

***Anesthesiology Rounds*
October 2002**

**Ropivacaine and levobupivacaine:
A review of recent adult and non-obstetrical literature
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Objectives:

- Explain the clinical context in which local anesthetics were developed.
- Develop an anesthesia plan that integrates the different local anesthetics that are available according to their toxicity and duration of action.
- Choose the most appropriate concentration of ropivacaine and levobupivacaine for the principal loco-regional anesthetic techniques used for surgical purposes.
- Choose the most appropriate concentration of ropivacaine and levobupivacaine for the principal loco-regional anesthetic techniques intended for postoperative analgesia.

Questions: (Only 1 response is correct)

1. When an infusion of ropivacaine is used for an epidural to ensure postoperative analgesia, the free plasma fraction level remains stable during the first 3 days of administration (except at the start); this phenomenon is explained by:
 - a. A decrease in the distribution volume of ropivacaine.
 - b. A constant and gradual increase in α 1- acid glycoproteins.
 - c. An increase in the rate of ropivacaine bound to plasma protein.
 - d. An increase in blood volume associated with resorption of postoperative edema.
 - e. An increase in ropivacaine metabolism by the liver.
2. Which of the following local anesthetics is the least toxic?
 - a. R (+) bupivacaine
 - b. S (-) ropivacaine
 - c. S (-) bupivacaine
 - d. Lidocaine
 - e. Racemic bupivacaine

3. To prolong the effect of a plexus block, in the absence of a continuous catheter, which of the following would be most effective?
- a. The use of ropivacaine 1.0%
 - b. The addition of adrenaline 1:200,000 to a long-acting local anesthetic
 - c. The use of levobupivacaine 0.75%
 - d. The addition of clonidine 1 µg/kg
 - e. The use of racemic bupivacaine
4. Which of the following solutions would be the most efficacious and safe for improving the analgesia induced by ropivacaine 0.2% in an epidural infusion?
- a. Sufentanil 0.25 µg/mL
 - b. Adrenaline 0.25 µg/mL
 - c. Fentanyl 2 µg/mL
 - d. Sufentanil 2 µg/mL
 - e. Fentanyl 4 µg/mL

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