

Characteristics of Tonsillitis Disease

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ABSTRACT

Introduction: Tonsillitis is an inflammation of the palatine tonsils that are part of Waldeyer's ring, and is caused by microorganisms such as viruses, bacteria, and fungi that enter the body through the air or food. The spread of tonsillitis infection can also be through kisses that contain microorganisms. Acute tonsillitis is caused by streptococcus beta hemolyticus, streptococcus viridans and streptococcus pyogenes, can also be caused by viruses. Chronic tonsillitis is generally caused by complications of acute tonsillitis, especially those that are not treated properly. In addition to improper treatment, other risk factors for the onset of chronic tonsillitis include poor oral hygiene, physical fatigue and certain types of food.

Methods: Descriptive observational with a retrospective approach and the research design used is Cross Sectional Study.

Result: The results of the distribution of patients with tonsillitis based on age, the most at the age of 5 - 11 years, as many as 20 people (50%). Based on gender, the highest number was female as many as 23 people (58%). Based on the size of the tonsils, the largest size was T2- T2 as many as 17 patients (43%). Based on the diagnosis, there were 23 patients (58%) with acute tonsillitis.

Conclusion: Acute tonsillitis was the most common diagnosis with a patient age range of 5 - 11 years, where most were female and tonsil size was T2-T2.

Keywords: Characteristics; tonsillitis; Tabaringan health center



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Introduction

The menstrual cycle in women usually lasts 28 days, with dysmenorrhea symptoms being a common symptom. Primary dysmenorrhea, not caused by any underlying medical conditions, often happens among students.^{1,2} A study reported that 49% of medical school students experience primary dysmenorrhea, in 35.5% experience severe dysmenorrhea at Tarumanagara University.³ In addition, a university in India has reported that 45% of its medical students experience primary dysmenorrhea.⁴ Furthermore, Erciyes University Turkey determined that 82.4% had primary dysmenorrhea.⁵

Tonsillitis is an inflammation of the palatine tonsils that are part of Waldeyer's ring, and is caused by microorganisms such as viruses, bacteria, and fungi that enter the body through the air or food, the spread of tonsillitis infection can also be through kissing that contains microorganism¹. Based on the duration of time tonsillitis is classified into acute and chronic tonsillitis. Acute tonsillitis is an acute inflammation caused by streptococcus beta hemolyticus, streptococcus viridans and streptococcus pyogenes, and can also be caused by viruses². Chronic tonsillitis is the most common recurrent throat disease, chronic tonsillitis usually occurs as a complication of acute tonsillitis, especially if the acute tonsillitis is not treated properly. Besides improper treatment, other risk factors for the onset of chronic tonsillitis are poor oral hygiene, physical fatigue and some types of food³.

In some cases, large tonsils can affect the respiratory system and children usually experience additional symptoms such as snoring during sleep and shortness of breath. If the inflammation is successfully treated, the tonsils may recover to normal, but if left untreated, they may not return to normal health and recurrent infections may occur. The painful throat makes it difficult to swallow with general weakness and a foul-smelling mouth (foetor ex-ore). The tonsils appear red and swollen and the crypts are usually covered by a fibrous or purulent film, which appears as white dots or white lines. The membrane may coalesce so that the entire tonsil is covered. The glands in the neck are usually enlarged and painful⁴.

Tonsillitis is considered a self-limiting disease, with 40% of symptoms resolving within 3 days and 85% of patients recovering within 1 week. However, tonsil inflammation remains common, especially in children, and can lead to other complications and in severe cases may require surgery⁵.

The World Health Organization (WHO) does not publish data on the number of tonsillitis cases worldwide, but estimates that 287,000 children under the age of 15 have undergone tonsillectomy, with or without adenoidectomy. A total of 248,000 (86.4%) children underwent tonsiladenoidectomy and 39,000 (13.6%) children underwent tonsillectomy alone. Based on epidemiologic data of ENT diseases in seven provinces in Indonesia, the prevalence of chronic tonsillitis was 3.8%, followed by acute nasopharyngitis at 4.6%³. From several hospitals in Indonesia, the number of outpatient visits caused by

tonsillitis in the last two years, namely in 2012-2013 amounted to $\pm 55,383$ people while outpatients caused by tonsillitis amounted to $\pm 37,835$ people⁶.

