Long-gap OA - delayed anastomosis

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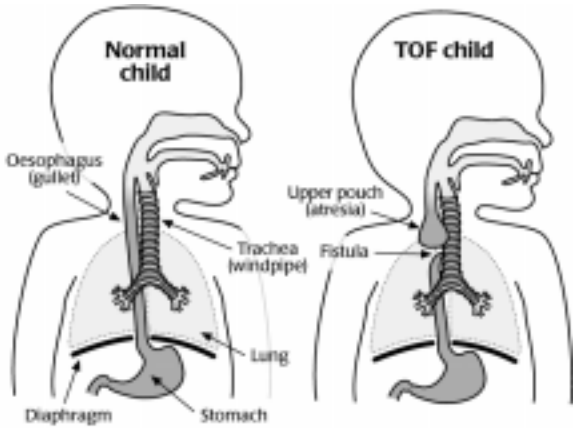
Oesophageal atresia - what is it?

Babies with oesophageal atresia (OA), cannot swallow food because there is a gap in their food-tube (oesophagus) which would normally transmit food from the mouth to the stomach. 'Atresia' is a word taken from ancient Greek which means 'no way through', so oesophageal atresia means, in effect, 'no way through the oesophagus.'

Babies with OA often also have another problem, a connection between the foo tube and the airway. This is called tracheo-oesophageal fistula or TOF (fistula is from Latin, meaning 'a pipe)

The diagram on the right shows the most common combination of OA and TOF – where the connection between the airway and the food-pipe is below the gap in the food-pipe. Some babies may have the connection about the gap, others have only OA or TOF (i.e. they do not have both).



The aim of surgery to correct OA is to join the two ends of the oesophagus back together. In most babies this is possible, and the operation successfully restores continuity of the food tube so that the baby can swallow food.

Long-gap OA

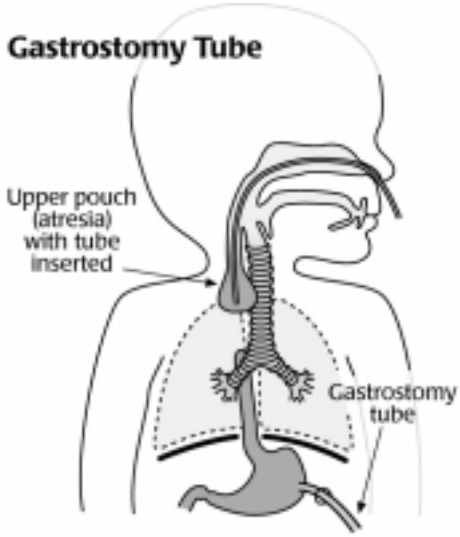
In a small number of babies with OA, the gap between the ends of the oesophagus is too large to bridge immediately. This is called 'long-gap oesophageal atresia.'

Long-gap oesophageal atresia is especially common in babies with no TOF (the connection between the airway and food-tube), i.e. those who have only OA.

The length of the gap may be obvious from the start, before any surgery has been undertaken, or it may be something that the surgeon discovers in theatre.

The surgeon will create a gastrostomy or 'G tube.' This is a tube which passes into the stomach through the abdomen wall on the left hand side, to allow feeding. The bottom end of the oesophagus also needs to be closed off, unless it is already blind.

A tube is also left in the upper part of the oesophagus, which is either left attached to a suction machine or manually aspirated at regular intervals, to prevent overflow of saliva into the lungs. Babies with OA continue to produce saliva – like any other baby – and try to swallow it, but



of course the fluid cannot reach the stomach and instead accumulates in the upper part of the oesophagus. If this were to build up it could cause problems, so the tube - which needs careful and meticulous nursing care - is used to remove it.

If the surgeon discovered the long-gap OA during surgery, then he or she will obviously now need to come and talk to you about what happens next.

This information has been written for the parents of TOF children by TOFS (Tracheo-Oesophageal Fistula Support) – helping children born unable to swallow.

If you have any feedback on this leaflet, please use our leaflets feedback form which is available from either the TOFS office our web site.

TOFS relies on money from membership fees, voluntary donations and other sources of charitable income to fund its activities.

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Related leaflets from TOFS which you might like to read:

1 Surgery for TOF/OA
2 Your child in hospital
3 Gastrostomy tubes
4 Sham feeding

These are all available from the TOFS web site (www.tofs.org.uk) or from TOFS office.

TOFS also publishes a book, 'The TOF Child,' which is suitable for both parents and medical professional. Details are available from TOFS.

What happens next?

Unless the gap is terribly long (for example, greater than the length of six vertebrae when viewed on a radiograph), the hope is that the ends of the oesophagus will grow over the course of the next few months so that they can be joined together (anastomosed).

This is called a 'delayed primary anastomosis' – a direct joining of the two ends of the oesophagus which has been delayed to allow the oesophagus a little further time in which to lengthen.

If the gap between the ends of the oesophagus is excessive (for example, greater than the length of six vertebrae when viewed on a radiograph), the surgeon may decide not to reassess the growth after a few weeks, and will instead proceed immediately to an oesophageal substitution operation. This is an operation in which another part of the baby's intestines is used to bridge the gap between the ends of the oesophagus.

How do we know if the gap has decreased?

The gap between the upper and lower ends of the oesophagus is usually assessed in the radiology (X-ray) department at around six weeks to ascertain whether a delayed primary anastomosis is feasible. Catheters which will show up on the X-ray film are introduced into the upper oesophagus through the nose or mouth and into the lower oesophagus through the gastrostomy, enabling the distance between the two ends to be measured.

In the meantime, the baby is fed through the gastrostomy tube. If a cervical oesophagostomy has been performed, the infant can be taken home, provided sham feeding continues prior to the replacement operation. Otherwise the baby must remain in hospital – although infants in whom the upper oesophagus is left intact often learn to spit out their saliva. If this happens, then these infants may be allowed home until the reconstructive operation.

If a join-up operation is considered feasible after this period, it involves the same procedure as would have taken place for a child who was born with a gap which could be closed immediately.

What happens if the gap hasn't closed enough?

A further radiological (X-ray) study may be carried out at 12 weeks to see if the gap becomes any smaller in order that a join-up can be performed.

Waiting to see whether any growth will occur in the two ends of the oesophagus after 12 weeks is unproductive and the child should be submitted to an oesophageal substitution procedure rather than persisting with the intention of performing a delayed primary anastomosis after 12 weeks.