

Information form concerning the types of anaesthesia administered in the Obstetrics Department of Medcover Hospital



Dear Patient !

It is very important that you read and understand the information below.

OBSTETRIC EPIDURAL ANAESTHESIA IN THE OBSTETRICS DEPARTMENT

The purpose of anaesthesiological care during obstetric anaesthesia

The purpose of epidural anaesthesia is to eliminate or reduce pain to a level acceptable by the patient. The pain usually subsides after approximately 10-20 minutes.

After anaesthesia, uterine contractions are usually experienced as less painful or as hardening and tightening of the uterus. In the second stage of labour, the anaesthesia may be continued. Sometimes, however, in order to increase the pushing effectiveness, its dose is slightly lower, which may involve the feeling of pain, but with reduced intensity.

The technique of administering obstetric epidural anaesthetics

Epidural anaesthesia is administered while the patient is sitting or lying. It is important that the patient arch her back in a proper manner and remain still until the procedure is over. After anaesthetising the skin in the lumbar area of the spine, a special needle is used to insert a thin catheter through which anaesthetics are administered. This catheter, attached to the skin of the back for the duration of the anaesthetic procedure, is used to administer the first and subsequent doses of anaesthetics. Hence, further doses require no additional needle insertions, but only administration of anaesthetics into the catheter during the subsequent hours of labour.

The anaesthesia is administered in the intervals between contractions. In most cases, the procedure takes about 10 minutes. During contraction, the procedure is stopped. The patient is kindly asked to inform the staff about the upcoming contraction and keep still. After the contraction, the anaesthesiologist will continue the anaesthesia procedure.

During the entire procedure and after administration of drugs into the epidural catheter, the following vital parameters of the patient are monitored: arterial blood pressure, pulse, blood saturation and foetal heart rate (on CTG).

Effects of epidural anaesthesia

The anaesthetic effect appears approximately 10-20 minutes after drug administration. The anaesthesia may be accompanied by transient numbness and weakening of the lower limbs (extremities), itching of the skin, and fever. In rare cases, the catheter may be displaced during labour, which might result in the absence of analgesic effects. This may necessitate placing the anaesthetic line again. Epidural anaesthesia may reduce the time of reaching full cervical dilation, but sometimes, due to secondary weakening of the contraction activity, this time might be slightly increased. In such a situation, it is sometimes necessary to use drugs that intensify contractions. Postpartum backaches are primarily related to the pregnancy-associated changes around the spine rather than the anaesthesia.

Occasionally, the patient may experience a strong headache on the days following anaesthesia. This should be notified to the medical staff. In most cases, such headaches subside upon intravenous administration of high volumes of fluids or after longer relaxation in a lying position. It is sometimes necessary to make the so-called epidural blood patch (EBP).

Under justified circumstances, the anaesthesiologist may use the epidural catheter for anaesthesia purposes during Caesarean section.

The epidural catheter is removed a few hours after administration of the last anaesthetics.

During pregnancy or labour, there might be situations where it is impossible to provide epidural anaesthesia. They may result from the course of the labour or the medical contraindications to epidural anaesthesia.

Please note that each labour may lead to a Caesarean section. The type of anaesthesia usually selected for this kind of intervention is the subarachnoid anaesthesia. Below, you will find information concerning the provision of anaesthesia for Caesarean sections.

THE TYPES OF ANAESTHESIA PROVIDED FOR SURGERIES OR OPERATIONS (INCLUDING CAESAREAN SECTIONS) IN THE OBSTETRICS DEPARTMENT

Please note that each labour may lead to a Caesarean section. The type of anaesthesia usually selected for this kind of intervention is the subarachnoid anaesthesia. Below, you will find information concerning the provision of anaesthesia for Caesarean sections.

The purpose of anaesthesiological care

The anaesthesiologist is responsible for the safety of anaesthesia during the operation by providing the patient with comfort and ensuring pain reduction. After operation, the anaesthesiologist supervises the analgesic procedure and post-operative care.

Preparation for surgery

All patients for planned surgical procedures should be on an empty stomach, which means they should refrain from eating any meals for at least 6 hours before surgery and drinking clear fluids for at least 2 hours before surgery. If any of these conditions is not met, the patient is kindly asked to inform the anaesthesiologist about this fact, because it represents a threat to the patient's life and health.

The choice of anaesthesia

During the pre-operative consultation appointment, the anaesthesiologist will determine the optimum type of anaesthesia for you.

The choice of anaesthesia depends on the type of surgery/operation, the patient's health status (concomitant diseases, age) and the patient's preferences (where possible). The type of anaesthesia recommended for Caesarean section is the subarachnoid anaesthesia. It is safer for both the mother and the baby than general anaesthesia. Currently, the percentage of subarachnoid anaesthesia for Caesarean sections is nearly 100%.

There are some rare contraindications to using subarachnoid anaesthesia for a Caesarean section, such as blood-clotting (coagulation) disorders, certain heart conditions, the patient's severe condition caused by sepsis, haemorrhage, injury, or poisoning, sudden foetal arrhythmias and the necessity of immediate extraction of the baby. In such a situation, the Caesarean section is performed under general anaesthesia.

Regardless of the type of anaesthesia, the patient's stay in the operating theatre begins with inserting an intravenous (IV) cannula into one of the patient's veins, putting the patient on a drip, measuring the patient's blood pressure, connecting an ECG monitor and placing a pulse oximeter sensor on the patient's finger. Each operation/surgery may require additional activities, such as making another intravenous line, placing a cannula into an artery, or performing blood transfusion.

Below, there is detailed information about two most common types of anaesthesia administered before Caesarean sections.

