RAILWAY LUMBAR COMBINED PUNCTURING NEEDLE

Field of the Invention

The present invention relates to a rail guided puncture needle for combined spinal-epidural anesthesia.

Background of the Invention

According to conventional puncture technique, the anesthesia puncture process is started with the epidural needle punctures into the epidural space, then the spinal needle is delivered into the epidural space through the inner cavity of the epidural needle and further pierced the spine dura mater and the arachnoid mater arriving at the subarachnoid space. After medicine is injected, the spinal needle is withdrawn. The epidural needle is withdrawn after the epidural catheter is placed through the epidural needle to complete the anesthesia puncture process.

Summary of the Invention

The objective of the invention is to overcome the shortcomings of prior art and provide a practical, scientific and rational combined lumber puncture needle. A combined railway lumbar puncture needle is provided, which comprises epidural needle (1) and spinal needle (2), wherein a small guiding conduit (3) is disposed on the pin of the epidural needle, a groove (8) is provided on the outer wall of the needle peduncle as railway, and the tip of the spinal needle is beaked(4).

Compared to prior art, the present invention has advantages as below:

1. The present invention enables the epidural catheter to be placed before medicine is injected into the subarachnoid space, thus avoids the awkwardness of the difficulty in placing catheter into epidural space after medicine is injected into the subarachnoid space.

2. The present invention avoids the possibility of the epidural catheter's accidental entering the subarachnoid space through the spinal needle by the eyelet left on the spinal dura mater.
3. The present invention properly alters the angle between the plane of the outlet of tip of the epidural needle and the vertical axis of the needle peduncle, thus facilitates the epidural catheter to be leaded into the epidural space.

Brief Description of the Drawings:

Figure 1 and figure 2 are the two-dimensional cross-sectional illustrations of epidural needle, wherein (5) shows the inlet the conduit (3), (6) shows the outlet, and (7) shows the crosslink of the extended line of the conduit (3) and the groove (8) on the needle peduncle.

Figure 3 is the two-dimensional cross-sectional illustrations of spinal needle, wherein (4) shows the beaked tip of the spinal needle.

Detailed Description of the Invention

As defined in conventional puncture technique, the epidural needle is first punctured into the epidural space and the epidural catheter placed through epidural needle. Then the spinal needle is take (2) and its tip (4) sent by the inlet (5) of the small conduit (3) on the pin of the epidural needle, go out by the outlet (6), forwarded to intersect with the groove (8) (i.e. the railway) on the peduncle of the epidural needle at (7), and pushed forward to make it go along the groove (8) to slide into the epidural space (notice: make sure that the ventral side of the beaked tip of the spinal needle slide clinging to the bottom of the railway to avoid the spinal needle's departing from the railway). Pushed ahead somewhat, the core of the spinal needle is withdrawn when feel empty. When the cerebral spinal fluid is seen going out which approves the tip be in the subarachnoid space, local anesthetics is injected by the needle into the subarachnoid space,

then the spinal needle is withdrawn. Afterwards the epidural needle is withdrawn with the epidural catheter left to complete the puncture process.

CLAIMS

1. A combined railway lumbar puncture needle, comprising epidural needle (1) and spinal needle (2), wherein a small guiding conduit (3) is disposed on the pin of the epidural needle, a groove (8) is provided on the outer wall of the needle peduncle, and the tip of the spinal needle is beaked(4).
2. The combined railway lumbar puncture needle according to claim 1, wherein said small guiding conduit (3) on the pin of the epidural needle can lead the spinal needle into the groove(8) on the needle peduncle.
3. The combined railway lumbar puncture needle according to claim 1, wherein the groove on the epidural needle enables the spinal needle slide along.
4. The combined railway lumbar puncture needle according to claim 1, wherein tip of the spinal needle is beaked(4) and the ventral side is fit for sliding clinging to the bottom of the groove(8) on the needle peduncle.