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PARTIAL TONSILLECTOMY ADENOIDECTOMY

A Pre-Operative and Post-Operative Guide for Parents and Patients

SOME BACKGROUND INFORMATION

1. What are tonsils and adenoids?

Tonsils and Adenoids are composed of lymphoid tissue. Adenoids are located behind the nose and soft palate. Tonsils are found at the back of the throat on either side. They produce antibodies that fight nose and throat infections. They act as filters to trap infection, virus, smog, etc. in the upper airway. Both the adenoids and tonsils are important in fighting infections.

Tonsils and adenoids become enlarged when bacteria or viruses enter into the airway and come in contact with these glands. In children, it is normal for these glands to remain enlarged due to the constant exposure to organisms not previously encountered. Enlarged adenoids and tonsils in and of themselves are not indicative of infection. When the tonsils and adenoids become enlarged for long periods of time, their filter function can be affected. They then act more as reservoirs for infection rather than filters. This is the most common reason for removal of tonsils and adenoids.

2. What is a partial tonsillectomy?

A partial tonsillectomy is a surgical procedure, which shaves off a large portion of the tonsils. Partial tonsillectomy is an option when a patient is suffering from obstructive sleep apnea with symptoms such as snoring and mouth breathing. Partial tonsillectomy results in a shorter and less painful recovery than a full tonsillectomy because it leaves part of the tonsillar capsule in place. The downside of this procedure is that there is a 5-10% chance of re-growth of the tonsils and a 5-10% chance of developing infection in the remaining tonsil tissue. Please contact our office and book an appointment to discuss which surgery is most advantageous for you or your child's situation.

3. What is an adenoidectomy?

An adenoidectomy is the surgical removal or partial removal of the adenoids, lymphoid tissue located on the back wall of the throat, behind the nose. This tissue is similar to tonsil tissue.

4. When should tonsils and adenoids be removed?

Adenoids and tonsils are recommended for removal when they become the continual source of infection or when they become so enlarged that they cause obstructive symptoms. Partial tonsillectomy is recommended when the tonsils cause obstructive sleep apnea. It is usually not indicated to treat recurrent infections

5. Indications for partial tonsillectomy are:

- a) Persistent mouth-breathing.
- b) Abnormal speech.
- c) Severe snoring.
- d) Persistent swallowing difficulties.

6. Indications for adenoidectomy are:

- a) Obstruction to the airway.
- b) Nasal stuffiness and post nasal drip.
- c) Chronic infection (infection of the adenoids usually presents itself in the form of foul smelling breath, cough or recurrent drainage.)
- d) Chronic ear infection. For children with a history of ear infection or persistent middle ear effusion (fluid), the doctor may recommend having a myringotomy and tube procedure performed while the child is undergoing tonsillectomy and/or adenoidectomy.

PREPARING FOR SURGERY

1. What medications should and should not be taken prior to surgery? Aspirin or aspirin based mediations (Motrin, Advil, Bufferin, Nuprin, Aleve, Ibuprofen etc.,) as well at vitamins should not be taken for two weeks prior to, and after, the surgery. Contact our office as to whether medication regularly taken should be taken the morning of surgery.

2. What can the patient eat and drink before surgery?

All patients undergoing surgery are allowed to ingest only clear liquids, up to 8 ounces, after midnight prior to the morning of the surgery. Adult patients must stop drinking liquids 4 hours before arrival to the hospital, while children may drink up to 3 hours prior to arrival. Clear liquids consist of apple juice, water, clear broth or Jell-O. No solids, juice with pulp or milk products are to be given after midnight prior to the morning of surgery. In the morning, patients may brush their teeth, but cannot swallow any water.

3. Mandatory blood tests for adults and children:

All adults must have a complete blood count blood test within 14 days of the surgery and no less than three days before the surgery. If other blood test are needed our office will notify you. Patients above the age of 45, are required to have a chest x-ray and an EKG. In the case of children, a CBC should have been performed preferably within a month of surgery. All results must be faxed into the office at 212 981-9832 no later than three days before the surgery date if testing is done outside the hospital.

4. What should I tell my child about the procedures?

It is important that you discuss the surgery with your child before the day that it is to take place. Reassure your child that on the day of surgery, there will be one parent with them throughout the entire first stage of anesthesia and that there will be no pain felt at all during this time. Make sure your child knows that you will be with him/her and that you

will make sure everything is okay. Explain to your child that this surgery is going to help keep him/her healthier in the future. Sesame Street, Mr. Rogers and Curious George all have wonderful children's' books about going to the hospital. If you can, get a copy of these books and read them with your child before the day of surgery. Remember to relax! The calmer you feel about this procedure, the calmer your child will be on the day of surgery. Please note that there is a special pre-operative program at New York-Presbyterian Hospital to help prepare you and your child for surgery. You can obtain more information about the program from our office.

5. Clothing and accessory restrictions:

For both pediatric and adult patients, contact lenses should not be worn on the day of surgery. If you wear them to the hospital, you will be asked to take them out before the surgery is started. Patients should abstain from wearing any makeup, earrings, open-toe shoes, or hats.

THE MORNING OF SURGERY AND THE PROCEDURE

1. Arriving and signing in:

Patients are generally scheduled for surgery at either New York Hospital, Manhattan Surgery Center, or Manhattan Ear Eye and Throat Hospital. If you are having surgery at New York Hospital, when you arrive at the hospital, you will go to the 9th floor of the Starr building, room L-919, the Ambulatory Surgery Center, where you and your child will sign in. If you are scheduled at Manhattan Surgery Center or Manhattan Ear Eye and Throat Hospital, you will go to the main reception desks at 619 West 54th Street or 210 East 64th street, respectively. Once you are signed in, your child will go into a changing area in the back room and change into hospital pajamas. Generally, with the approval of the anesthesiology staff, one parent is allowed to accompany the child to the operating room, This parent will need to change into a hospital jumper at the same time and place that the patient puts on his/her pajamas. The jumper fits right over your clothes. On the day of your child's surgery, the parent going up to the OR should wear pants, as opposed to a skirt if possible. Please refrain from wearing open-toe shoes or hats.

2. The waiting room:

Once your child is signed in and has changed into pajamas, you and your child will be brought to the waiting room. Usually you will wait in this area for about 45 minutes before your child is brought up to the OR. While there are some toys in the waiting area, you should bring a favorite toy or stuffed animal if your child has one. You may also bring a video tape or iPad that can be played for your child in the waiting room. Once the doctors in the OR are ready for your child, one parent or guardian and the patient will be escorted to the OR.

3. What happens in the operating room?

Children are placed asleep by general anesthesia administered via a mask. It is important for the parents to discuss this with their child, as this procedure can be frightening if your child is unaware of what to expect. Tell your child that you will be present throughout this entire phase of anesthesia induction. Once the patient is asleep, parents must leave

the OR. You will be reunited with your child once the procedure is finished and they are in the recovery room (PACU.) After the parents have left the OR Suite, an endotracheal tube and an intravenous line will be inserted. This is routine for all patients undergoing general anesthesia. Surgery will take approximately one to one and a half hours. While your child is in the OR, parents will be back asked to wait in a waiting room.

4. Information for adult patients:

Once signed in, you will go into a changing area in the back room and change into hospital pajamas. Please leave all valuables at home or leave then with the person that will be accompanying you on the day of surgery. Adults will be brought to the OR by an orderly. Since there are no pre-medications administered, you will be asked to walk or be transported by a wheelchair. An intravenous line will be inserted by an anesthesiologist and anesthetic agents will be administered through the IV as part of the induction phase. You will become groggy and, once asleep, an endotracheal tube will be inserted. Surgery is usually completed in one to one and a half hours. After surgery, you will be transferred directly to the post-anesthesia care unit (PACU). Family members or a significant other will be informed when you have arrived in the PACU. When you are awake enough they may be allowed to visit.

THE RECOVERY PERIOD

1. The who, what and where of the pediatric recovery period in the post-anesthesia care unit:

Upon completion of surgery, children will be brought to the PACU. Both parents will be brought to the PACU, in most cases, prior to the child's arrival. Parents will be allowed to be with the child until discharged or transferred to a floor. On arrival to the PACU, children will have humidified oxygen directed towards their face to help alleviate the effects of anesthesia. Vital signs (blood pressure, pulse, respiration) will be taken every 20 minutes in the PACU. Temperatures will be taken every hour on children. The IV that was placed in the OR will remain in until the child is tolerating fluids. Your child will be placed on a cardiac monitor temporarily to observe cardiac rhythm. Pain medication will be administered as needed. Most children, under the age of 5, will have received a Tylenol suppository in the OR. When your child is able to drink fluids, we will offer clear fluids such as fruit juice, Jell-O and water. Even though it hurts to suck and swallow, it is very important for your child to drink plenty of fluids. Please remember, the more your child drinks, the quicker your child will recover. When your child can drink at least one glass of juice or water without vomiting, the IV can be removed. Ambulatory patients will be discharged in approximately two hours. Children to be admitted overnight will be transferred to the floor when a bed is available. Parents should bring a toy or book for the child as there may be a wait for a bed.

