



# A REVIEW ON THE ACTUAL INDICATIONS FOR TONSILLECTOMY IN ADULTS AND POTENTIAL POSTOPERATIVE COMPLICATIONS

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<p><b>Received:</b> November 6<sup>th</sup> 2021 <b>Accepted:</b> December 6<sup>th</sup> 2021 <b>Published:</b> January 26<sup>th</sup> 2021</p>	<p>Although tonsillectomy is common, its actual indications remain disputed among otolaryngologists, and it requires accuracy and skill to reduce the complications surrounding it, which may negatively affect the patient's safety. The present article aims to review the correct indications for applying tonsillectomy in adults and to describe the complications that may be experienced after surgery. The anatomy of the tonsils and the meaning of tonsillectomy were presented, focusing on the reasons for practicing tonsillectomy, and the complications associated with it. The results showed that the tonsils are part of the immune system to attack infections, and the decision to remove them should not be rushed unless when there is an actual need for it. Most important indications for tonsillectomy in adults were tonsils hyperplasia as well as recurrent tonsillitis. Hemorrhage was the most prevalent complication that could occur after tonsillectomy. It was concluded that tonsillectomy, despite its effectiveness in treating the cases required, is considered a delicate surgical operation and is not without life-threatening risks and postoperative complications, so it requires attention to the actual indications for its procedures.</p>

**Keywords:** Tonsillectomy, tonsils hyperplasia, recurrent tonsillitis.

## INTRODUCTION

Historically, the removal of tonsils dates back to the first century AD, Cornelius Celsus is considered the first to mention it, as it was performed using the finger [1]. Since the turn of the 20th century, tonsillectomy has been considered the generality prevalent surgery for the treatment of various respiratory and even systemic diseases, but with the discovery of antibiotics and taking into account the critical evaluations of their indications, the application of tonsillectomy has become low [2-4]. Tonsillectomy is a surgical operation to prevent recurrent throat infections as well as tonsillar hypertrophy, which are considered the most important indicators [5]. On the other hand, it has common critical complications such as bleeding, and death may sometimes occur [6]. There are many previous studies on tonsillectomy for children in all its aspects [7], corresponding to fewer studies in adults [8]. Therefore, this article study has two goals: to determine the correct indications for tonsillectomy in adults, as well as to remind the complications that may be life-threatening.

## PALATINE TONSILS

They consist of bundles of lymphoid tissue, located bilaterally on either side of the oropharynx (figure 1).

Palatine Tonsils (PTs) composed of crypts, allowing for a large internal surface area [9,10]. There are regional parts in which both cellular and humoral immune processes occur, like reticulated crypt epithelium, extra-follicular, and lymphoid follicular regions [11]. PTs compose portion of the Waldeyer's ring, which is a circular bundle of adenoid tissue that protects the opening in the digestive and respiratory tracts [12]. The tonsils are lying within a bed of three muscles that make up the tonsil fossa. Due to their strategically important position, they provide more blood perfusion contributing to immune processes against general diseases such as viral infections of the upper respiratory tract. In addition, PTs contain M cells which act as antigen capture cells allowing absorb various surface antigens generated by different pathogens [13,14]. During childhood, the tonsils are more prominent in size and are affected by bacterial load and the amount of B and T cells. Then followed by a reduction in size depending on age [15].

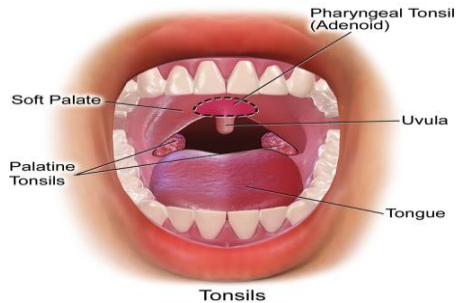


Figure 1: Anatomy of the palatine tonsils [16].

### TONSILLECTOMY

Tonsillectomy (TC) is a common head and neck surgery [17], in which the tonsils are completely removed with their capsules, the space around the tonsils (located between the capsule and the muscle wall) is dissected as shown in figure 2 [18]. Often, a tonsillectomy is performed with adenoidectomy as well as without it. In US, for example, there are more than half a million tonsillectomy annually [19].

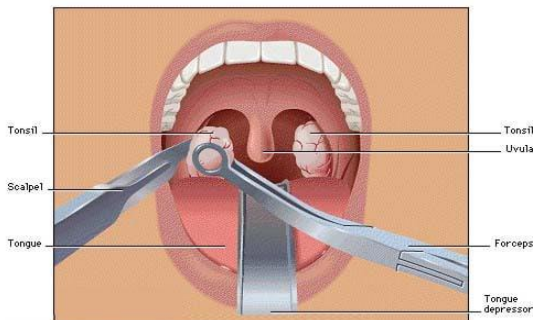


Figure 2: Tonsillectomy

### INDICATIONS FOR TONSILLECTOMY IN ADULTS Obstructive Sleep Apnea

Sleep breathing disorders arising due to tonsils hyperplasia (figure 3) are the most important indication for tonsillectomy [20]. As the proportion of morbidity up to 2 to 4% of adults. It denotes chronic upper airway obstruction (either partially or completely) during sleep, causing disruption of normal ventilation with restless sleep.



Figure 3 : Tonsillar hyperplasia

Clinical symptoms are intensified when they are accompanied by other risk factors like fatness or craniofacial deformity, which leads to breathing pause [21,22]. Tonsil size is easily determined by the tonsil grade (figure 4), whereby tonsil enlargement is considered defined as grades III and IV.

