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Tonsillectomy indication in adult with chronic tonsillitis: a case report



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ABSTRACT

Introduction: Tonsils are the body's defense against viruses or bacterial antigens that enter the tonsils. These pathogens can cause inflammation and formed focal infection. Either persistent or recurrent infection of the palatine tonsils occurs in chronic tonsillitis. Tonsillectomy is surgical procedure that removed the entire palatine tonsils. It is performed if conservative and medical management failed to relieve symptoms and if indicated by the American Academy of Otolaryngology-Head and Neck Surgery (AAO-HNS) consensus published 1995.

Case description: A 30 years old male, complained a lump in his throat for about a year and had worsened for the previous 1.5 months. The patient also had difficulty in breathing, especially during sleep and

snored. The patient had received treatment and got better. However, some complaints such as fever, cough, runny nose, difficulty and painful swallowing appear more than three times a year. The patient was alert, vital signs and general examination are within normal limits. Throat examination revealed T2 - T3 tonsils, hyperemic + / +, dilated crypts + / +, detritus - / -, midline uvula with hyperemic mucosa. The patient was diagnosed with chronic tonsillitis and undergone Tonsillectomy.

Conclusion: Tonsillectomy is indicated in patients with enlarged tonsils that cause upper airway obstruction and recurrent episode of tonsil infections more than three times per year despite adequate medical therapy.

Keywords: Tonsils, chronic tonsillitis, tonsillectomy.

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INTRODUCTION

The tonsils are the body's foremost defenses. Antigen originating from inhalants and ingestants that easily enter the tonsils could trigger body resistance and inflammation, especially if these foreign particles are viruses or bacteria. These pathogens could grow on the mucous membrane and forming a focal infection. Local inflammation of the tonsils can cause symptoms such as discomfort or pain when swallowing. This situation would worsen if the patient's immune system were compromised due to previous viral inflammation.¹

If, after an acute tonsillitis episode, there is no complete healing, repeated infections may occur. Pathogenic bacteria will be easier to lodged in the tonsils and resulted in chronic inflammation called chronic tonsillitis. Meanwhile, by definition, chronic tonsillitis is a persistent or recurrent infection of the palatine

tonsils, which are part of the Waldeyer ring. These infections can be caused by viruses or bacteria, with the most common are *Group-A Beta-hemolytic Streptococcus* bacteria.²⁻⁴

Chronic tonsillitis is the most common recurrent throat diseases. Epidemiological data showed that 5-15 years old children and adolescents are most often affected by tonsillitis, but it can affect anyone, including adults. In Indonesia, the prevalence of chronic tonsillitis (3.8%) placed at the second in the ENT disease group, after acute nasopharyngitis (4.6%). The frequent aged distribution was 5-14 years old patients (50%), women (56.7%), and the highest chief complaint is sore throat or pain in swallowing (100%).^{5,6}

There are many predisposing factors for chronic tonsillitis. These include oral hygiene, physical fatigue and certain types of food. The management of chronic tonsillitis includes medical treatment and

surgical procedure. The primary surgical procedure is Tonsillectomy. Chronic tonsillitis that does properly treated will cause several complications ranging from peritonsillar abscess to cardiopulmonary abnormalities.^{4,7,8}

Tonsillectomy is a surgical procedure to remove all palatine tonsils. It is a definitive treatment that performed in cases where medical and conservative management fails to relieve symptoms. Surgery should only be decided only according to the proper indications to minimize any harm. It should be reminded that tonsils are part of the body's defense system. However, the impact of tonsillectomy on immunity is not clear yet. It is proven that tonsillectomy does not cause any significant decrease in the body ability to fight the pathogen. On the other hand, there are still risks involved in a tonsillectomy.⁹ This case report will present a case of 30 years old male adult diagnosed with chronic tonsillitis and who

had undergone tonsillectomy. The author was interested to know the indication for a tonsillectomy in this patient.

CASE REPORT

A 30 years old male complained of a lump in his throat for about a year, which worsened in the previous 1.5 months. The complaints were intermittent, mainly without the accompanying pain when swallowing. However, the patient had difficulty breathing, especially during sleep. The patient had received medical treatment and got better. However, the complaints got worse for the previous months. The symptoms usually worsen when he gets exhausted. There is a history of fever and snoring during sleep. The patient had been experiencing these complaints for about a year, and it occurred intermittently. The patient denied other complaints such as cough, runny nose, difficulty swallowing or pain during the examination. However, he revealed that said complaints, coughs, colds, difficulty swallowing and pain, had occurred more than three times a year, which greatly disturbed the patient's activities. History of chronic diseases such as diabetes, hypertension, and heart disease is denied. The patient's history of allergy was dismissed. The patient said that he often consumed snacks, fried foods, ice cream and cold drinks that were less hygienic. The patient said that he regularly brushed his teeth twice a day. He has a history of smoking and alcohol consumption since young but had been decreased over the past month.

