General Anaesthesia for Children

Patients' Information

Introduction

This leaflet aims to provide you with basic information about general anaesthesia that your child is going to receive. If you have any questions about your child's anaesthesia that are not covered in this leaflet, please discuss with your child's anaesthetist who will be willing to answer your questions.

What is General Anaesthesia?

General anaesthesia is a drug-induced unconsciousness that can ensure that your child is unaware of the operation and free of pain.

Who is responsible for your child's anaesthesia?

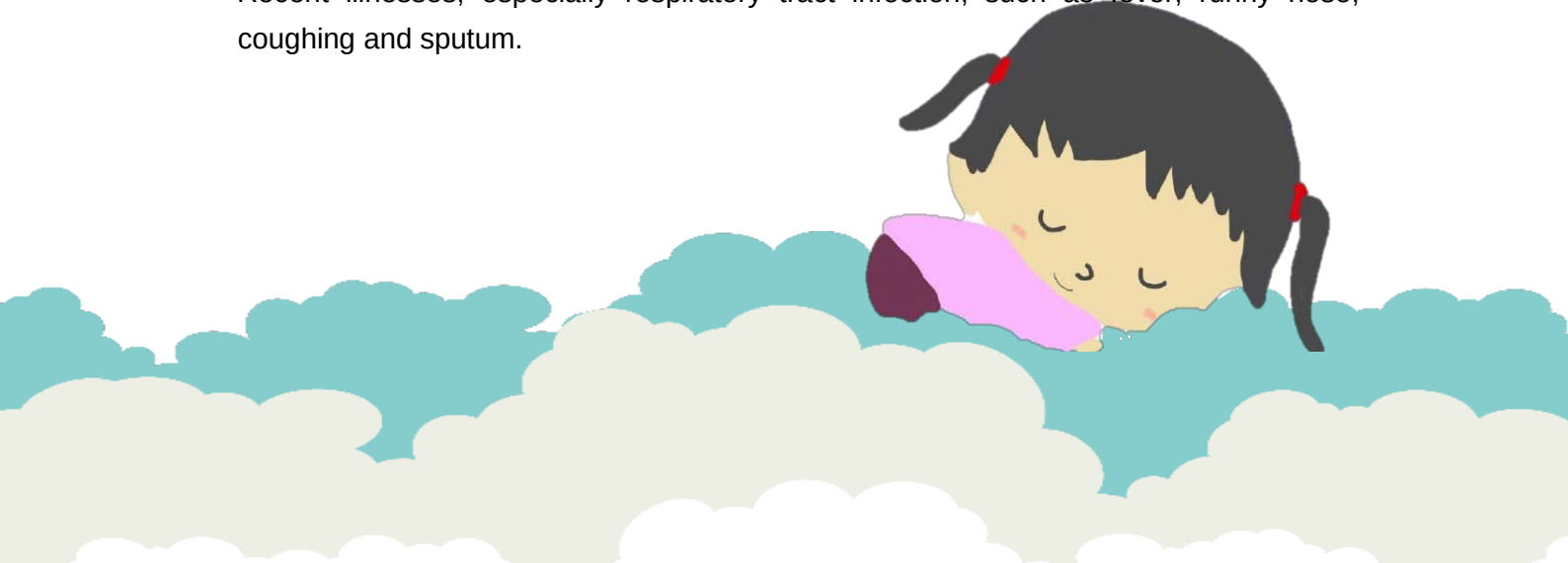
Anaesthetists are specialist doctors who conduct the anaesthesia and take care of your child during surgery. They will stay with your child all the time during anaesthesia and ensure his/her safety. They are also closely involved with your child's pain relief after the operation.

Pre-anaesthetic assessment

An anaesthetist should see you and your child before the procedure to assess your child and discuss your child's anaesthetic plan with you, either in ward or anaesthetic clinic.

The anaesthetist may ask some questions about

- Your child's birth and developmental history, general health, any medicines he/she is taking, and any allergies he/she has.
- Your child's previous experiences of anaesthesia
- Family history of anaesthetic problems
- Snoring or difficulties inbreathing
- Recent illnesses, especially respiratory tract infection, such as fever, runny nose, coughing and sputum.



The anaesthetist may also do the following preparation

- Examine your child's heart, chest, back, airway and other relevant physical exams
- Review your child's medical records
- Review investigation results and order further investigations if needed
- Discuss with you about the anaesthetic and pain management plan

This is a good time to talk about any particular concerns you have about the anaesthesia.

How can I prepare my child for the operation?

These are some useful points shared by many parents to prepare their children for operation.

- Except for very young children, explain to your child about the timing of operation. If your child will stay in hospital, let him/her know the duration and when he/she can see you.
- Explain that the operation will help him/her get better
- Attend ward/operating theatre visit if available
- Bring his/her comfort toys/blankets to admission and operation

Why must my child fast?

