MICHIGAN PEDIATRIC
ENT ASSOCIATES, PLLC

Airway Reconstruction Information Sheet

What is Airway Reconstruction?

Open airway reconstructions include procedures involving the area from the top of the voice box to the trachea (windpipe), and require a skin incision. These are usually performed when other surgeries have failed. Candidates are patients who have airway narrowing, such as subglottic stenosis, tracheal stenosis, or glottic webs.

For what purpose are these surgeries performed?

These surgeries are performed to expand a narrow airway, making your child more comfortable in his/her breathing through their mouth. This also allows for decannulation (removal of the tracheostomy tube) if present.

Why is it important to remove the tracheostomy tube (if possible)?

The presence of the tracheostomy tube has many benefits and is often necessary for life but it also has risks. If the tube comes out, children might “lose” their airway and not be able to breathe. The estimated risk of death in a patient with a tracheostomy is as high as 5% per year.

The tracheostomy tube may also cause growth of scar tissue and bleeding in the airway, and does requires lifetime maintenance. This is in addition to needing special equipment at home, and a decreased overall quality of life.

What should I expect during our hospital stay?

Your child may stay in the intensive care unit (ICU) for 3-7 days. During this time, they may be intubated (have a breathing tube in their nose) and be under sedation (placed in a sleep state) to prevent movement and possible damage of their new, healing/ repaired airway. A repeat evaluation of the airway will take place 3-7 days after the reconstructive surgery, where extubation (removal of the breathing tube) will be done if possible. Expect a hospital stay of 7-14 days (on average).

What material do we use for reconstruction?

Rib cartilage is an ideal material for airway reconstructions, because it is rigid and big enough, and has no risk of being rejected since it is taken from your child’s own body.

This will result in a small scar on the chest.

Another possible material is a thyroid ala cartilage graft, which is taken from the Adam’s apple (This is done through the same neck incision used to remove the tracheostomy tube and repair the airway).

What kind of follow up should I expect after the surgery?

Your child will need regular airway evaluations (DLB) after the surgery over a period of a year (on average), which will be gradually spaced out if the airway is healing well. IT IS IMPORTANT TO MAKE ALL OF THESE APPOINTMENTS AS NOT DOING SO CAN INCREASE RISK OF FAILURE.

What are the risks of the procedure?

As with any surgery risks of bleeding and infection exist. Specific risks for this surgery include pneumothorax (air trapped around the lungs), failure with the need of re-inserting a tracheostomy tube and in extremely rare situations (<1%) death. However, these events rarely occur, and the success rates of these procedures are above 90%.

What other information do I need to know before proceeding with surgery?

Having reflux (GERD) under control is very important for the success of the surgery. It is very important to keep your child on his reflux medication (zantac, nexium, prevacid, etc). To make sure this is under control, we might ask your child to visit a gastroenterologist (GI) for an expert opinion before surgery.
We also may ask your child to start antibiotics before surgery.

During the day of surgery, if the airway exam shows changes that we think may weaken the chance of success, we may need to reschedule the reconstruction to a later date. This is done to make sure your child has the best results!

*This is a large surgery and there are risks, but ultimately our goal is to give your child the best life possible with the least risk. We will do everything we can to help you through this process.
Please feel free to contact us or your doctor for any additional information.