Information about Anesthesia

We are providing this document to help patients who will undergo anesthesia to better understand the process. Please read it carefully and understand the content.

1. Safety of anesthesia

Anesthesia is an essential technique in performing safer surgery, as well as in mediating the patient's pain during surgery. An anesthesiologist is in charge of the procedures and responds to changes in the patient's condition during surgery. Anesthesia, however, is not always safe for all patients. In rare cases, patients undergoing general anesthesia could develop a critical condition, even though the anesthesia is provided appropriately. In this hospital, we make every effort to take the best measures promptly in case complications occur, so that patients can undergo anesthesia without concern.

2. Type of anesthesia

There are two types of anesthesia: general anesthesia and local anesthesia.

The method of anesthesia is determined by the anesthesiologist after (s)he has considered the type, duration, and site of the surgery, results of presurgical testing, and the age of the patient. If you have any requests, please let us know.

(1) General anesthesia

With general anesthesia, the patient is put into a deep sleep. Because his/her breathing weakens, assistance using artificial ventilation is required.

(2) Local anesthesia (spinal anesthesia, epidural anesthesia, or conduction anesthesia [nerve block])

In spinal or epidural anesthesia, anesthetics are injected into the upper or lower back of a conscious patient to reduce pain.

In conduction anesthesia (nerve block), anesthetics are injected near the nerve that is related to the surgical site to reduce pain.

(3) Combination of general and local anesthesia

By combining local anesthesia with general anesthesia, the physical stress caused by anesthetics can be reduced and safer surgery can be performed.

3. Preparation for anesthesia

(1) Fasting before surgery

Anesthesia may cause vomiting. Vomited matter may enter the trachea or the lungs, which can cause suffocation or aspiration pneumonia. Therefore, to avoid these problems, your stomach must be empty before you are given anesthesia. Because such problems can be life threatening, please be sure to follow our instructions to restrict food and water intake before your surgery.

(2) Entering an operating room

Depending on your condition, you may enter the operating room on a bed, in a wheelchair, or on foot. Doctors and nurses wear caps and masks to maintain sterility in the operating room. After you enter the room, we confirm your wristband and your name to verify your identity.

We place electrodes from an electrocardiogram (ECG) to monitor your heart and a sensor to monitor your breathing, and then take your blood pressure. The electrodes and sensor are applied to your skin.

For a drip infusion, we insert a thin indwelling catheter, usually to a vein in your arm. The insertion can cause an injury to the nerve near the insertion site, although very rarely, or internal bleeding, which will disappear after a while in most cases.

4. General anesthesia

With general anesthesia, you will be put under sedation by anesthetics that are usually administered through the infusion route. Because your breathing will weaken due to the effects of the anesthetics, we first use an oxygen mask to supply oxygen through your mouth and nose, and then switch to mechanical ventilation by supplying oxygen through a tube that is inserted into the trachea, from the mouth through the vocal cords, to make sure to stably assist your breathing. During surgery, you are unconscious and will not feel any pain. Once administration of anesthetics is stopped at the end of the surgery, you will start to wake up from the anesthesia. Please respond when your anesthesiologist talks to you, because we will remove the tracheal tube after we confirm that you can open your eyes in response to your name being called and that you can open and close your fist following instructions. The anesthesiologist always adjusts the anesthesia dose during surgery so that you will not wake up before your surgery is completed. If your condition is not good before the surgery, it may take longer to wake up from the anesthesia. It is, however, very unusual for a patient not to wake up because of the anesthesia.

5. Local anesthesia (spinal or epidural anesthesia)

You will have to lie on your side for an injection into your back. Please curl up as much as possible by hugging your knees with your arms and drawing in your chin. Before anesthesia, we first give you a pain-relief injection using a thin needle. With spinal anesthesia, we examine the effect of the anesthetics immediately after injection. We start the surgery once we know that the anesthesia is working effectively; however, you may feel sensations of being touched or pulled. Even when the surgery is started using only local anesthesia, we may add general anesthesia, if necessary, to continue the surgery safely. In this case, we will explain the situation to you if possible before giving you general anesthesia.

6. Local anesthesia (nerve block)

This is a method to reduce pain from surgery by injecting anesthetics near the nerve that is related to the surgical site. When combined with general anesthesia, the nerve block will not cause you any pain, because it is usually injected after the general anesthesia becomes effective.

7. Complications

(1) Rare complications caused by anesthesia

Various drugs are used during anesthesia, which are administered depending on the patient's condition. Some patients may have allergic reactions to some of these drugs. One of the rare complications during anesthesia is "malignant hyperthermia". This is a very frightening complication; the body temperature suddenly rises during anesthesia, and the strain on the heart increases, which may result in cardiac arrest. It is not known who is vulnerable to this complication. The occurrence of this complication cannot be prevented; however, we do our best if it occurs.