2. The adult patient recovery period in the PACU:

For adults, on arrival to the PACU, oxygen will be administered by nasal prongs to alleviate the effects of anesthesia. The IV will remain in place until you are able to tolerate fluids and you will remain on a cardiac monitor until discharge. The average length of time in the PACU is 1-2 hours if you are any ambulatory patient or until a bed

is available if you are to be admitted overnight. Pain medication will be administered as needed in the PACU, and vital signs taken every 20 minutes until discharge from the PACU. Patients sometimes complain of feeling cold in the PACU. This is due to the effects of the anesthesia wearing off. Patients are reunited with their families in the PACU when they are awake enough to receive visitors. Generally, adult patients do not have to spend a night in the hospital.

DISCHARGE INSTRUCTIONS

1. Limit activity:

After discharge from the hospital or ambulatory unit, you are to go home immediately. Your child should remain in bed the first day and out of school for one week. Encourage your child to have frequent rest periods in the first few days after surgery. Adults and older children may need longer periods of healing. Children usually return to school after 5-7 days. On the day of anesthesia, direct parent supervision is advised for 24 hours. Do not leave your child with an older child or babysitter. You and your child should have a day of quiet activities: watch television, read, play board games. Do not play any contact sports, swim, climb, bike-ride, roller or ice skate, do gymnastics or other strenuous activities. Adults should remain home and quiet for one week. Please be aware that most patients do not feel fully recovered for about ten days. Exposure to the sun should be avoided as it may cause higher blood pressure and slow healing. For the first 5-7 days, it is helpful to use a vaporizer or humidifier when your child is sleeping. This improves breathing, reduces crusting in the nose and throat. No travel for 2 weeks after surgery.

2. Diet:

You should start with liquids and advance to soft foods as tolerated. Your child should resume a regular diet 10 days after surgery. Avoid things such as very hot food and drinks, spicy food, citrus fruits and juices and scratchy foods such as popcorn, pretzels and peanuts for the first 14 days after surgery.

RECOMMENDED DIET FOR PATIENTS:

1. First day post-operatively:

The diet for the day of surgery should consist of liquids and Jell-O. Apple juice and fruit punch are usually well tolerated. **Do not give any citrus juices** (orange juice, pineapple juice, etc. or Gatorade as they may sting your child's throat.)

2. Second day post-operatively:

- a) Applesauce, bananas, soft fruits.
- b) Scrambled eggs.
- c) Oatmeal, cream of wheat or rice.
- d) Mashed potatoes (use non-dairy creamer/soy milk when mashing.)
- e) Baked or canned sweet potatoes.
- f) Cooked fruits (remove skin and seeds.)
- g) Commercial baby foods.
- h) Soups (avoid creamed.)

i) Pudding and ice cream are allowed but may increase coughing due to the production of phlegm.

3. Third day post-operatively:

You may add strained vegetables (pureed or soft) and ground chicken or beef.

4. Fourth day post-operatively:

Increase diet as tolerated. No rough foods such as pretzels, potato chips, cookies, apples or peanuts should be eaten for 14 days following surgery.

3. Fluids:

It is very important to drink plenty of fluids to prevent dehydration and assist with the healing process. Cut down on the amount of milk ingested as it increases mucous production.

4. Medication for pain:

- a) Your child's throat will be sore for approximately 7 to 10 days after the operation. Give Tylenol or Oxycodone every 4 hours for the first 24-48 hours to control pain. The doctor will write a prescription for Oxycodone. Tylenol is given in liquid or suppository form. Stop giving the pain medication or reduce the number of doses of Tylenol/Oxycodone as your child improves. Do not stop the medication suddenly as pain will still occur for 5-10 days. If a suppository pain medication is prescribed, it can be used in place of the liquid medication. Both the liquid and suppository pain medications are narcotics and cannot be used at the same time.
- b) You will also receive a prescription for an antibiotic. Please contact the doctor if the patient has a fever greater than 102 F by mouth that persists for over 6 hours. Please remember, it is not uncommon to run a low grade fever following surgery. Plain Tylenol is usually sufficient to alleviate this discomfort.
- c) Mild to moderate ear pain and mouth odor are common during the first week after the operation. Chewing gum may help reduce ear pain which is often caused by muscle spasm. Often, your child will complain of an earache more than a sore throat- especially at night. It is very important to encourage drinking to help fight pain. Pain relievers, such as Tylenol, are also essential.
- d) Do not use aspirin (Motrin, Advil, Bufferin, Nuprin, Aleve, Ibuprofen etc.,) throat gargles or aspergum during the recuperation phase 2 weeks). These products may interfere with blood clotting capacity which may lead to bleeding. Read all medication labels carefully to insure that they do not contain aspirin.

5. In the event of bleeding:

Bleeding can occur up to 15 days after surgery. If you notice any significant bleeding coming from your child's nose or mouth, please call your doctor. You should consider any significant bleeding as a serious problem requiring medical attention. There may be a slight oozing of blood approximately 6 to 9 days after surgery as the scab from healing falls off. This is normal. Have the patient drink a glass of ice water as this should stop the bleeding. Contact us immediately if bleeding persists or is severe. Occasionally, severe

bleeding may be cause for the patient to be brought back to the OR in order to control the bleeding.

6. Things to avoid:

Avoid sneezing, coughing, violent blowing of the nose and forcible clearing of the throat for these actions may cause bleeding. If sneezing is imperative, it should be done with the mouth open.

7. A post operative visit will be arranged one month following surgery. Please call the office after surgery to set up an appointment.

COMMON CONCERNS, QUESTIONS AND POSSIBLE COMPLICATIONS

* If there are any concerns or questions regarding your post-operative care, please read the following post-operative care instructions and information below. If further information is required, please contact our office:

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1. Why is the patient nauseous and/or vomiting?

It is common for this to occur due to the anesthetic and the swallowing of small amounts of blood during the operation. We will give your child medication to control the vomiting. If your child is vomiting at home, there are things you can do to help. Encourage rest. Do not give any fluids or food for 30 minutes and then slowly start to give small amounts of clear fluids. If vomiting persists 24 hours after surgery, or is severe, please call our office.

2. What should I do if my child is running a fever?

A low grade fever is normal after any surgery. If your child has a fever higher than 38.5 C/102 F by mouth and has not had Tylenol within the past three hours, give your child some Tylenol (the amount recommended by the doctor.) If the temperature is higher than 102 F after treatment with Tylenol and lasts for over six hours, please contact our office. Occasionally, post-operative infection occurs. The infection will present itself as unrelenting pain and fever about 102 F. If this happens, again, please contact our office.

3. Is coughing normal after surgery?

A loose cough is expected after tonsillectomy and adenoidectomy due to the excess mucous. This will clear over time.

4. Is it normal for the patient to be drowsy or dizzy after the surgery?

Yes, after the operation, your child may be drowsy and/or dizzy. This will usually improve prior to the time of your child's discharge from the hospital. Because your child may be a little unsteady at the time of discharge and the 24 hours after surgery, it is important to support him/her until your child can walk safely. Supervise your child to prevent falls or injuries during this time.

5. Will the patient's voice be affected from the surgery?

Tonsil and adenoid removal may result in a voice change. This is usually temporary, however, in rare instances, it may be permanent.

6. What is the white substance forming where the tonsils were removed?

As the tonsil bed is healing, you will notice a white-gray tissue in the throat where the tonsils were removed. This is the color of normal, healing tonsil beds and does not mean that an infection is present.

7. Is it normal for throat pain to persist and/or develop in the weeks after surgery? Yes, this pain is normal. Approximately 5-7 days following tonsillectomy and adenoidectomy, the white-gray scabs (described above) will fall off. At this time, there is usually an increase in throat pain which lasts for approximately 2 days. You should encourage your child to drink fluids during this time and use pain medications as needed. In adults, pain may persist for 2 weeks. Patients may also experience pain with yawning for 3-4 weeks.

8. Why is there minor bleeding several days after surgery?

A small amount of bleeding may occur several days post-operatively as the scar from healing falls off. Should this occur, drinking a glass of ice water usually stops the bleeding. If there is a large amount of bleeding, contact the office at once.

9. Why does my child complain of an earache?

Often, children experience ear pain following tonsil and adenoid surgery. This is referred ear pain. Because the ear and throat have a similar nerve supply, the ear is sore for the same reason that the throat is sore: nerves and muscles irritated during surgery spasm and cause pain. Symptoms of this ear pain, which may be worse at night, are usually alleviated with pain medication, drinking fluids and chewing gum. Ear pain does not mean that there is an ear infection.

10. What should I do if my child refuses fluids?

Do not take 'NO' for an answer. If your child complains of pain when drinking, give pain medications 20 minutes before offering liquids or solids. You can also put one half teaspoon of crushed ice under the tongue and let it melt.

11. Why is my child constipated in the weeks following surgery?

Your child may be feeling constipated because of the medications and change of diet he/she is experiencing. Both the pain medication and the antibiotics your child may receive alter the stomach's ability to process food for a short period of time. Just continue to give your child plenty of fluids (i.e. prune juice) and soft foods.