

The complications of epidural labor and countermeasures

Hypotension: Anesthesia used for epidural labor may lead to hypotension (low blood pressure); therefore, we always administer an intravenous infusion beforehand and adjust the infusion as necessary to minimize the effects of hypotension. We have a supply of pressure-raising drugs (medications to raise blood pressure) in the delivery room for use when necessary, and regularly monitor blood pressure and other parameters during delivery. If you experience palpitations or feel sick, please immediately inform a nearby staff member, as this is especially likely to occur when lying on your back.

Numbness and difficulty moving the legs: During epidural labor, numbness, and difficulty in moving the legs often occur because anesthesia affects not only the nerves involved in childbirth pain sensation but also the nearby nerves that carry sensation and movement in the legs. The intensity of the symptoms varies depending on how the medication spreads, but once delivery is complete and the local anesthetic is administered, the effects disappear, and recovery occurs within a few hours to half a day.

As a result, there is a risk of falling, and as a rule, the patient should remain on the delivery table (bed for childbirth), and urine should be guided through a catheter as needed (the discomfort of this procedure is lessened owing to the anesthesia).

Postdural puncture headache: Headache may occur when a hole is made in the dura, during the insertion of an epidural catheter, and spinal fluid leaks out. It is estimated to occur in approximately 0.8% of epidural labor cases and causes a headache, nausea, and stiff neck. It is more likely to occur when the patient is awake and improves when lying down. Symptoms usually appear within 72 hours after the procedure and improve within approximately a week, and can be treated with rest and medication for headaches. If there is no improvement or the symptoms are severe, a treatment called an epidural blood patch may be performed, in which blood is placed into the epidural space to seal the hole. As many factors, including childbirth, can cause headaches, other causes have also been investigated and addressed.

Needle insertion pain: Epidural anesthesia uses a needle that is large enough to pass through a catheter after administering local anesthesia on the surface. Therefore, the area where the needle is inserted may remain painful for a few days; however, this is not considered to have any long-term effects. Back pain is a major side effect of pregnancy and childbirth and does not increase as a result of painless delivery.

Nausea, itching, fever, shivering, and urinary retention (difficulty passing urine) may be more likely to occur with painless delivery than without anesthesia. Depending on the intensity of the symptoms, medication or catheterization may be used.

Neuropathy: Due to the longer time it takes to deliver the baby and the longer time spent being pushed by the baby's head and positioned for delivery, postpartum symptoms, such as dysuria, numbness, sensory disturbance, and difficulty with strength, may occur more frequently in those who do not have a painless delivery. Direct nerve damage from the painless delivery procedure is rare, and is most often accompanied by distinct symptoms during the catheterization procedure. Temporary numbness or a vibrating sensation sometimes occurs during catheter advancement and can be addressed by adjusting the position.

Rare but potentially serious complications include local anesthetic poisoning, high-level spinal subarachnoid anesthesia, epidural hematoma/abscess, and anaphylaxis. Safety measures are taken in such cases so that they can be prevented or detected early.

Local anesthetic intoxication: To spread pain relief over a large enough area for painless delivery, many thin concentrations of local anesthetics are used. As they are usually absorbed slowly, local anesthetics have little or no systemic effects. If a large dose of concentrated local anesthetic is administered while the epidural catheter is in a vein, it can cause a systemic effect called local anesthetic toxicity, which can lead to serious complications, including cardiac arrest. To prevent this, we use test doses, thin local anesthetics, divided doses to avoid administering large doses all at once, and continuous monitoring.

High spinal subarachnoid anesthesia: If the amount of local anesthetic that should be administered to the epidural space is instead administered to the subarachnoid space, it directly affects the spinal cord and can have a quick and strong effect on the whole body, not just the lower half, and complications, such as hypotension, bradycardia, dyspnea, and impaired consciousness, may occur. In this case, an anesthesiologist will temporarily sedate the patient, insert a breathing tube down the throat (intubation), assist breathing (artificial respiration), and maintain blood pressure, similar to the procedure performed during general anesthesia. Owing to the temporary effect of the local anesthetic, the procedures will be reduced sequentially as the effect wears off over time.

Epidural hematoma/abscess: Because the needle is inserted close to the spinal cord, there is a non-zero chance of bleeding or infection, which can cause paralysis due to nerve compression; however, this complication is generally extremely rare, ranging from one in tens of thousands to one in hundreds of thousands of cases. Be sure to inform your doctor if you are or have been using medications that prevent blood clotting (antiplatelet and anticoagulant medications, heparin, aspirin, EPA, etc., in pregnancy-related situations) or if you have any specific medical conditions.

Anaphylaxis: Severe allergic reactions to local anesthetics are generally rare, and amide-type local anesthetics, which are considered relatively less likely to cause allergic reactions, are used for epidural labor and obstetric-related anesthesia.