1. Description of the disease

Your child has been diagnosed with esophageal stricture (narrowing), which is one of the most common complications after esophageal atresia repair surgery. The risk of narrowing is estimated at up to 50%. The reason for the narrowing is a scar that forms at the anastomosis site. Scar formation is the result of a natural healing process after surgery. However, in some children, the scar grows so much that it causes narrowing or almost complete closure of the esophagus. Risk factors for this condition include: long-gap esophageal atresia, high-tension anastomosis, and post-operative anastomosis leakage. In addition, the scar's growth is intensified by irritation with gastric juice due to gastroesophageal reflux. The effect of narrowing is the inability to drink and eat.

2. Treatment

The only effective method of treating esophageal stricture is endoscopic esophageal dilatation. The goal of dilatating the esophagus is to allow your child to drink fluids and eat naturally. It often happens that the stricture recurs after a few weeks and then the dilatation procedure must be repeated. Most children need dilatation procedure several times, but some require a dozen or more. The effectiveness of treatment in our center is very high and is nearly 100%. In very rare cases, surgical resection of the stricture and re-anastomosis or reconstruction of the esophagus using a portion of the stomach or intestine is necessary.

3. Description of the procedure

Each esophageal dilatation procedure is performed under general anesthesia, which is performed by anesthesiologists with experience in the treatment of newborns and young children. During the procedure, the child sleeps and does not feel pain, and his vital signs are constantly monitored. You will be informed about the details of the course of anesthesia and possible complications by an anesthesiologist who will ask you for separate informed consent for general anesthesia.

The procedure begins with esophagoscopy. The surgeon inserts a gastroscope (flexible tube with a camera) through the mouth into the child's esophagus. With the help of a gastroscope, the surgeon locates and evaluates the site of the narrowing. Thin guide is then passed through the stricture and dilators are fitted along the guide. The esophagus widens until the desired esophageal lumen width is obtained, which is determined based on the child's age and mechanical resistance when the surgeon inserts the dilators. In the event of severe narrowing or difficulty in dilatating, it may be necessary to perform an X-ray examination involving the child's exposure to ionizing radiation. After the procedure, if there are no complications, the child is woken up from anesthesia and can drink and eat the same day. Most children are discharged home the first day after surgery.

The most serious and at the same time the most common complication after the dilatation of the esophagus is perforation - perforation of the esophagus due to mechanical damage to its wall by a gastroscope, guide or dilator. The risk of esophageal perforation is estimated at 1%.
Esophageal perforation may be small and only require leaving the nasogastric tube for a few weeks. However, there are cases of extensive damage to the esophagus wall, which causes saliva or gastric juice to enter the mediastinum and pleural cavity, which in turn can lead to a state of immediate threat to the child's life. Treatment of extensive perforation is to put on a nasogastric tube, if possible, and leave the drain in the chest. In extreme cases, re-surgery may be required to stitch the perforation or reconstruction of the esophagus.
Other complications such as hemorrhage or throat, larynx or stomach damage are very rare.
Each esophageal dilatation is performed or supervised by a surgeon with extensive experience in this type of procedure, which minimizes the risk of complications.

Alternative or supportive treatments for esophageal stricture are under study. They are not used in standard treatment and there is no clear scientific evidence to show their effectiveness. These methods include injecting the stricture with steroids or cytostatics and placing the stent in the esophagus. The use of the those methods also requires treatment under general anesthesia. Due to the high effectiveness of endoscopic dilatation of the esophagus, alternative or supportive methods are considered only in rare cases where standard management is ineffective.

