What is oesophageal dilatation?

The oesophagus (foodpipe) is the tube that takes food from the back of the mouth to the stomach. It contains muscles which squeeze rhythmically to push food downwards.

Sometimes, the foodpipe can become narrowed, making eating and swallowing more difficult. Narrowing can happen when scars develop following surgery to the foodpipe, but it can also occur when the foodpipe is burnt, for instance after swallowing a dangerous chemical. Narrowing can also develop as a side effect of some illnesses, for instance, epidermolysis bullosa (EB).

This narrowing is usually diagnosed using a barium swallow test. This involves drinking a liquid that shows up well on X-rays. A series of X-ray pictures are taken to show the liquid passing down the foodpipe to the stomach. The doctors will usually ask that your child has a barium swallow before the oesophageal dilatation so that they can confirm the exact area where the foodpipe is narrowed.
What happens before the oesophageal dilatation?

You will already have received information about how to prepare your child for the procedure in your admission letter. The doctor will explain the dilatation in more detail, discuss any worries you may have and ask you to sign a consent form giving permission for your child to have the procedure. If your child has any medical problems, please tell the doctors.

Many of the studies we perform involve the use of x-rays. Legally, we are obliged to ask any girls over the age of 12 whether there is any chance they might be pregnant. This is to protect babies in the womb from receiving unnecessary radiation.

What does it involve?

Oesophageal dilatation is always carried out while your child is under a general anaesthetic. It is important that your child does not eat or drink anything for a few hours before the anaesthetic. This is called ‘fasting’ or ‘nil by mouth’. Fasting reduces the risk of stomach contents entering the lungs during and after the procedure.

You will be informed the night before the procedure of the time that your child should be ‘nil by mouth’ – in other words, have nothing to eat or drink before the anaesthetic. Fasting times are provided in your admissions letter – in broad terms, this is six hours for food (including milk), four hours for breast feeding and two hours for clear fluids before the procedure.

It is equally important to keep giving your child food and drink until those times to ensure they remain well-hydrated and get adequate nutrition. This may involve waking your child in the night to give them a drink which we recommend.

Once your child is under general anaesthetic, the doctor passes a catheter (soft plastic tube) containing a balloon down the back of your child’s mouth into their foodpipe. They watch where the catheter is by using X-rays and continue to pass it down the foodpipe until it reaches the narrowed section. Once it is in place, the doctor inflates the balloon so that it stretches the narrowed section. Further X-rays are taken to check how much the balloon is inflated. At the end of the procedure, the balloon is deflated and with the catheter is brought back up the foodpipe and out of your child’s mouth.

Are there any risks?

Oesophageal dilatation is carried out while the child is under general anaesthetic. Although every anaesthetic carries a risk, this is extremely small. There is little risk of infection because no incisions or cuts are necessary. Your child’s throat is likely to feel a bit sore for a few hours after the procedure, but this can be helped with pain relief such as paracetamol.

There is a very small chance that the foodpipe could be damaged during the procedure, causing a tear in the foodpipe wall. This is unlikely as the progress of the catheter and balloon down the foodpipe is checked frequently using x-rays. If damage occurs, the doctors will usually place a nasogastric (NG) tube through the foodpipe, past the damaged area, and into the stomach. Your child will need to stay in hospital to be fed...
using this naso-gastric (NG) tube for a few days afterwards while the foodpipe heals. An NG tube is a thin, plastic tube that is inserted into one of your child’s nostrils, down the back of the throat into the stomach. Alternatively, if your child already has a gastrostomy feeding tube in place, this will be used for feeding until the foodpipe has healed.

Quite often, the affected section of the foodpipe narrows again, but oesophageal dilatation can be repeated as many times as needed. The doctors may suggest a series of dilatations so that the foodpipe is gradually widened as this often gives the best long-term results.

Are there any alternatives to oesophageal dilatation?
This is the safest and least invasive way of widening a narrowed section of the foodpipe. It could be repaired using open surgery but this carries a greater risk of infection or bleeding and is a much bigger operation.

What happens afterwards?
Your child will return to the ward after they have recovered from the anaesthetic. Some children feel sick and vomit after a general anaesthetic. Your child may have a headache or sore throat or feel dizzy, but these side effects are usually short-lived and not severe. Your child can start eating and drinking as normal once they feel like it.
Going home

Your child will usually be able to go home a couple of hours after the procedure, if they have recovered from the anaesthetic and have had something to eat and drink. You will normally need to come back to hospital for an outpatient appointment a few weeks afterwards to check how your child is recovering. Another barium swallow might be needed at this appointment to show whether the dilatation has been successful.

You should call the hospital if:

- Your child is in a lot of pain and pain relief does not seem to help
- Your child is not drinking any fluids
- Your child brings up red, black or brown vomit (this may be blood) more than once. Many children vomit non-bloody sick a few times after the procedure but this will not do them any harm.

If you have any questions, please telephone 020 7405 9200 and ask for the ward from which your child was discharged

Notes

Compiled by the Interventional Radiology team in collaboration with the Child and Family Information Group

Great Ormond Street Hospital for Children NHS Foundation Trust, Great Ormond Street, London WC1N 3JH

www.gosh.nhs.uk