

Eldor Needle for the Combined Spinal-Epidural Anesthesia

Combined Spinal-Epidural Anesthesia

Combined spinal-epidural anesthesia is a new kind of regional anesthesia that combines the spinal anesthesia with the epidural anesthesia. Both techniques are well known separately for their benefits and limitations. The combination of the spinal and the epidural routes as separate departments for local anesthetic injections gives a new kind of regional anesthesia. The benefits of the spinal anesthesia (rapid induction and excellent muscle relaxation) are combined with those of the epidural catheter (epidural catheter injections intraoperatively and epidural injections postoperatively).

Eldor Needle Technique

Using the Eldor needle the epidural space is reached by the loss of resistance technique or the hanging drop technique while the proximal opening of the epidural needle of the Eldor needle enters the epidural space. Then the epidural catheter is inserted into the epidural space through the epidural needle of the Eldor needle. A test dose is done as after any epidural catheter insertion. Then a small bore spinal needle (25G or less) is inserted through the spinal conduit of the Eldor needle until it pierces the dura. Confirmation of its placement in the subarachnoid space is when CSF is obtained through the distal orifice of the spinal needle. The local anesthetic is then injected through the spinal needle into the subarachnoid space. After the injection is completed the spinal needle is withdrawn. Then the Eldor needle is withdrawn leaving the epidural catheter in the epidural space. The catheter is attached to the back by plaster and the patient is turned on his back.

Local Anesthetic Injections

The dose of the local anesthetic injected into the subarachnoid space can be the same or lower than that injected when performing only spinal anesthesia. Local anesthetics can then be injected through the epidural catheter if the level achieved by the spinal injection is not enough for the operation, or when the spinal anesthesia wears off and the operation lasts more than the spinal anesthetic duration. Postoperatively, the epidural catheter serves for injecting opiates or local anesthetics as an excellent method of postoperative analgesia. The usual care of epidural opiates or local anesthetics injections should be practised.

Hazards

Intrathecal medications may obscure signs of epidural catheter malposition. The reduced ability to detect catheter malposition using an epidural test dose should be considered in the selection of this technique and in the choice of agents if the intrathecal medication is provided prior to the epidural dose.

Caution

Federal law restricts this device to sale by, or on the order of a physician.