NHS
National Institute for Health and Clinical Excellence

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Foker technique for long-gap oesophageal atresia

Understanding NICE guidance – information for parents and carers considering the procedure, and for the public

Information about NICE Interventional Procedure Guidance 153

Ordering information

You can download the following documents from www.nice.org.uk/IPG153

- this booklet
- the full guidance on this procedure.

For printed copies of the full guidance or information for the public, phone the NHS Response Line on 0870 1555 455 and quote:

- N0965 (full guidance)
- N0966 (information for the public).

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Contents

About this information 4

About the procedure 5

How well the procedure works 6

Risks and possible problems with the procedure 7

What has NICE decided? 8

What the decision means for you and your baby 9

Further information 10

About this information

The National Institute for Health and Clinical Excellence (NICE) is the independent organisation responsible for providing national guidance on the promotion of good health and the prevention and treatment of ill health. One of NICE's roles is to produce guidance (recommendations) on whether interventional procedures are safe enough and work well enough to be used routinely in the NHS in England, Wales and Scotland.

This information describes the guidance that NICE has issued on a procedure called the Foker technique. It is not a complete description of what is involved in the procedure – your baby's healthcare team should describe it in detail.

NICE has looked at whether the Foker technique is safe enough and works well enough for it to be used routinely for the treatment of the rare but serious condition called long-gap oesophageal atresia.

To produce this guidance, NICE has:

- looked at the results of studies on the safety of the Foker technique and how well it works
- asked experts for their opinions
- asked the views of the organisations that speak for the healthcare professionals and the babies and parents and carers who will be affected by this guidance.

This guidance is part of NICE's work on 'interventional procedures' (see 'Further information' on page 10).

About the procedure

Oesophageal atresia is a rare condition that a baby can be born with. The oesophagus is the tube that connects the mouth and the stomach. In oesophageal atresia, the tube is not formed correctly and there is a break in it. In some babies, the 'broken ends' or pouches of the oesophagus are just closed off – they have a section of oesophagus running from the mouth to an ending, then a gap, and then another section of oesophagus starts and runs down to the stomach. More commonly, one or both of the 'broken ends' are joined to the windpipe (the trachea) in what are known as tracheo-oesophageal fistulae (babies with this condition are sometimes called TOF babies). If the baby has a fistula like this, potentially air can pass from the windpipe into the stomach, and saliva and milk can pass from the oesophagus into the lungs.

Oesophageal atresia is a serious condition and if it is not treated, it is fatal. Long-gap oesophageal atresia, which is the condition specifically covered by the NICE guidance, is where the gap between the two sections of oesophagus is relatively large (probably more than 3 cm).

A baby with oesophageal atresia normally has an operation within the first few days of his or her life. The operation may be delayed for up to 3 months if the baby has long-gap oesophageal atresia. The aim of this delay is to let the oesophagus grow so that the gap closes up and the two sections of the oesophagus can be stitched together. During this time, the baby is fed by a tube. If the two sections of oesophagus don't grow close enough together, the surgeon will use another procedure to overcome the problem.

The new procedure NICE has looked at, which is known as the Foker technique, involves pulling slightly on the broken ends of the oesophagus to encourage them to grow towards each other. If one or both sections of the oesophagus are joined to the windpipe, they are separated away and the opening or openings in the windpipe are

then closed. Special stitches called traction sutures are put into the ends of the oesophagus and then drawn out through the skin and attached outside the body. A small amount of pressure is applied to these stitches, with the aim of encouraging the sections of the oesophagus to grow. Once the ends have grown close enough together, the two ends are stitched together to form a complete oesophagus. The baby is usually kept sedated and on a ventilator for a few days afterwards to allow the join between the sections of oesophagus to heal.

How well the procedure works

What the studies said

One study followed what happened in 10 babies with long-gap oesophageal atresia. Four babies had the Foker procedure and the remaining six had the oesophagus joined without external traction. After they'd had the surgery, all ten babies had what's known as gastro-oesophageal reflux, where the contents of the stomach return up the oesophagus. They all had further surgery to help with this. The children's progress was checked when they were around 9 years old. At this stage, all four children who'd had the new procedure were eating excellently or satisfactorily.

In a different study, 23 babies were treated with external traction. The oesophagus was joined in all 23 cases.

In another study, two out of the three babies who'd had the new procedure were feeding normally 4 months after the surgery. In another report, one infant out of two who had the Foker procedure was eating solids normally at the age of 1 year. The other infant still needed to be fed through a tube.

The sections of oesophagus were joined successfully in four out of four babies in one study, two out of two babies in a second study, one out of two babies in a third study, and one out of three babies in a fourth study.

Risks and possible problems with the procedure

What the studies said

There were problems with the traction sutures in 3 out of a total of 12 babies from all the studies. This usually meant that for these babies, the surgery to join the sections together had to be carried out with more tension on the ends of the oesophagus than would normally be applied.

In the studies, no babies died as a direct result of having surgery to overcome oesophageal atresia.

What the experts said

The experts said that babies who had the Foker procedure could go on to have a narrowing at the site of the join, and/or reflux. Other possible problems were leakage through the join, problems with the traction stitches, the formation of more fistulae, problems with the way the stomach emptied and problems swallowing.

What has NICE decided?

NICE has considered the evidence on the Foker technique. It has recommended that when doctors use this procedure for babies with long-gap oesophageal atresia, they should be sure that:

- the parents or carers understand what it means to have oesophageal atresia
- the parents or carers understand what is involved with the new procedure and that further surgery may be needed to overcome some side effects of the procedure
- the parents or carers agree (consent) to the treatment, and
- the results of the procedure are monitored.

The Foker technique should be performed by specialists who have had specific training in the technique. It should be carried out in surgical units that specialise in surgery for children.

Other comments from NICE

A baby who has long-gap oesophageal atresia often has other medical problems as well. If he or she dies after having the Foker procedure, the death is often because of these other medical problems and not because of the operation.

What the decision means for you and your baby

Your doctor may have offered the Foker technique to treat your baby's long-gap oesophageal atresia. NICE has considered this procedure because it is relatively new. NICE has decided that although there is not much evidence available from studies, the results that are available suggest the procedure is safe enough and works well enough for use in the NHS for babies with this rare and serious condition. Nonetheless, you should understand the benefits and risks of the Foker technique before you agree to it. In particular, your baby may need to have more surgery in the future if side effects develop. You should also understand that oesophageal atresia is fatal if it isn't treated. Your doctor should discuss all these issues with you. Some of these may be described above.

Further information

You have the right to be fully informed and to share in decision-making about the treatment your baby receives. You may want to discuss this guidance with the doctors and nurses looking after your baby.

The NICE website (www.nice.org.uk) has further information about NICE, the Interventional Procedures Programme and the full guidance on the Foker technique for long-gap oesophageal atresia that has been issued to the NHS. The evidence that NICE considered in developing this guidance is also available from the NICE website.

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