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INSTRUCTIONS FOR PARENTS

AIRWAY ENDOSCOPY AND SURGERY

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The following instructions are presented for your review over the next several weeks. Please understand that every child is unique and that these instructions are offered as guidelines. Every child will handle each situation differently and every parent is similarly entitled to respond uniquely to their child's needs during the recovery and postoperative period of time.

Thank you.

Background:

Infants and children undergo airway evaluations at all ages for many reasons.

There may be **obstruction** in the nose, throat, voice box ("larynx") or windpipe ("trachea") from the newborn period because of a smaller than normal passageway or because vital airway structures are not functioning properly. There may be **masses** ("tumors") or **blood vessel** ("vascular") **lesions** that grow over childhood with subsequent development of airway symptoms. The child may have a **chronic cough**, often of a "croup-like" nature. Some children have **weak voices** or they **have poor activity tolerance** compared to age matched peers. There may be **scar tissue** from internal trauma to the voice box or windpipe after long-term use of an artificial breathing tube ("endotracheal tube"). Some children need a **tracheotomy**, the creation of a surgical airway through the neck, because of a significant long-term airway obstruction or because of the need for prolonged use of a mechanical breathing machine ("respirator" or "ventilator").

Follow up endoscopy, and possible surgery, for any of these children may be required.

Type of Procedures:

Flexible airway endoscopy involves passing a specially designed flexible fiberoptic endoscope through the nose to evaluate for abnormalities in internal nasal structures, for sinus disease, adenoid tissue, roof-of-mouth ("palate") function, base-of-tongue anatomy, and throat anatomy and function. It is during this procedure that your ENT doctor (the "endoscopist") will look for vocal fold mobility or signs of reflux change to the voice box ("larynx").

Rigid endoscopy involves passing a specially designed rigid endoscope (called a "telescope") through the mouth to evaluate the voice box ("larynx"), windpipe ("trachea") and main access to the lungs ("bronchi"). On occasion, a hollow metal tube ("bronchoscope') is first passed into the trachea followed by insertion of the rigid telescope. Sometimes, it is important to also evaluate the upper portion of the swallowing tube ("esophagus"). In such cases, a hollow metal tube ("esophagoscope") is first inserted into the esophagus followed by visualization with a rigid telescope. In some children, a small sample of tissue from the inner, upper esophageal lining will be obtained. In general, the only time your child is intubated with a semi-rigid plastic "breathing tube" is during the brief time that the esophagus is evaluated.

Micro-laser or micro-excision surgery is necessary, on occasion, if a child has significant internal scarring, a blood vessel ("vascular") tumor, excess obstructive tissue, paralyzed vocal folds, or other lesions such as papilloma or cysts. Laser technology, micro-instruments, and/or suction-debrider instrumentation, are

utilized under microscopic visualization to improve the internal size of the airway. The goal is to improve function while maximizing the potential for the body to heal safely on the inside.

Tracheotomy or Reconstructive surgery: If your child is scheduled to receive a tracheotomy, which is the creation of a surgical airway through the tissue of the neck, you will receive extensive education and training through the nursing staff at Wolfson's Children's Hospital while your child is still an inpatient. If your child is to undergo a reconstructive procedure, with or without use of cartilage grafting; you will receive additional information in the pediatric otolaryngology office. If your child is having a persistent non-closing tracheotomy site following tracheotomy tube removal, an overnight stay will be required but the general postoperative instructions are covered in the following paragraphs.

Types of Anesthesia:

For most airway endoscopy procedures, children continue to breathe on their own throughout the case and receive anesthesia during their normal inhalation and exhalation cycle. Most children, therefore, do not require a breathing tube ("endotracheal tube") to receive anesthesia. Alternatively, if they have a tracheotomy, anesthesia is usually given through the tracheotomy tube. On occasion, because of the concern for airway obstruction, a child will require the passage of a breathing tube ("endotracheal tube"), through the mouth, for a necessary period of time until the airway swelling has resolved or until the child is able to breath strongly enough on their own. In some cases, anesthesia is given through a specially designed hollow metal tube ("bronchoscope") that is placed in the windpipe in order to safely complete the procedure.

Discharge to Home:

Most children are discharged to home the same day of the procedure. Some children, however, will receive recommendations to remain for extended observation, either in the Pediatric out-patient suite (POPS), General Pediatric Floor, or Pediatric Intensive Care Unit (PICU), depending on age, severity of the problem, or post-operative symptoms.

OBSTRUCTED BREATHING:

If you feel your child is in <u>major airway distress</u>
and is at risk for <u>immediate respiratory collapse</u> with complete airway obstruction
with pale or bluish skin or lip color changes (cyanosis),

<u>CALL "911" IMMEDIATELY.</u>

OBSTRUCTED BREATHING (continued)

Signs of increased airway resistance or obstruction are labored breathing, retraction or excessive motion of either the neck muscles or the ribcage during the breathing cycle, or retraction of the small depression above the breastbone (sternum) with inspiration.

If you feel your child is experiencing progressive increased airway resistance or sustained partial obstruction, *without severe respiratory compromise*, call 911 –or- Go to the nearest Emergency room, and then notify your ENT doctor when reasonably possible.

If your child is making adequate air exchange during the breathing cycle and you do not feel that they are in immediate distress, but you still have concerns over increased airway resistance or obstruction, please contact us directly.

If you feel that your child is developing progressive breathing difficulty but is NOT in immediate distress, call our office at (904) 262-7368. If after hours, there will be a voice prompt to contact Dr. Wohl or the on-call physician.

Pain:

Pain is usually very limited after a diagnostic procedure – as opposed to a therapeutic procedure – because there is minimal, if any, touching of the inside airway lining. However, with a therapeutic procedure, because of the use of the laser or because of tissue contact with micro-instruments, varying degrees of discomfort or pain could result. In these cases, we suggest using non-narcotic acetaminophen (Tylenol, Panadol, Tempra, etc.) every 4-6 hours for the first twelve hours and then every 4-6 hours as needed over the next 24-48 hours.

Fever:

A low-grade fever may develop after airway endoscopy and surgery. It may be a response of the lungs after general anesthesia and is generally not a result of the endoscopy or surgery. You should take your child's temperature with a thermometer if you think it is high. Remind your child to breathe deeply on a regular basis. A temperature up to 101^0F is generally acceptable within two days of surgery. Please contact us if an oral temperature of greater than 101^0F persists beyond 24-48 hours after surgery - OR - if your child's fever does not respond to medication.

Diet:

If tissue was removed during the procedure, your child's throat may still be somewhat irritated afterwards. In such cases, you should avoid having your child drink very hot liquids or citrus juices for 48 hours.

Vomiting:

Some children may have mild postoperative nausea or occasional vomiting. This problem should resolve within one to two days. One to two episodes of vomiting is not unusual after airway surgery and usually results from the combination of anesthesia and any blood that may have been inadvertently swallowed. Excessive vomiting is unusual and should be reported.

Activity:

In general, there are no restrictions on return to normal activities post-operatively. Children will usually limit their level of activity to their level of tolerance. If you notice that your child has not returned to their baseline breathing and activity status within 48 hours after the procedure, please contact us.

Voice:

With a diagnostic only procedure, vocal changes are not expected. However, if your child's vocal folds were touched during surgery, or if laser or micro-instrumentation surgery was utilized in the voice box area, you may notice a change in your child's vocal quality. Depending on the type of procedure performed, these changes usually resolve within 24-48 hours. On occasion, it may take several weeks for your child's voice to return to their new baseline.

Medication:

If a diagnostic only endoscopy procedure was performed, medications are usually not necessary afterwards unless significant gastro esophageal reflux is identified. If tissue has been removed in the throat or upper windpipe, your child may receive prescriptions for, or a recommendation to continue, anti-reflux medications for a six to eight week period, as well as antibiotics for up to one week, to minimize the potential for excessive scarring or granulation tissue formation. On occasion, a short course of post-operative steroids is also prescribed.

Follow-Up Appointment:

A postoperative follow-up appointment is appropriate and is generally requested from two to four weeks following the procedure. On occasion, based on the nature of the lesion or the surgery performed, your first follow-up may be a return endoscopy procedure under general anesthesia in the operating room.

Telephone Instructions:

We encourage you to contact our office during regular working hours Monday thru Friday, for routine or urgent questions, if possible. If you have emergent "after hours" questions please call our office at (904) 262-7368, and follow the prompts to reach Dr. Wohl or the on-call physician.

****REMEMBER, FOR TRUE EMERGENCIES YOU SHOULD CONTACT 911 FIRST****