If there is food or liquid in your child's stomach during anaesthesia, it could come up from the stomach and get into his/her lungs (aspiration). Fasting improves your child's safety. If your child fails to fast, the procedure may be cancelled or postponed. Anaesthetic and surgical teams will try their best to keep fasting as short as possible. The anaesthesiologist will give you clear instructions on fasting.

The following are generally agreed timings for fasting before non-urgent surgery.

- Six hours for light meal/formula milk
- Four hours for breast milk
- Two hours for clear fluid, including water, clear glucose solution, clear juice (NO milk based product)

Should my child take his/her usual medications during fasting?

The anaesthesiologist will advise you on the arrangement of these medications.. When When needed, your child can take medications with a mouthful of water during fasting.

Q What should I do if my child feels unwell before/on the day of operation?

Please inform hospital staff if your child feels unwell within a few days of the operation. Generally speaking, it may be best to delay the operation until they are better.

Please let hospital staff know if your child has been in recent contact with chickenpox, hand-foot-mouth disease or other infectious diseases.

Q Why may my child need medications before anaesthesia?

The anaesthetist may prescribe medications ('pre-meds') before operation to help your child relax, improve pain control or treat the preexisting illness. Please follow the instructions to take these medicines.

Local anaesthetic cream ('magic cream') is a common premed. When put on skin, it takes 30-60 minutes to work. It works well to reduce discomfort when an intravenous cannula is placed. An intravenous cannula is a thin plastic tube that is placed into a vein under the skin, so that drugs and fluids can be given as needed during and after the operation.

What will happen on the day of operation?

- ✓ Before going to operation, your child may get changed. A ward nurse and you will accompany your child to the operating room. Your child can bring his/her favourite toy or comforter.
- ✓ You may be allowed to stay with your child until he/she is asleep. However, there are a few circumstances when this will not be possible. You can discuss with the anaesthesiologist about this.
- ✓ Before anaesthesia, various monitors will be attached to your child to keep him/her safe throughout the procedure.
- ✓ Older children will have an injection through an intravenous cannula which can put them into a good sleep within a few seconds. Younger children will breathe through a mask with anaesthetic gas so that they will gradually fall asleep within 2-3 mins. In this case, an intravenous cannula will be established afterwards.
- ✓ When your child is anaesthetised (in a deep sleep), the anaesthetist will stay with him/her at all times and give drugs to keep him/her unaware, safe, and comfortable.

- ✓ As soon as the operation is finished, the anaesthetic drugs will be stopped and your child will wake up in a short period of time.
- ✓ Depending on the clinical condition, some patients may be kept asleep and ventilated with the help of a machine after the operation; for example, after major operations or prolonged procedures.

What will be used to control my child's pain?

Your child will be given pain relief medications during operation and when necessary in the recovery room. The anaesthetist will discuss with you on pain management plan appropriate for your child.

Examples of pain relief methods:

- Oral drugs
- Rectal suppositories
- Intravenous drugs, either boluses, infusion or nurse/patient controlled analgesia (N/PCA)
- Epidural or caudal analgesia
- Local anaesthetic infiltration or regional blocks

Risk of general anaesthesia

In general, modern anaesthesia is safe and the risk of death directly due to anaesthesia in healthy children is very low. The surgical procedure may incur certain risks and your surgeons will discuss with you. The side effects and complications associated with general anaesthesia can be classified into the following groups: very common, common, uncommon, and rare or very rare.

Very common and common side effects (1 in 10 to 1 in 100)

- Nausea or vomiting
- Sore throat
- Airway obstruction
- Pain during injection of drugs
- Agitation, confusion or short term behavourial changes
- Breath-holding (especially neonates and premise)

Uncommon side effects (1 in 1,000) and complications

- Aspiration of stomach contents or foreign matters into the lung
- Depressed breathing
- Difficulty breathing
- Dental injuries
- Failure to intubate

Rare or very rare complications (1 in 10,000 – 100,000)

- Damage to eyes
- Serious allergy to drugs
- Nerve injury
- Complications of invasive line insertion
- Awareness: being awake in surgery in certain high risk patients
- Risk of death from anaesthesia for healthy children having minor to intermediate elective procedures is less than 1:100,000

Would anaesthesia affect my child's development?

There may be concerns regarding anaesthesic exposure to your child's brain development. Recent human studies suggest that a single, brief exposure to general anaesthesia is safe to infants and toddlers' development, although we are still waiting for more researches to provide information on the effects of multiple and prolonged anaesthetic exposure on brain development in young children.

Since there are no or little alternatives to general anaesthesia for young children who need surgical procedures, we should not withhold or delay necessary surgical procedures due to the concern of anaesthetic risk. Moreover, untreated pain and stress during surgery is also potentially harmful to developing brains.

Remarks

This is general information only and the list of complications is not exhaustive. Other unforeseen complications may occasionally occur. In special patient groups, the actual risk may be different. Please contact your doctor for further information.

Complications may sometimes occur despite all precautions. However, if they do occur, your doctor will take appropriate steps to manage them.

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