(2) Tracheal intubation during general anesthesia

After you lose consciousness with general anesthesia, we need to insert a tracheal tube through your mouth to provide artificial ventilation. We use a metal instrument and it may touch your teeth. If you have fragile teeth, they may be broken or damaged.

You do not need to worry if your teeth are stable and strong. However, especially if you have false teeth or loose teeth, there is higher risk of such a damage. In this case, please tell your anesthesiologist about your false or loose teeth. (S)he will perform tracheal intubation as carefully as possible. Please note that, even if your teeth are damaged by this procedure, you are liable for any treatment expense.

(3) Patient-specific complications

You may have various diseases other than that for which the surgery is performed. Some of these could worsen during the perioperative stage, and may require special management during anesthesia. Please tell your anesthesiologist about your health condition before the surgery.

In addition, please tell her/him about the drugs that you usually take, because such drugs may be important when (s)he makes a decision about the administration method or dose of anesthetics.

<Major diseases that are problematic for the management of anesthesia>

A slight cold, asthma, hypertension, angina pectoris, myocardial infarction, arrhythmia, heart valve disease, diabetes mellitus, liver disease, kidney disease, brain infarction, pulmonary disease, neurological disease, allergy, etc.

(4) Complications caused by local anesthesia

Even after the following day, when the anesthetic effect has disappeared, neurological symptoms such as numbness or discomfort in the legs may remain for a while, but this happens very rarely. It is due to nerve damage caused by a puncture needle or a hematoma, because the needle must be inserted near the nerve to inject the anesthetics. To prevent this complication, we perform tests for hemostasis and blood coagulation before the surgery, and perform punctuation for anesthesia very carefully.

With epidural anesthesia, a thin and flexible catheter is inserted into a small epidural space, which is only several millimeters across. Because this catheter is very thin, there is a small risk that it might tear during insertion or removal. We handle this catheter very carefully.

For several days after surgery, you may feel pain in the back of your head and neck when you stand up. This can happen after spinal anesthesia, whereas it rarely happens after epidural anesthesia. However, this pain usually disappears in several days and does not remain as an after-effect.

Although we pay the greatest attention to the administration of local anesthetics, on rare occasions, they may enter a blood vessel, which results in toxic symptoms. We are always ready to provide the best treatment in such a case.

(5) Venous thromboembolism

To prevent venous thrombosis, which can cause pulmonary embolism, we use compression stockings or intermittent pneumatic compression (a foot pump) during a surgery as much as possible. The compressions of this foot pump can cause paralysis or numbness in the lower legs, but only rarely.

(6) Postoperative complaints

With general anesthesia, in which a tracheal tube is required for artificial ventilation, you may have pain or discomfort in your throat or hoarseness for several hours after surgery. These symptoms will gradually disappear in most cases.

You may have nausea, vomiting, or drowsiness for a while after surgery, because of the adverse effects of the anesthetics or painkillers that are used during surgery. Because the frequency and degree of these symptoms vary greatly among individuals, we cannot tell whether you will have them.

(7) Anesthesia for children

For general anesthesia, unlike that for adults, anesthetic gas is used to put a child to sleep, because it is usually difficult to set up the drip infusion route on a child before surgery. This procedure has a greater risk of causing vomiting and consequent aspiration pneumonia. Therefore, please be sure to correctly follow our instructions to restrict food intake. In addition, please be certain to tell us before the surgery if your child has symptoms of a cold, because colds can cause more serious complications in children than in adults. We will carefully investigate whether your child can safely have anesthesia. Please understand that his/her surgery may be cancelled on the scheduled day.

(8) Insertion of a central venous catheter into a patient who is taking cardiovascular surgery or surgery that prevents him/her from eating immediately afterwards

To deliver drugs that are difficult to administer from a peripheral venous route in the arm (regular drip infusion route), we may insert a central venous catheter during anesthesia.

Complications vary depending on insertion sites, and the following complications may occur rarely: a pneumothorax following the puncture of the lung (an insertion of a chest tube into the thoracic cavity may be required in some cases), hematoma formation by arterial puncture, recurrent nerve paralysis, infection or tearing of the catheter.

8. If you would like to withdraw your consent for anesthesia

Even after you submit the consent form, you can withdraw your decision up until the anesthetic procedure starts. If you decide to do this, please contact your anesthesiologist.

*By signing below, I confirm that I have read and understood the information provided above.

Date (YYYY/MM/DD):____ / /

Patient's signature: