



Acute Tonsillitis in children: Causes and Types

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Abstract

The tonsils are two lymph nodes located at the top of the throat in the back of the mouth, which help in the natural state to filter out a various pathogenic and nonpathogenic microorganisms and prevent entry to our body system. Tonsils are frequent overwhelmed by different types of bacterial and viral infections. The tonsils and pharynx often infected together and the tonsils may be more pronounced, the condition is called acute tonsillitis. Acute tonsillitis may be caused by viruses or bacteria. It is estimated that the bacterial or purulent tonsils caused by 30% of the cases by streptococcus bacteria and 70% of cases from other bacteria. The aim of this descriptive minireview, generally, is to shed light on the main types of the vital bacterial and viral acute tonsillitis in children.

Keywords: Acute Tonsillitis; Tonsillitis in children; Bacterial Tonsillitis; Minireview

Introduction

The tonsils are similar to those of almonds, as is the case for many names in the medical field. They are shaped like two small postures that are located in each side of the palate. They are anatomically known as palms, located inside the pharynx and closely related to the pharynx. Tonsils, actually, are located in a central area between the upper part of the airways (the nose, the sinuses, digestive and the ear) and the lower part of the trachea. The adenoid is a median mass of mucosa-associated lymphoid tissue. It is situated in the roof and posterior wall of the nasopharynx [1].

Formally, the tonsils form a group of lymph nodes and belong to the general lymphatic system in the body, which also includes other members: the bone marrow, spleen, thymus and other lymph nodes scattered in specific places in body. Altogether, form the immune system of the body through which the lymphocytes apply within these glands and organs. The tonsils are major components of the MALT (Mucosal Associated Lymphoid Tissues). They consist of aggregations of lymphoid cells that are present in the mucosa of the nasopharynx (NALT), the oropharynx (GALT), and the laryngopharynx (LALT) [2]. Its location at the crossing of the digestive and respiratory tracts plays a key role in immunity as this is the site where vast amounts of foreign antigens enter the body during feeding and breathing [3,4].

Hence, the strategic importance of the tonsils, they represent the first guard for the defense of the body in the event of serious pathogenic attacks, such as those that get in particular bacterial infections.

On the other hand, tonsillitis is the most common disease, after nasal pharyngeal infections, with pathogens. Millions of infections occur worldwide every year, and in all climatic seasons, with an increase between November and April, but can be seen all the time in the year [5]. It is estimated that the Sore throat accounts for 2.1% of ambulatory visits in the US [6]. Acute tonsillitis is more common in children between the ages of 5 and 15 years. The prevalence of bacterial tonsillitis, specifically group A beta-hemolytic streptococci (GABHS), is 15% to 30% of children with sore throat and 5% to 15% of adults with sore throat [7-9]. It is also one of the most susceptible to complications (in its bacterial form in particular) [9].

Etiology and Clinical Signs

The oral cavity and especially the tonsils are a reservoir for multiple pathogens (viruses and bacteria), parasites and fungi [10]. However, all these microbes belong to the transient flora living in symbiotic relationships with each other and with human [11]. Actually, in a study conducted by Jensen A., *et al.* were able to

detect more than 100 bacteria in the tonsils of children and adults with and without recurrent tonsillitis. about 52 different bacterial strains form the basis were detectable in each patient, whether child or adult, whether sick or healthy. These represent 90% of the total pathogen load [12].

Tonsillitis is usually viral; it is most commonly caused by the rhinovirus, followed by the coronavirus, and the adenovirus. Less commonly it is caused by the influenza virus, the parainfluenza virus, enteroviruses, or herpes viruses. In tonsillitis associated with infectious mononucleosis, the most common infective agent is the Epstein-Barr virus [13].

Viral infections: Acute inflammation of the tonsils leads to a set of signs, called if accompanied by acute pain, "angina" and accompanied by these symptoms: Difficulty and pain swallowing and start redness with congestion in the pharynx and increase in the size of tonsils, with or without ulceration. The incidence extends to the pharynx and lymph nodes, and in most cases is accompanied by fever (38.5 to 40). The pain extends to the ear, in some cases; it is accompanied by a cold wheeze in adults, and can cause neurological complications, due to heat, in children Without 3 years in the form of spasm, all added to the general signs: head and throat pain, lack of appetite for food, vomiting, nausea. With the possibility of infection at the level of the digestive system or respiratory [13].

These infections are generally benign and can be reduced automatically and cured within a period of not more than one week. In France, for example, 8 million cases are reported annually, as is the case in the United States. About 75% of cases is the type of these viruses that do not benefit the use of antibiotics because they are ineffective. Viruses infect humans regardless of their age or component and in any season of the year [5].

Bacterial infections: The most serious infections are bacteria, most of which belong to the *Streptococcus pneumoniae* bacteria, rarely caused by *Staphylococcus*, *Streptococcus* or *Staphylococcus aureus* which affects the urethra in adult males or syphilis bacteria.

Back to *Streptococcus pneumoniae*, statistics show that 5% of people carry this germ (in the pharynx), but without infecting them, they do not seem to have any signs of disease (they are the category of healthy germ carriers), they can transfer the germ to others, especially children, Especially infants. (Hence the advice to kiss children away from their mouths These bacteria accounts for

25 to 40% of bacterial infections of the ovaries, affecting children and children between the ages of 3 and 12 years. In this case, the disease is generally present. Heat rises appear to be the only cause of detection, especially in infants [3,14].

Clinical forms of tonsillitis and bacterial infections.

In the reddish form, which accounts for 90% of the cases, the bacteria are often responsible for a virus from the previously mentioned species. This possibility is present in the presence of changes in the upper airways (in the form of runny nose, pharyngeal congestion, cough [15].

The most common bacterial source, although small, is the pneumococcal node, which can be determined by laboratory implantation of a sample of the pharyngeal and tonsillar secretions, taking into account the possibility of other types of pulmonary nodules, although they are rare.

This is the case for a persistent influenza virus, a bacterium that nests in the tonsils. The middle ear is infected with acute inflammation and its serious consequences are inflammation of the brain's brain. These infections have become less frequent after the introduction of an effective vaccine against the bacteria, long and early in infants [8].

There is a clinical form of infection of the bacterial tonsils, which is a disease of fever or scarlet fever, and the germ of the genus *Streptococcus pneumoniae* as well, as the latter characterized by the secretion of a type of toxic substance called chubby, leading to the emergence of a qualitative boom in the skin, is crimson red and located in places And after an incubation period of 3 to 5 days, acute inflammation of the tonsils occurs with a special change of the tongue membrane and a headache, frequent exhaustion and fever rise to 40 degrees with an acceleration of the abnormal heart rate (due to the toxic substance) [6,15,16].

Semi-membrane form of severe tonsillitis, which accounts for 3% of infections

The most likely occurrence is the unusual multiplication of a cell in the blood, usually found in a limited amount, called a "single-nucleus", which leads to disease (infertility or infection). The cause of the disease is a virus known as Epstein-Barr virus French is called the disease of lovers. Due to infection by saliva by kissing. The incubation of the germ lasts from 15 to 60 days and leads to a rise in heat with the appearance of red inflammation of the red

in the pharynx and the presence of coating on the placenta and a fungal mutation on the pharyngeal veil, what distinguishes this membrane is that it facilitates the impregnation is non-rubber and non-adhesive and not renewed, The larynx in this form is intact; Accompanying these topical clinical signs is the swelling of the lymph nodes on both sides of the neck, swelling of the spleen and the possibility of a rash [4,16].

The diagnosis is confirmed by a laboratory analysis of blood showing a high percentage of white blood cells in the single-core group and through a qualitative biochemical immune reaction in the blood as well.

The second disease that is included in this clinical form is sepsis in the tonsils, which is associated with the presence of a false membrane, and gets in the disease, which is a rare disease obtained after vaccination campaigns with campaigns of continuous immunization for decades. The disease causes a specific bacteria called Klebs-Loeffler, which, after incubation periods of 3 to 7 days, leads to general malaise accompanied by a high temperature of 38 to 38.5°C and the presence of a wrong membrane on the tonsils that are coated with an ivory, adhesive, After removal and later affliction of the veil. The appearance of the false membrane is accompanied by a runny nose in the nose, sometimes in the form of a blood vessel with swelling in the lymph nodes under the jaws, and the patient's general condition is poor with sound disorder and "nasal" cough indicating the injury of the trachea and throat [9,13].

Other forms of injury in tonsils, such as ulcerative varicose veins and their causes are often viral, including (ulcerative gingivitis).

It may be due to the patient's lack of commitment to the period of treatment prescribed by the doctor, or through self-treatment without medical advice, which expresses a lifestyle or behavior of irresponsibility. This is especially true for children because their immune system is weak in defense against germs, leaving these children and children exposed to the consequences of picking up other potentially dangerous germs and possibly leaving their mark on their lives later on [17].

Conclusion

Acute tonsillitis may be caused by viruses or bacteria all over the world. It is estimated that the bacterial or purulent tonsils caused by 30% of the cases by streptococcus bacteria and 70% of cases from other bacteria, so this is a high rate of risky infection.

Accordingly, the aim of this descriptive minireview, generally, was to shed light on the main types of the vital bacterial and viral acute tonsillitis in children and describing the importance of the disease in children.

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