Based on this description and seeing the high prevalence of tonsillitis and the various characteristic symptoms that can be found, and there have not been many studies conducted in the Makassar city environment, so researchers are interested in conducting research to determine the characteristics of tonsillitis at Tabaringan Health Center Makassar City.

Methods

This research used a descriptive observational with a retrospective approach, the research design used is a cross-sectional study to describe the characteristics of Tonsillitis patients at Pulskesmas Tabaringan Makassar City. This research was conducted on July - August 2023 at the Tabaringan Health Center in Makassar city. The population and samples use all patients who had a history of tonsillitis disease medical records at Tabaringan Health Center, Makassar city, with the total sampling technique.

The inclusion criteria are the medical records of patients with tonsillitis at the Tabaringan Health Center in Makassar City which are in accordance with the independent variables. Exclusion criteria were illegible medical records (torn, dirty, wet), incomplete medical records (not fulfilling the independent variables), and medical records of patients with acute tonsillopharyngitis. The independent variables in this study are age, gender, tonsil size, and determination of the diagnosis of tonsillitis patients and the dependent variable is tonsillitis patients at the Tabaringan health center in Makassar city. This research use univariate analysis to identify the characteristics of data variable.

Result

This study aims to determine the characteristics of tonsillitis patients at Tabaringan Health Center Makassar City from 2019-2023. This study used a descriptive observational design by using a secondary data. Secondary data were collected from the medical records of tonsillitis patients, with 81 data from the medical record there were only 40 data that met the inclusion criteria and did not have exclusion criteria. The collected data were entered and processed in the Microsoft excel application. The data is presented in tabular form accompanied by an explanation, the results of which can be seen as follows.

Table 1. Distribution of tonsillitis patients by Age

Age	N	%
5 – 11 years	20	50
12 – 25 years	10	25
26 – 45 years	10	25
Total	40	100

Source: Secondary data 2023

The table shows that the distribution of tonsillitis patients recorded in the medical records of Tabaringan health center Makassar city, based on the highest age is 5 - 11 years, namely 20 people (50%) and for ages 12 - 25 years and 26 - 45 years, namely 10 people (25%).

Table 2. Distribution of tonsillitis patients based on gender

Gender	N	%
Female	23	58
Male	17	43
Total	40	100

Source: Secondary data 2023

The table shows, the distribution of tonsillitis patients recorded in the medical records of Tabaringan health center Makassar city based, on gender is mostly in women, namely 23 people (58%) and men, namely 17 people (43%).

Table 3. Distribution of tonsillitis patients based on tonsil size

Tonsils Size	N	%
T1-T1	2	5%
T2-T1	4	10%
T2-T2	17	43%
T3-T1	2	5%
T3-T2	3	8%
T3-T3	9	23%
T4-T2	1	3%
T4-T4	2	5%
Total	40	100

Source: Secondary data 2023

The table shows, the distribution of tonsillitis patients recorded in the medical records of Tabaringan health center Makassar city, based on the size of the tonsils was mostly T2 - T2, as many as 17 people (43%), and the least size was T4 - T2, as many as 1 person (3%).

Table 4. Distribution of tonsillitis patients based on diagnosis

Diagnosis	N	%
Acute tonsillitis	23	58
Chronic tonsillitis	14	35
Acute exacerbation of chronic tonsillitis	3	8
Total	40	100

Source: Secondary data 2023

The table shows, the distribution of tonsillitis patients recorded in the medical records of Tabaringan health center Makassar city based on the highest diagnosis was acute tonsillitis, namely 23 people (58%) and the least diagnosis was acute exacerbation of chronic tonsillitis, namely 3 people (8%).

Discussion

The are 40 data of patients suffering from tonsillitis at Tabaringan health center Makassar city from

2019-2023, the results were obtained in the age group 5-11 years as many as 20 people (50%). In accordance with research conducted by Rombadi (2022), the age group 5-11 years was the age at which the most tonsillitis occurred, 21 patients (35%)⁷ and in contrast to Rahmadayanti (2022), there were 13 patients (31.7%) with an age group between 15-24 years. Tonsillitis generally occurs in children between the ages of 5 and 15 years, but is less common in children less than 2 years old⁸. Typically, the tonsils reach full size between the ages of 6 and 8, and the tonsil and adenoid tissues become immunologically active between the ages of 4 and 12(5). In addition, the children habit that sometimes forget to keep their food clean and maintain oral hygiene is also one of the common problems that cause tonsillitis⁹. Bintang (2022) at H. Hanafie Muara Bungo Jambi Hospital in 2021, stated that patients aged had less than 20 years were a risk factor for the appearance of tonsillitis symptoms 4.40 times greater than patients aged more than 20 years⁸.