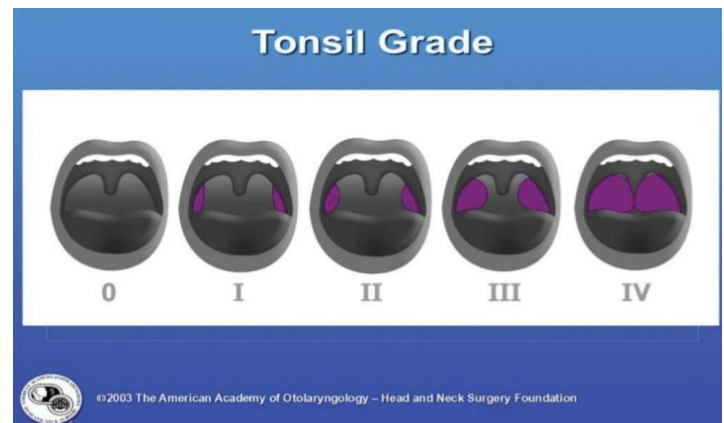


Figure 4: Tonsils Subjective Scoring grade [23].

### RECURRENT TONSILLITIS

The infection of tonsillitis in adults negatively affects the lifestyle of sufferers and stresses health services through frequent primary care consultations and hospitalization, in addition to the possibility of complications [23]. Therefore, tonsillectomy is safe and effective for the prevention of recurrent tonsillitis. Recurrent tonsillitis in adults remains a common indication for otolaryngology surgery. Oftentimes, sore throats due to acute tonsillitis is self-limited with a short duration, while a few patients experience recurrent exhausted attacks, accompanied by impairment of normal functioning [24]. Figure 5 presents indications related to tonsillectomy for recurrent acute sore throat in adults [25].

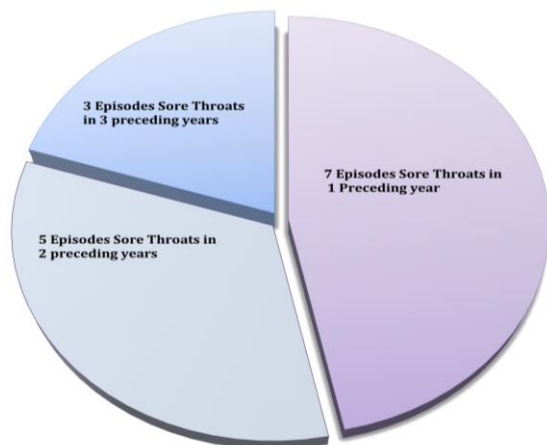


Figure 5 : Recommended Indications for Consideration of Tonsillectomy for Recurrent Acute Sore Throat in Adults, Based on the Guidelines of the Scottish Intercollegiate Guidelines Network (SIGN)

### RECURRENT PERITONSILLAR ABSCESSSES

It is considered the final stage of a continuum, the beginning of which is considered acute exudative tonsillitis, then progresses to cellulitis and lastly abscess consistence. All ages are susceptible to infection, but the highest percentage occurs in adults (20-40) years [26,27]. Clinically evident purulent tonsillitis demonstrated by known culture assays culture or based on rapid antigen assay caused by hemolytic Group A Streptococci. The majority of cultures of peritonsillar and abscesses expose mixed flora (both aerobic and anaerobic), especially Prevotella as well as Peptostreptococcus species [28,29]. The prime guise of peritonsillar abscesses is severity of the pain when swallow and it is often characterized as one-sided [30] as shown in figure 6. Here it is proved that the specific indications are good for tonsillectomy, if the patient has been exposed twice or more [30,31].

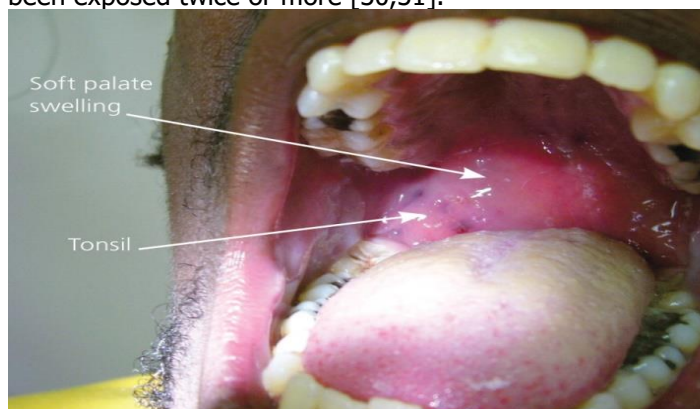


Figure 6: Peritonsillar abscesses from the right side, swelling of the soft palate and the appearance of the abscess[32].

### POTENTIAL POSTOPERATIVE COMPLICATIONS

#### Hemorrhage

It is considered a serious complication and is responsible for the majority of postoperative deaths. The risk of postoperative hemorrhage depends on factors including older age, excessive blood loss during the operation, as well as arterial blood pressure [33,34].

#### Taste distortion

The glossopharyngeal nerve may be injured during tonsillectomy, which leads to a lack of general sense or sense of taste [35].

#### Velopharyngeal stenosis

It rarely follows tonsillectomy and is caused by deficient closing of the posterior portion of the palate versus the wall of the pharynx after elimination the tissue of the posterior nasopharynx. tissue. It causes speech problems. This is usually transient, although in rare cases it may persist [36,37].

#### Pulmonary edema and respiratory distress

As a result of obstruction due to edema of the tongue or palate, this blocks the airway. They rarely occur after surgery [38].

### CONCLUSINS

Tonsillectomy surgery is effective and indicated in the treatment of cases of tonsillar hyperplasia that cause obstruction of breathing during sleep, recurrent sore throat and recurring peritonsillar abscess. It has post-operative complications, bleeding can be considered the most dangerous, as through it the patient rarely loses his life.

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