On physical examination, the patient was in a good general condition and looked mildly ill. The blood pressure 100/80 mmHg, pulse rate 80 times per minute, respiratory rate 20 times per minute, temperature 36.5°C. General examination was within normal limits. Tonsils were T3-T2, hyperemic + / +, dilated crypts + / +, detritus - / -, the uvula in the midline and surrounded by hyperemic mucosa. The patient had a complete blood count, complete blood chemistry and hemostatic laboratory examination. All were within normal limits. The patient, in this case, was diagnosed with chronic tonsillitis. The patient had previously received pharmacological therapy and planned to

undergo a Tonsillectomy.

DISCUSSION

This case is about a 30-year-old male patient who came to the ENT clinic with complaints of a lump in the throat. At that time, there was no swallowing problem and sore throat. The patient experienced these complaints for a year and worsened since the previous 1.5 months. These complaints came and goes and had been treated but did not improve. There is a history of fever, swallowing disorders, and sore throat that comes and goes is said to occur more than three times a year. Patients said they often consume poor hygiene food and drinks and a history of smoking and alcohol consumption since he is young. This is in accordance with the theory, which states that persistent inflammation of the tonsils resulting from recurrent acute or subclinical infection is referred to as chronic tonsillitis. Tonsillitis is common in children but can also affect adults.¹⁻³

From the physical examination, there were signs of chronic inflammation of the palatine tonsils. The tonsil size had enlarged past the tonsillar fossa (T2 / T3), with hyperemic mucosa, as well as dilated crypts but did not appear to be filled with detritus. Based on the theory, tonsillitis occurs due to germs' entry through the mouth and infiltrate the epithelial layer and superficial lymphoid tissue, causing an inflammatory reaction that will be characterized by a hyperemic mucosa and detritus. Erosion of mucosal and lymphoid tissue during the healing process will be replaced by scar tissue which will experience shrinkage so that the crypts widen. This leads to chronic tonsillitis.¹⁰

American Academy of Otolaryngology-Head and Neck Surgery (AAO-HNS) in 1995 had published the clinical indicators for the tonsillectomy procedure, detailed are as follows:^{4,7,8}

- Tonsillitis recurrent more than three times per year despite adequate therapy.
- Hypertrophic tonsils cause malocclusion of teeth and cause orofacial growth disorders.
- Airway obstruction in the form of tonsil hypertrophy with airway obstruction, sleep apnea, swallowing problems, speech disorders, and cor-pulmonary

disorders.

- Chronic rhinitis and sinusitis, peritonsillitis, a peritonsillar abscess that doesn't improve with treatment.
 - Recurrent tonsillitis caused by *Group-A Beta-Hemolytic Streptococci*.
 - Hypertrophy of the tonsils that are suspected malignant.
 - Otitis media effusive or suppurative.
- Meanwhile, tonsillectomy is contraindicated when:
- Presence of bleeding disorders
 - Considerable risk of anesthesia
 - Severe systemic disease
 - Anemia
 - Severe acute infections.

In these cases, there are no contraindications to undergo tonsillectomy. There is obstruction of the airway because of tonsillar hypertrophy and possibly had obstructed the airway for a certain extent as the presence of frequent snoring. Also, acute tonsillitis had occurred more than three times each year despite adequate therapy. Here, we can conclude that the patient meets the indication for a Tonsillectomy.

Based on the literature, recurrent tonsillitis is the main indication for tonsillectomy in adults. Tonsillar hypertrophy (\geq T3) is another common reason to conduct tonsillectomy as the enlarged tonsils block the airway. Tonsil size can help predict when to perform a tonsillectomy in patients with tonsillar hypertrophy. Evaluation of tonsil size accurately is mandatory as it plays an essential factor to determine the success of tonsillectomy to relieve airway obstruction. The tonsillectomy in adults has several advantages: improving quality of life, reducing the frequency of *Group-A Beta-hemolytic Streptococci* recurrent infections (GABS), and reducing the use of drugs such as antibiotics, and reducing the likelihood of patients leaving work due to illness and reducing medical costs.¹¹ In this patient, the tonsil size was T2 / T3. Still, the hypertrophied tonsil caused various complaints and symptoms such as discomfort or lump in the throat, difficulty swallowing, and airway obstruction characterized by snoring. In children, the common manifestation includes drowsy, restlessness, inadequate attention and decreased learning achievement.¹¹

Based on research by Mustofa, the larger the tonsil size (T3-T4), the greater probability to undergo tonsillectomy.¹² For some time in the past, tonsillectomy was more skewed toward treating chronic and recurrent tonsillitis. But currently, the predominant indications are airway obstruction and tonsillar hypertrophy (\geq T3). In hypertrophic tonsils that cause emergencies such as airway obstruction, tonsillectomy is the definitive treatment.

CONCLUSION

The indications for tonsillectomy in patients follow the indications listed in the American Academy of Otolaryngology-Head and Neck Surgery (AAO-HNS) in 1995. The condition of hypertrophied tonsils that causes disturbances in the airways is a primary indication for tonsillectomy regardless of age, either adults or children.

ETHICAL CONSIDERATION

The authors had gained consent from the patients to publish his case in an academic journal without revealing any personal identity and solely for educational purposes.

CONFLICT OF INTEREST

The authors stated that there is no conflict of interest in writing this article.

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