas

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1. The Lancet Commission on Global Surgery established in 2014, identified the wide gap existing in the world in terms of access to surgical and anesthesia services. With respect to the indicators suggested that reflect universal, safe and economically feasible access to surgical and anesthesia care, it is true that [\(1\)](#):

- a. Timely access to essential surgery including cesarean section, laparotomy or open fracture management is achieved. A 60% coverage of anesthesia and surgical services for these procedures is expected for 2030.
- b. Every country is expected to have at least 20 or more specialists (surgeons, obstetricians and anesthesiologists) per 100,000 inhabitants for 2030.
- c. The expectations for 2030 are that at least 70 % of the countries monitor the surgical volume and that there will be at least 8,500 procedures per 100,000 inhabitants for that year.
- d. Protection against impoverishment due to out-of-pocket health expenditure in surgical and anesthesia procedures. 100 % protection in all countries is expected by 2030.

2. The paper published by Guevara-Farias et al. in 2022 in Colombia with a comparison of the direct costs associated with the use of balanced general anesthesia vs. total intravenous anesthesia in adults for non-cardiac surgery, found that [\(2\)](#):

- a. The most economic technique was balanced anesthesia with isoflurane.
- b. The most expensive technique was total intravenous anesthesia.
- c. There is no significant statistically difference between the balanced technique with sevoflurane and total intravenous anesthesia.
- d. A and B are true.

3. The so called Burnout Syndrome (BS) is the response to chronic job stress experienced by healthcare providers. Which of the following statements is false with regards to this syndrome [\(3\)](#)

- a. The world incidence of BS among physicians is around 28 %.
- b. The questionnaire to Assess the Burnout Syndrome (BAT) has been validated in Colombia.
- c. The BAT is a questionnaire that assessed cognition, emotions and attitudes of the individual, as related to his/her job experiences.
- d. The BAT is a test validated only for anesthesiologists, emergency physicians and intensivists.

4. The Advance Directives Document (ADD) is a bioethical benchmark for quality of healthcare and guarantee of fulfillment of the right to autonomy, self-determination and dignity of patients. It is false that in Colombia [\(4\)](#):

- a. The Colombian legislation approved the right to sign the ADD under Article 5 of Law 1733 of 2014.
- b. The document has to be signed before a notary.
- c. People under 18 years old are not allowed to sign an ADD.
- d. The cornerstone of Advance Directives (AD) is the ethical principle of Prospective Autonomy.

5. With respect to lidocaine, which of the following statements is false? (5)

- a. Blocks the voltage-gated sodium channels (VGSC) in the inner segment of the neuron cell membrane, interrupting nerve transmission.
- b. By administering the medication intravenously (IV), the drug loses its sodium channel selectivity and its properties are increased, acting on the peripheral receptors.
- c. Lidocaine modulates margination, adhesion and diapedesis of the polymorphonuclear cells to the injured site and inhibits the production of oxygen reactive species.
- d. It increases the postsynaptic potentials of the N-Methyl-D-Aspartate (NMDA) receptors and neurokinin in the spinal cord, in addition to stimulating Protein Kinase C.

6. Iatrogenic injuries of the trachea, including mucosal tears, may occur more often during emergency endotracheal intubation. Which of the following factors represents an additional risk? (6):

- a. Obesity.
- b. High blood pressure.
- c. Being a male.
- d. Being a female.

7. In terms of local anesthetic systemic toxicity (LAST), which is the recommended lipid dose for the early management of this complication in patients with a body weight > 70 kg? (7).

- a. A fixed bolus of 100 mL of lipids at 20 % in 10 to 15 minutes, followed by a standard infusion of 100 to 150 mL during 15 to 20 minutes.
- b. A fixed bolus of 50 mL of lipids at 20 % in 2-3 minutes, followed by a standard 150 mL infusion during 10 to 15 minutes.
- c. A fixed bolus of 100 mL of lipids at 10 % in 5-10 minutes, followed by a 200-250 mL standard infusion during 15 to 20 minutes.
- d. A fixed bolus of 100 mL of lipids at 20 % in 2-3 minutes, followed by a standard 200-250 mL infusion during 15 to 20 minutes.

8. The next statement with regards to LAST is true (7):

- a. With regards to treatment of seizures secondary to LAST, it is essential to manage the airway with 100% oxygen, avoid hypoventilation and administer propofol.
- b. If patients remain unstable after 5 minutes, the bolus may be repeated once (maximum two, including the initial bolus) at the same dose as the initial bolus, and maintain the basal infusion at 0.25 mL/kg/min.
- c. It should be noted that lipemia may interfere with the electrolyte or hemoglobin measurements.
- d. For extremely obese patients, the recommendation ideally is to determine the lipid dose based on the actual weight.

9. Which of the following medications that have been used for the management of chronic pain using invasive techniques through an epidural or intrathecal infusion via a totally implantable pump have been FDA approved? (8):

- a. Fentanyl and hydromorphone.
- b. Hydromorphone and morphine.
- c. Morphine and ziconotide.
- d. Clonidine and ziconotide.

10. In patients with COVID-19 presenting with acute respiratory failure, the following recommendations are applicable, except for (9):

- a. Tidal volume 6-8 mL/kg ideal.
- b. Plateau pressure < 28 cm H₂O.
- c. Saturation 88-96 %.
- d. Consider ECMO if the patient has been in prone position for more than 36 hours and the PaFi < 110 mmHg.

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ANSWERS

- 1. d.
- 2. a.
- 3. d.
- 4. c.
- 5. d.
- 6. d.
- 7. d.
- 8. c.
- 9. c.
- 10. d.