British Society of Interventional Radiology
Paediatrics

British Society of Interventional Radiology
The Royal College of Radiologists
63 Lincoln's Inn Fields
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Oesophageal Dilatation

This information sheet tells you about the oesophageal dilatation procedure. It explains what it involves, what are the possible risks, and what to expect when your child comes to the Interventional Radiology department for treatment.

Please note that this leaflet is not meant to replace discussion between you and your child's doctor. You should raise any questions you may have with the doctor who has referred your child for, or is performing, the procedure.

What is oesophageal dilatation?

The oesophagus (also known as the gullet or food-pipe) is the tube that takes food from the back of the mouth to the stomach. It contains muscles which squeeze rhythmically to push the food down.

Sometimes, the oesophagus can become narrowed, making eating and swallowing more difficult. Narrowing can happen when scars develop following surgery to the oesophagus. They can also occur when the oesophagus is burnt, for instance after swallowing certain chemicals. Narrowing can also develop as a result of some illnesses, like epidermolysis bullosa (EB).

Oesophageal dilatation is a procedure to widen the narrowing in the oesophagus using a catheter (a long, thin, soft tube) with a balloon. Dilatation aims to stretch the narrowing and make swallowing easier.

Why does my child need oesophageal dilatation?

Your child has been diagnosed with a narrowing of the oesophagus and are struggling with eating and swallowing, your doctor will explain the underlying cause of this. The aim of the procedure is to make swallowing easier.

How does my child prepare for oesophageal dilatation?

Your doctor may ask that your child has a barium swallow test before the oesophageal dilatation. A barium swallow test involves drinking a liquid while a series of X-ray pictures are taken. The liquid shows up well on the X-rays and helps confirm the site, length and severity of the narrowing in the gullet.

Oesophageal dilatation is usually performed as a day case procedure. Your child will come into the hospital, have the procedure, and go home the same day.

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.

The specific fasting times for your child's procedure will be included in your admissions letter.

In broad terms, your child should not:

- Eat food or drink milk for 6 hours before the procedure
- Have breast milk for 4 hours before the procedure
- Drink clear fluids for 1-2 hours 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.

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On admission, you will meet the interventional radiologist and the anaesthetist. The interventional radiologist is a doctor specially trained to perform image-guided procedures - like oesophageal dilatation.

The doctor will explain the procedure in more detail, answer any queries you may have, and ask you to sign a consent form giving permission for your child to have the procedure. Please tell the doctors if your child has any medical problems.

This procedure involves 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.

How is oesophageal dilation performed?

Once your child is under general anaesthetic, the doctor will pass the catheter with the balloon over a guidewire and down the back of your child's mouth into their oesophagus. The catheter is then passed across the site of the narrowing. The doctor will use X-ray machines to follow the progress of the catheter and see when the balloon is in the correct position. 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 the catheter is brought back up the oesophagus and out of your child's mouth.

This is the safest and least invasive way of widening a narrowed section of the oesophagus. The oesophagus could be repaired using open surgery but this carries a greater risk of infection or bleeding and is a much bigger operation.

Who performs the procedure and where?

Oesophageal dilatation can be performed by radiologists or specially trained radiographers. These are people who are experts in image guided procedures. The procedure can be performed in a specialist interventional radiology room or in a theatre with X-ray equipment.

What are the potential risks or complications of oesophageal dilatation?

Oesophageal dilatation is carried out under general anaesthetic. Although every anaesthetic carries a risk, this is extremely small.

Your child's throat is likely to feel sore for a few hours after the procedure, but this can be helped with pain relief such as paracetamol. Your child may cough or spit a small amount of blood after the procedure. It is very rare that they will continue to spit blood or require any additional treatment for bleeding. There is little risk of infection because no incisions or cuts are necessary.

There is a very small chance that the oesophagus could be damaged during the procedure, causing a tear in the wall of the oesophagus. This is called an oesophageal perforation. Although this is rare, a perforation can be life threatening. It can happen after any dilatation, even if there has not been a problem before. If a perforation occurs, the doctors will usually insert a nasogastric (NG) tube. An NG tube is a thin, plastic tube that is inserted into one of your child's nostrils, down the oesophagus (past the damaged area) and into the stomach. Your child will need to stay in hospital to be fed using this NG tube for a few days while the oesophagus heals. If your child already has a gastrostomy in place, this will be used for feeding until the oesophagus has healed.

Quite often, the affected section of the oesophagus narrows again and another oesophageal dilatation will be required. It is important to remember that this procedure can be repeated as many times as needed. In some children, the doctors may suggest a series of dilations are performed so that the oesophagus is gradually widened. This can help to obtain the best long-term results.

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.

The radiologist will decide how soon after the procedure your child can eat or drink. Pay special attention to these instructions, because they are important. Different hospitals may have different policies about this. Your child can usually have some clear fluids to drink after the procedure. If this is well tolerated, they will be allowed to eat and drink.

The radiologist will generally review your child before you are discharged. They will ensure your child is well and that there have been no complications. They will discuss the procedure and any plans for any immediate plans for further oesophageal dilatations.

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Your child will usually be able to go home a few hours after the procedure, if they have recovered from the anaesthetic and have had something to eat and drink. You may need to come back to the 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 has difficulty breathing
- Your child has a high fever
- Your child is not drinking any fluids (if they normally can)
- Your child looks pale or mottled
- Your child brings up red, black or brown vomit (this may be blood) more than once.

Notes