

Esophageal Atresia and Tracheoesophageal Fistula in Newborns

A Guide for Parents

What is esophageal atresia and tracheoesophageal fistula?

Esophageal atresia is an abnormality, or birth defect, of the esophagus that occurs early in pregnancy as the baby is developing. The esophagus forms in the first few months of fetal life as a long, hollow, continuous tube joining the mouth to the stomach. In newborns with this birth defect, formation of this continuous esophageal tube is interrupted. Instead, two separate tubes are formed, an upper tube or pouch connected to the mouth and a lower pouch connected to the stomach. The pouches are separated by a gap. Because the upper pouch ends blindly, saliva is trapped, accumulates and cannot drain into the stomach.

There are many variations of this birth defect. Newborns with esophageal atresia often have a tracheoesophageal fistula. This is a direct connection between the upper pouch, lower pouch or both, and the trachea or windpipe. This connection can lead to a breathing problem called aspiration pneumonia if saliva from the upper pouch or stomach contents from the lower pouch enter the trachea and lungs.

Where will my baby be cared for and how is esophageal atresia and tracheoesophageal fistula surgically repaired?

Your baby will be cared for in an Intensive Care Nursery by specially trained doctors and nurses. To prevent aspiration pneumonia, the tracheoesophageal fistula must be surgically closed soon after birth. If the gap between the two ends of the esophagus is small, the ends will be brought together. This is called a primary repair. If the upper and lower pouches are too far apart to bring together, only the fistula will be closed and the esophagus repair may be delayed. If the gap is very wide, an alternative method of surgical repair of esophageal atresia may be offered. Your child's pediatric surgeon will discuss this with you.

Before the esophagus is repaired, saliva can accumulate in the upper pouch and spill into the lungs. This can lead to choking. To prevent choking a small tube attached to a suction device is passed through the mouth into the upper pouch to provide continuous drainage.

At the time of esophageal repair, a tube will be placed in your child's chest to drain any fluid that might accumulate near the surgical site. About 10 days after surgery, your child will have a special X-ray called a contrast esophagram. This test is done to ensure there are no leaks along the esophageal repair. If the incision has healed without a leak, the chest tube will be removed and feedings will be started by mouth. In some cases, the esophageal repair may take longer than 10 days to heal. A leak will be visible on the X-ray. If there is a persistent leak, the chest tube will remain in place until the leaking stops. X-ray studies will be repeated every several days until the esophageal repair has healed.

How will my baby be fed?

Intravenous fluids will be given until breast milk or formula feedings can be started. Feedings are begun once your baby has recovered from the operation, usually after several days. Feedings will be given one of two ways. If the esophagus is repaired primarily, a thin soft tube will be placed through the nose, down the esophagus and into the stomach. This tube will be used to give feedings while the esophagus heals. The feeding tube will be removed after the esophagus is healed and full oral feedings are established. If repair of the esophagus is delayed because of a wide gap between the pouches, a gastrostomy tube will be placed in the stomach when the tracheoesophageal fistula is closed. The gastrostomy tube will be used to give feedings and to remove (decompress) air from the stomach until the final repair of the esophagus is performed.

How long will my baby be in the hospital?

Your baby will remain in the Intensive Care Nursery until he or she is taking full feedings by mouth or gastrostomy tube and is gaining weight. This usually takes several weeks. Babies born with esophageal atresia and tracheoesophageal fistula may have a condition called tracheomalacia or soft airways. This occurs during pregnancy as a result of compression of the dilated upper pouch of the esophagus on the developing trachea. Tracheomalacia may contribute to breathing problems after birth, prolonging the hospital stay. Babies usually outgrow tracheomalacia as the airways become firmer over the first year of life.

Babies with esophageal atresia and tracheoesophageal fistula also have gastroesophageal reflux, a back flow of contents from the stomach into the esophagus. This is due to poor motility or contractility of the lower portion of the esophagus. Reflux may contribute to irritation of the esophagus and cause pain. The irritating effects of the stomach contents on the esophagus may cause tightening (stricture) at the surgical site in the esophagus. To prevent this irritation, your baby will be started on an antacid medication and a medication to enhance stomach emptying. These medications will be prescribed throughout the first year of life with dosages adjusted as your child gains weight.

If your baby has a gastrostomy tube, the nurses will show you how to care for it and use it for feeding or to decompress air from the stomach. A replacement gastrostomy tube of the same size will be sent home with you at discharge. The discharge coordinator in the Intensive Care Nursery Feeding will order supplies for you. A homecare company will deliver these supplies to your home. Nurses will be requested to visit you and your child after discharge to help ease the transition from the hospital to home.

Do I see the pediatric surgeon after the hospital discharge?

If all is going well, a visit to our office at a specific time is not required. A visit to your child's pediatrician one to two weeks after leaving the hospital is recommended. Children with esophageal atresia and tracheoesophageal fistula may have intermittent problems with esophageal narrowing (stricture) at the site of repair. If this occurs, your child will have trouble with liquids or solids passing down the esophagus into the stomach. If the problem is severe, you may notice your child drooling excessively or the refusing to take food or liquids. If you suspect there is a stricture call our office as soon as possible. We will arrange for a special X-ray called an esophagram. This X-ray will outline the esophagus, helping to identify any narrowing or stricture of the esophagus. Surgical dilation or stretching of the esophageal stricture may be required and will be done under anesthesia. If your child has a gastrostomy button for feedings, you will be referred to a pediatric gastroenterologist for feeding management and maintenance of supplies.

When do I call the Pediatric Surgery office?

Call our office at 415-476-2538 if:

- You have any concerns about your child's progress
- You notice redness at the incision site, with or without a fever
- Your child has severe pain and tenderness at the incision
- You see any fluid coming out of the incision
- Your child has difficulty swallowing liquids or solids

Parent support organizations:

EA/TEF Child and Family Support Connection, Inc.
111 W. Jackson Blvd., Suite 1145, Chicago, Ill. 60604-3502

Phone: 312-987-9085

Email: eatef2@aol.com

Web: www.eatef.org

TEF/Vater International Support Network

15301 Grey Fox Road
Upper Marlboro, Md. 20772

Phone: 301-952-6837

Email: info@tefvater.org

Web: www.tefvater.org

This information is for educational purposes only and is not intended to replace the advice of your physician or health care provider. We encourage you to discuss with your physician any questions and concerns you may have.