

Combined spinal-epidural analgesia is a regional anesthesia technique that has proven useful in laboring parturients. The spinal anesthetic may be given to alleviate early labor pain while the epidural can be activated after the patient is in active labor. Clinicians using this technique often inject an opioid such as fentanyl 25 mcg or sufentanil 10 mcg intrathecally during the first stage of labor. The opioid may be injected alone or with a small amount of local anesthetic such as 2.5 mg of preservative free bupivacaine or 3-4 mg of Ropivacaine. The addition of 100 mcg of epinephrine can prolong the block, but should not be used with opioids alone.

It is not necessary to place the spinal and epidural at the same interspace, although many clinicians do. One technique is performed using a needle-through-needle method where the epidural needle is placed within the epidural space and then a long spinal needle is advanced through the epidural needle into the subarachnoid space. Another method employs a needle-beside-needle technique using an epidural needle with a specially designed channel through which the spinal needle can pass. After intrathecal injection, the spinal needle is removed and the epidural catheter is placed through the epidural needle.

The use of 24 to 27 gauge pencil-point needles (Whitacre, Sprotte, or Gertie Marx) helps reduce the incidence of postfural puncture headache. Also, the use of smaller gauge spinal needles reduce the likelihood that the epidural catheter could pass through the dural hole into the subarachnoid space. Epidural drugs should be titrated carefully, however, as they could pass through the dural hole into the subarachnoid space, intensifying their effects.

Some studies indicate that patients undergoing combined spinal-epidural analgesia have a higher degree of satisfaction and lower incidence of postdural puncture headache than patients who undergo epidural analgesia alone.

*Ezekiel MR. Handbook of Anesthesiology 2004-2005 Ed. Laguna Hills, CA: Current Clinical Strategies; 2004: 213.*