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TONSILS AND ADENOIDS

INTRODUCTION

The tonsils and adenoids are composed of tissues that are similar to the lymph nodes or "glands" found in the neck or other parts of the body. Together, they are part of a ring of glandular tissue (Waldeyer's ring) encircling the back of the throat. The adenoids are located high in the throat behind the nose and soft palate (or roof of the mouth) and, unlike the tonsils, are not easily visible through the mouth. The tonsils are the two masses of tissue on either side of the back of the throat. Normal tonsils are usually about the same size and have the same pink color as the surrounding area. On their surfaces are little depressions, called crypts, which may appear deep and contain pus pockets or stones. A tonsillectomy and adenoidectomy (commonly referred to as a T & A) are surgical procedures performed to remove the tonsils and adenoids, respectively.

WHAT IS THE PURPOSE OF THE TONSILS AND ADENOIDS?

The tonsils and adenoids are thought to help defend the body against incoming bacteria and viruses by helping the body to form antibodies. However, this function may only be important during the first year of life, and in fact there is no evidence to support a significant role of the tonsils and adenoids in immunity. Medical studies have shown that children who must have their tonsils and adenoids removed suffer no loss whatsoever in their future immunity to disease. The popular myth that they act as filters to bacteria is untrue, not to mention impossible.

WHAT ARE THE COMMON PROBLEMS AFFECTING THE TONSILS AND ADENOIDS, and WHAT ARE THEIR SIGNS AND SYMPTOMS?

The most common problems occurring with the tonsils and adenoids are recurrent or chronic infections and significant enlargement (hypertrophy).

ACUTE TONSILLITIS: Is an infection of the tonsils caused by one of several possible types of bacteria or viruses. Acute tonsillitis is characterized by either the sudden or gradual onset of a sore throat, which is usually associated with fever. The patient may stop swallowing saliva, start to drool, complain of ear pain with swallowing, and have bad breath. The surface of the tonsil may be bright red with or without a grayish-white coating (exudate). The lymph nodes in the neck may be swollen.

Strep throat (tonsillitis) is a specific type of infection caused by the streptococcus bacteria. Strep tonsillitis can cause secondary damage to the heart valves (rheumatic fever) and kidneys (glomerulonephritis). It can also lead to a skin rash (scarlet fever), sinusitis, pneumonia, and ear infections. **Acute mononucleosis** is caused by the Epstein-Barr virus, and can lead to a very severe throat infection, which is characterized by the rapid enlargement of the tonsils, adenoids, and lymph nodes of the neck.

CHRONIC TONSILLITIS: Is a persistent infection of the tonsils. Repeated infections may cause the formation of small pockets (crypts) on the tonsils in which bacteria can dwell. Frequently small, foul smelling stones, are found in these crypts. These **tonsiloliths (stones)** may contain high quantities of sulfa. When crushed, they give off the characteristic rotten egg smell which is well known to cause bad breath. They may also give the sense of something being caught in the back of the throat.

ENLARGEMENT OF (HYPERTROPHIC) TONSILS AND ADENOIDS: Obstruction to breathing may cause snoring and disturbed sleep patterns that may lead to sleep pauses or **sleep apnea**. Other features include frequent awakening from sleep, restless sleep, nightmares, bed-wetting, mood changes, excessive sleepiness, failure to thrive, and even cardiac problems. Some orthodontists believe that chronic mouth breathing from large tonsils and adenoids causes improper alignment of the teeth (malocclusion). Chronic enlargement and infection of the adenoids may lead to sinusitis or nasal drainage/obstruction, and/or may affect the Eustachian tube of the ear leading to chronic ear infections.

PERITONSILLAR ABSCESS: Is a collection of pus behind the tonsils that pushes one of the tonsils toward the uvula. It is generally very painful and is associated with a decreased ability to open the mouth. If left untreated, infection can spread deep in the neck causing life threatening infection and airway obstruction.

HOW ARE DISEASES OF THE TONSILS AND ADENOIDS TREATED?

Bacterial infections of the tonsils and adenoids are treated with appropriate antibiotics. Tonsillitis caused by the streptococcus bacteria can lead to serious complications, and must be treated. Often times, the diagnosis of strep throat is confirmed by a throat culture or rapid-strep tests. Once treated, it is important to take the full course of antibiotics as prescribed because the premature discontinuance of therapy can lead to adverse consequences. Viral causes of tonsillitis are often treated with only supportive care (hydration and control of fever), and antibiotics are often withheld.

An abscess of the tonsil (Peritonsillar abscess) should be drained either by needle aspiration, incision, or tonsillectomy. Chronic stones in the tonsil can be removed digitally or with a blunt probe. Massive enlargement of the tonsils and adenoids causing airway obstruction may be treated with a long course of antibiotics, or even a brief course of steroids.

Surgical removal is considered in those situations resistant to medical therapy.

WHEN SHOULD THE TONSILS AND/OR ADENOIDS BE REMOVED?

Tonsillectomy and adenoidectomy is indicated in situations where there is enlargement of the tonsils and adenoids to such an extent that it causes severe sleep problems (snoring & breath holding), sleep apnea, dental abnormalities, and difficulty swallowing. Adenoid enlargement alone, or in combination with tonsillar enlargement, may cause nasal obstruction, recurrent ear infections, or sinusitis. If these conditions are resistant to medical therapy surgery is indicated.

Tonsillectomy and adenoidectomy is indicated in persons with repeated or persistent infections, particularly if they interfere with everyday activities. In general, repeated infections in children are defined as 6-7 episodes in one year, or 4-5 episodes in each of two years, or 3 episodes in each of three years. A significant episodes of tonsillitis is defined by one or more of the following criteria: a) a temperature greater than 101 F, b) enlarged or tender neck lymph nodes, c) purulent material coating the tonsils, or d) a positive strep test. In adults, the severity, frequency, and hardship associated with repeated infections are considered more important than the absolute number. Chronic infections characterized by bad breath and/or tonsillar stones causing significant disability is also an indication for tonsillectomy.

Tonsillectomy and adenoidectomy is strongly considered in those patients who are, or may suffer serious complications of infection. These include peritonsillar abscess, history of streptococcal complications (rheumatic heart disease, glomerulonephritis), or neck abscess. Suspicion of malignancy or tumor is a definite indication for surgery.

It should be emphasized that all decisions for or against surgery should be individualized. Additional factors such as tolerance of antibiotics, concurrent medical problems, school achievement/progress, and family preferences are also important in the decision process.

GLOSSARY OF TERMS:

- **Abscess:** An accumulation of pus that may require surgical drainage.
- **Adenoidectomy:** The surgical removal of the adenoids.
- **Adenoiditis:** Infection of the adenoids.
- **Adenoids:** Masses of lymphoid tissue in the upper part of throat behind the nose.
- **Epstein-Bar Virus:** A virus that can cause infectious mononucleosis ("mono").
- **Lymphoid tissue:** The part of the body's immune system that helps protect it from bacteria.
- **Sleep apnea:** Temporary stoppage of breathing during sleep, often resulting in daytime sleepiness.
- **Strep throat:** An infection caused by a type of bacteria called streptococcus, which can lead to serious problems if not adequately treated.
- **Tonsillectomy:** The surgical removal of both tonsils.
- **Tonsillitis:** Infection of the tonsils.
- **Tonsils:** Oval masses of lymphoid tissue at the back of the throat, on both sides.