Based on gender, this study found women as many as 23 people (58%). This is following the research that conducted by Tamara Nike et al (2021) from 70 samples, found that the most tonsillitis patients, namely 36 patients (51.4%), occurred in women¹⁰. In contrast the research conducted by Alvina et al (2023) from 68 samples obtained results, namely men as many as 38 people (55.9%)¹¹. This result may be due to the increased nutritional requirements during adolescence. In adolescence, many girls are concerned about their body shape and often eat late. This causes girls to eat less frequently than boys and their increased calorie and protein requirements are not met, thus negatively impacting nutritional stamina¹². In addition, women especially children are more likely to engage in activities in clean places, such as indoors, and are less adapted to dirty environments rich in microorganisms⁹. Based on the explanation above, the factor causing tonsillitis is poor oral hygiene, regardless of age or gender. In men, the risk of developing tonsillitis is due to smoking, which can cause a decrease in antibodies in the tonsils. The function of the tonsils is that if the pathogen penetrates the epithelial layer, mononuclear phagocytic cells will recognize and eliminate antigens, resulting in disruption of the function of the body's defense cells. The particles in cigarette smoke then stimulate the tonsils to produce antigens if this continues, the tonsils will become inflamed³.

There are 40 data who experienced tonsillitis at the Tabaringan health center Makassar city from 2019-2023, the most common was T2 - T2 as many as 17 people (43%). The study by Rahmadayanti's research (2022) found the most tonsil size T2 - T2, namely 15 patients out of 41 patients with tonsillitis. In contrast to research conducted by Zuhdi et al (2020) in 66 patients with tonsillitis there were 27 patients (40.9%) who had tonsil sizes T3 - T3. One of the factors for tonsil enlargement is due to the effect of infection on the tonsils. The size of the tonsils is enlarged due to parenchymal hyperplasia or fibrinoid degeneration with obstruction of the tonsil crypts, and will worsen if there is repeated infectious

inflammation⁸. Tonsils that are repeatedly infected cannot kill all the germs, so the germs become lodged in the tonsils (focal infection). Repeated infections and focal infections cause the tonsils to work hard to fight germs by producing a lot of immune cells so that the size of the tonsils will increase rapidly beyond normal size¹³.

Based on this study, the most common diagnosis was acute tonsillitis as many as 23 patients (58%). In Resky's research (2019), acute tonsillitis obtained in 66 patients (71.7%) of the 92 patients. In Rahmadayanti's research (2022), different results were obtained, namely more chronic tonsillitis, namely 35 patients (85.4%) out of 41 patients¹⁴. Acute tonsillitis is caused by viruses or bacteria that cause inflammation of the tonsils. It is characterized by swelling and redness of the tonsils, may be accompanied by exudates, cervical lymphadenopathy and fever $>38.3^{\circ}\text{C}$ measured rectally. Odynophagia lasts for 24 to 48 hours resembling the symptoms of the common cold¹⁵.

Conclusion

Based on research that has been conducted on the Characteristics of Tonsillitis Patients at Tabaringan Health Center Makassar City 2019-2023, the author concluded that the characteristics based on age, most in the age group 5-11 years. Characteristics based on gender, mostly female. Characteristics based on tonsil size, the most commonly found with size T2-T2. Characteristics based on diagnosis, obtained are patients with acute tonsillitis.

Based on the research that has been done, the researchers provide several suggestions, namely, it is hoped that public health services will continue to provide education about maintaining a healthy lifestyle, it is also hoped that the community, especially parents, will pay more attention and apply a healthier lifestyle to their children from an early age so that they can get used to taking better care of their health, it is hoped that future researchers will conduct further research with a larger sample size regarding cases of tonsillitis = to develop the latest information about tonsillitis.

Conflicts of Interest

There is no conflict of interest.

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