Subarachnoid (or the so-called "intraspinal") anaesthesia

Regional subarachnoid anaesthesia involves administration of an anaesthetic into the subarachnoid space using a thin needle, which reversibly blocks neural conduction. During this type of anaesthesia, the patient remains conscious but experiences no pain at all. Subarachnoid anaesthesia eliminates pain during surgery and, importantly, provides the patient with comfort for the first hours immediately after surgery. Subarachnoid anaesthesia is administered while the patient is sitting or lying. It is important that the patient arch her back in a proper manner and remain still until the procedure is over. After anaesthetising the skin in the lumbar area of the spine, a special needle is used to administer anaesthetic drugs. In most cases, the procedure takes a few minutes. In patients after operations on the spine or with anatomical defects of the spine, as well as in those suffering from obesity, this type of anaesthesia may be more difficult, and sometimes even impossible. We usually make a few/several attempts to make an anaesthetic line, which may not be comfortable for the patient but is necessary. Once the anaesthetic has been administered, the patient is put on her back. The lower limbs (extremities) become warm, numb and heavy, and cannot be moved after a few minutes. It is only after an appropriate level of anaesthesia has been obtained that the operation can begin.

During the operation, there might be previously unforeseeable situations that require additional administration of general anaesthesia.

The patient should be aware that there are also contraindications to epidural and subarachnoid anaesthesia. The most common include:

- blood-clotting (coagulation) disorders (including thrombocytopenia, coagulopathies);
- intake of drugs affecting blood coagulation;
- certain heart diseases;
- certain neurological conditions;
- haemorrhage, injury, the patient's severe condition, sepsis;
- sudden foetal heart rate disorders;
- the necessity of immediate extraction of the baby;
- infection or a large tattoo at the injection site.

Each time before the anaesthetic procedure, the anaesthesiologist assesses the safety of the epidural or subarachnoid anaesthesia for both the mother and the foetus.

The most common complications of epidural or subarachnoid anaesthesia include:

Despite the best efforts and the high safety profile of the procedure, subarachnoid anaesthesia may cause the following complications:

- a transient decrease in arterial blood pressure, nausea, cardiac arrhythmias;
- backaches;
- post-puncture headaches. They are manifested as pain in the nape, back of the head or forehead. They become more intense in a standing position, and subside by lying down. Post-puncture headaches may be accompanied by nausea, photophobia (light intolerance) and tinnitus (ear buzzing). Severe pain usually lasts for 2-3 days and spontaneously subsides within a week. An effective solution in most cases is to lie flat for 24 hours, drink large amounts of fluids and regularly take analgesic drugs (painkillers). It is sometimes necessary to make the so-called epidural blood patch (EBP), which will be discussed when such a need arises.
- transient difficulties in urination;
- insufficient depth of anaesthesia, asymmetrical anaesthesia;
- transient sensory disturbances (dysaesthesia), hypoaesthesia (diminished sense of touch), numbness, e.g. in the area of the foot, toes, lower leg, thigh;
- transient mobility disorders in the lower limbs (extremities).

Extremely rare complications of epidural or subarachnoid anaesthesia include:

- permanent neurological damage, paraparesis/paraplegia (partial/complete loss of voluntary motor function in the lower limbs);
- epidural haematoma or abscess;
- spinal (vertebral) canal haematoma;
- toxic effect of the regional anaesthetic (intravascular administration, total subarachnoid anaesthesia).

General anaesthesia

This type of anaesthesia is most commonly used for short gynaecological and obstetric procedures, and very rarely for Caesarean sections. General anaesthesia is chosen for Caesarean sections in the case of patients with absolute contraindications to subarachnoid anaesthesia.

This type of anaesthesia involves administration of an appropriate combination of intravenous drugs – hypnotics (sleep-inducing agents), analgesics (painkillers) or relaxants, which cut off the patient's consciousness, eliminate pain and relieve muscle tension throughout the surgery.

Prior to drug administration, the patient receives a mask to breathe in pure oxygen. When the surgical team is ready to begin the surgery, the anaesthesiologist administers drugs which render the patient unconscious. During general anaesthesia, it is usually necessary to introduce a special tube into the trachea (endotracheal intubation) and ventilate the lungs using a respirator. In pregnant women, due to the physiological changes appearing during pregnancy, there is a significantly higher risk of gastric aspiration and the so-called "difficult intubation" compared to other patients. Therefore, the preferred technique for pregnant women is the subarachnoid or epidural anaesthesia.

The complications of general anaesthesia for Caesarean section:

The most common, yet not dangerous:

- nausea, chills, sore throat and muscle pain;
- fluctuations of arterial blood pressure, transient cardiac arrhythmias;
- damage to the oral mucosa;
- damage to the teeth, lips, palate, tongue, uvula, and epiglottis during endotracheal intubation;
- tracheal damage.

Serious complications:

- difficult or impossible endotracheal intubation (1:30 – 1:300 cases of anaesthesia);
- gastric aspiration (1:1,000 cases of anaesthesia);
- allergic reactions to the drugs administered (1:10,000 cases of anaesthesia);
- death related to anaesthesia administration to a pregnant woman (1:600,000 childbirths).

Transversus abdominis plane (TAP) block or quadratus lumborum (QLB) block

These are types of regional anaesthesia where the anaesthetic is administered into the abdominal wall – between the abdominal muscles, symmetrically on both sides. These types of anaesthesia are administered under ultrasound guidance, using a special ultra-thin and long needle introduced into the area of the post-operative wound. This leads to the reduction of pain in this area. These solutions represent a complementary method in the management of pain after Caesarean section performed under general, subarachnoid or epidural anaesthesia.

Note

In each medically justified case, during anaesthetisation or the surgery, the type of anaesthesia may be changed for the sake of the patient's well-being.